Table of Contents

Index to Financial Statements

As confidentially submitted with the Securities and Exchange Commission on October 17, 2014

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Bellicum Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	2834	20-1450200
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2130 W. Holcombe Blvd., Ste. 850
Houston, TX 77030
(832) 384-1100
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Thomas J. Farrell
President, Chief Executive Officer
Bellicum Pharmaceuticals, Inc.
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(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☑ (Do not check if a smaller reporting company)	Smaller reporting company	☐

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (1)	AMOUNT OF REGISTRATION FEE (1)
Common Stock, $0.01 par value per share	$	$

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act. Includes the offering price of shares that the underwriters have the option to purchase.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2014

PRELIMINARY PROSPECTUS

Shares

Common Stock

Bellicum Pharmaceuticals, Inc. is offering shares of its common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price of our common stock will be between $ and $ per share.

We have applied to list our common stock on The NASDAQ Global Market under the symbol “BLCM.”

We are an “emerging growth company” as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our common stock involves risks. See “Risk Factors” beginning on page 12.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public Offering Price	$	$
Underwriting Discounts and Commissions (1)	$	$
Proceeds to Bellicum Pharmaceuticals, Inc. (before expenses)	$	$

(1) We have agreed to reimburse the underwriters for certain expenses. See “Underwriting.”

We have granted the underwriters an option for a period of 30 days to purchase up to an additional shares of common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $, and the total proceeds to us, before expenses will be $.

The underwriters expect to deliver the shares of common stock to purchasers on or about , 2014.

Jefferies

Prospectus dated , 2014

TABLE OF CONTENTS

	PAGE
Prospectus Summary	1
Risk Factors	12
Special Note Regarding Forward-Looking Statements	45
Use Of Proceeds	46
Dividend Policy	47
Capitalization	48
Dilution	50
Selected Financial Data	53
Management's Discussion And Analysis Of Financial Condition And Results Of Operations	55
Business	66
Management	111
Executive And Director Compensation	118
Certain Relationships And Related Party Transactions	133
Principal Stockholders	140
Description Of Capital Stock	143
Shares Eligible For Future Sale	148
Material U.S. Federal Income Tax Consequences To Non-U.S. Holders Of Our Common Stock	150
Underwriting	153
Notice to Investors	157
Legal Matters	160
Experts	160
Where You Can Find Additional Information	160
Index to Financial Statements	F-1

Neither we nor any of the underwriters has authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we may have referred you in connection with this offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor any of the underwriters is making an offer to sell or seeking offers to buy these securities in any jurisdiction where or to any person to whom the offer or sale is not permitted. The information in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock and the information in any free writing prospectus that we may provide you in connection with this offering is accurate only as of the date of that free writing prospectus. Our business, financial condition, results of operations and future growth prospects may have changed since those dates.

Through and including , 20 (25 days after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to their unsold allotments or subscriptions.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

We have obtained registered trademarks for Bellicum®, CaspaCIDe® and DeCIDE® based on an intent to use in the United States. We are currently prosecuting registrations for the GOCAR-T and GOCART marks. This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus. Because it is only a summary, it does not contain all of the information that you should consider before investing in shares of our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. You should read the entire prospectus carefully, especially "Risk Factors" beginning on page 12 and our financial statements and the related notes, before deciding to buy shares of our common stock.

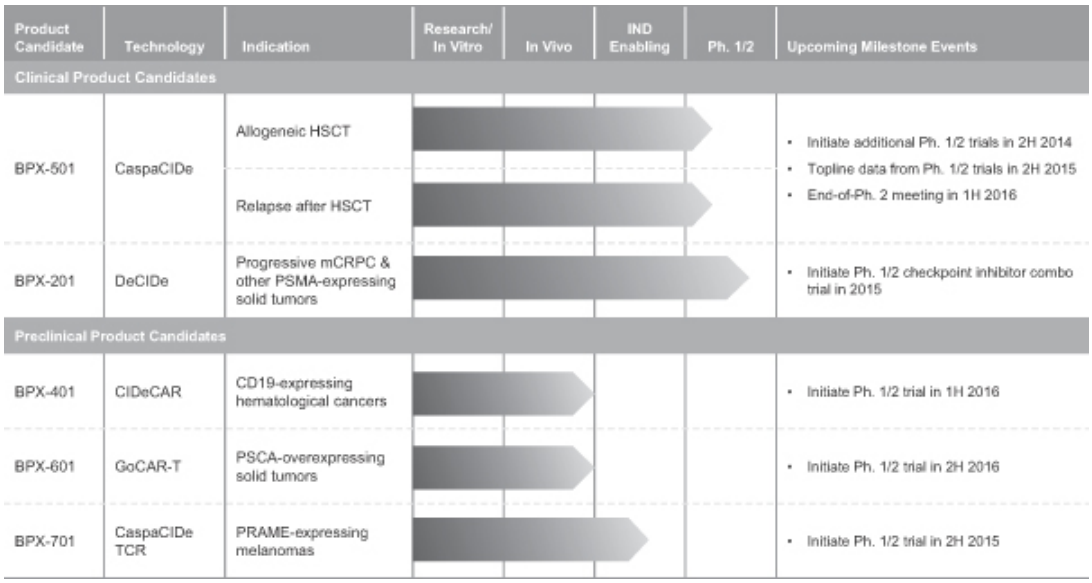
Unless the context requires otherwise, references in this prospectus to "we," "us" and "our" refer to Bellicum Pharmaceuticals, Inc.

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. Cellular immunotherapy has the potential to transform medicine by harnessing immune cells, principally T cells, to attack and eliminate harmful diseased cells in the body. Unlike traditional small molecule and biologic therapies which are predictably metabolized and eliminated from the body, cellular immunotherapies are unpredictable and uncontrollable. We are using our proprietary Chemical Induction of Dimerization, or CID, technology platform to engineer and then control components of the immune system in real time. By incorporating our CID platform, our product candidates may offer better safety and efficacy outcomes than are seen with current cellular immunotherapies.

Our lead clinical product candidate, BPX-501, is an adjunct T-cell therapy administered after allogeneic hematopoietic stem cell transplantation, or HSCT, and is currently being evaluated in multiple Phase 1/2 clinical trials. Our next clinical product candidate, BPX-201, is a dendritic cell cancer vaccine in a Phase 1 clinical trial for the treatment of metastatic castrate-resistant prostate cancer, or mCRPC, targeting the prostate-specific membrane antigen, or PSMA. We are also focused on developing next-generation chimeric antigen receptor, or CAR, T-cell therapies and T-cell receptor, or TCR, therapies and are planning to advance several product candidates into human clinical trials, including: (i) BPX-401, a CAR-T product candidate for hematological cancers that express the CD19 antigen, (ii) BPX-601, a CAR-T product candidate for solid tumors overexpressing the prostate stem cell antigen, or PSCA, and (iii) BPX-701, a TCR product candidate for solid tumors expressing the preferentially-expressed antigen in melanoma, or PRAME.

Our product candidate pipeline is set forth below:



Our Proprietary CID Technology Platform

We are developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including HSCT, CAR T cell therapy, and dendritic cell vaccines. HSCT, also known as bone marrow transplantation, has for decades been curative for many patients with hematological cancers or orphan inherited blood disorders. However, application of HSCT is limited by graft-versus-host-disease, or GvHD, a condition in which the transplanted immune cells recognize the host cells as foreign and attack them. Since the transplanted cells can persist indefinitely, GvHD does not resolve by itself and is a major cause of transplant-related morbidity and mortality. CAR T cell therapy is an innovative approach in which a patient's T cells are genetically modified to carry CARs which redirect the T cells against cancer cells. While high objective response rates have been reported in some hematological malignancies, serious and sometimes fatal toxicities have arisen in patients treated with CAR T cell therapies. In solid tumors, where the behavior of CAR T cells is particularly unpredictable and results have been inconsistent, researchers are developing enhanced CAR T cell approaches called "armored CARs" that raise even greater safety concerns. Lastly, despite the integral role that dendritic cells play in the immune system, they are difficult to activate appropriately and as a result their use has delivered only modest therapeutic benefit.

Our proprietary CID technology is designed to address these challenges. Events inside a cell are controlled by cascades of specialized signaling proteins. CID consists of molecular switches, modified forms of these signaling proteins, which are triggered inside the patient by infusion of a small molecule, rimiducid (AP1903), instead of by natural upstream signals. We include these molecular switches in the appropriate immune cells and deliver the cells to the patient in the manner of conventional cellular immunotherapy. We have developed two such switches: a "safety switch" designed to initiate programmed cell death, or apoptosis, of the immunotherapy cells, and an "activation switch" designed to stimulate activation and in some cases proliferation of the immunotherapy cells. Each of our technologies incorporates one of these switches, for enhanced, real-time control of safety and efficacy:

- ***CaspaCIDe*** is our safety switch, incorporated into our HSCT and TCR product candidates, where it is inactive unless the patient experiences a serious side effect. In that event, rimiducid is administered

to fully or partially eliminate the cells, with the goal of terminating or attenuating the therapy and resolving the serious side effect.

- ***CIDeCAR*** consists of CAR T cells modified to include our CaspaCIDe safety switch and in which the CAR incorporates the signaling domains of two proteins, MyD88 and CD40. Together, these form our proprietary dual co-stimulatory domain, MC, which is designed to activate T cells in the presence of cancer cells more potently than co-stimulatory molecules CD28 and 4-1BB, which are used in current CAR T cell therapy. Incorporation of CaspaCIDe in a CIDeCAR product candidate is intended to allow the enhanced potency of MC co-stimulation to be deployed safely in patients.
- ***GoCAR-T*** consists of CAR T cells that are modified to include the proprietary dual co-stimulatory domain, MC. In contrast to CIDeCAR, MC is structured in GoCAR-T as a molecular switch, separate from the chimeric antigen receptor, which itself contains no co-stimulatory domains. GoCAR-T is designed to allow control of the activation and proliferation of the CAR T cells through the scheduled administration of a course of rimiducid infusions that may continue until the desired patient outcome is achieved. In the event of emergence of side effects, the level of activation of the GoCAR-T cells is designed to be attenuated by reducing the rimiducid administration schedule.
- ***DeCIDe*** consists of dendritic cells that are modified to include the same MC switch used in GoCAR-T. Upon exposure to rimiducid, dendritic cells containing DeCIDe become highly activated in a process that is less susceptible to being turned off by the immune system's natural inhibitory processes. By administering rimiducid after the patient has been vaccinated and the dendritic cells have had time to migrate to the draining lymph nodes, our DeCIDe product candidates are designed to be activated in a potent and long-lasting manner.

By incorporating our novel switch technologies, we are developing product candidates with the potential to elicit positive clinical outcomes and ultimately change the treatment paradigm in various areas of cellular immunotherapy. Our clinical product candidates, each of which is a combination product of genetically modified immune cells and rimiducid, are described below.

- ***BPX-501.*** We are developing a CaspaCIDe product candidate, BPX-501, as an adjunct T-cell therapy administered after allogeneic HSCT, using donor stem cells. In a typical allogeneic HSCT procedure, a patient receives a full complement of immune cells including both donor stem cells and donor T cells. T cells in the transplant often cause serious and potentially fatal side effects, such as GvHD. BPX-501 is designed to decrease the risk of including T cells with the transplant by enabling the elimination of donor T cells through the triggering of the CaspaCIDe safety switch upon emergence of GvHD. In a 10-patient Phase 1 clinical trial with CaspaCIDe modified T cells, conducted by an academic collaborator, four patients developed GvHD after donor T-cell infusion. A single dose of rimiducid rapidly eliminated over 90% of the modified T cells and resolved GvHD in all four patients without recurrence of GvHD. These findings have been replicated in preliminary data from three patients in a second clinical trial of CaspaCIDe-modified T cells. BPX-501 is currently being evaluated in multiple Phase 1/2 clinical trials in the United States and Europe, with the first top-line data expected in the second half of 2015.
- ***BPX-201.*** We are developing a DeCIDe product candidate, BPX-201, as a dendritic cell cancer vaccine made from the patient's own white blood cells, designed to treat mCRPC. It targets the prostate specific membrane antigen, or PSMA, and uses our DeCIDe activation switch technology. BPX-201 is currently being evaluated in an 18-patient Phase 1 clinical trial for mCRPC. We are evaluating opportunities for BPX-201 in combination with other cancer immunotherapies, such as checkpoint inhibitors.

In addition, our preclinical product candidates are designed to overcome the current limitations of CAR-T and TCR therapies and include the following:

- ***BPX-401.*** We are developing a CIDeCAR product candidate, BPX-401, as a next-generation CAR T cell therapy for hematological cancers that express the CD19 antigen. CD19 is an antigen expressed in

many hematological cancers, including acute lymphocytic leukemia, or ALL, chronic lymphocytic leukemia, or CLL, and certain non-Hodgkin's lymphomas. We believe that, while the activity of CAR T cell therapy has been demonstrated in early-stage clinical trials by third party researchers in these indications, safety issues, such as cytokine release syndrome, a systemic inflammatory response that is produced by elevated levels of cytokines that are associated with T-cell activation and proliferation, remain a major concern, which may be addressed by BPX-401.

- ***BPX-601.*** We are developing a GoCAR-T product candidate, BPX-601, for solid tumors overexpressing PSCA, such as some prostate, pancreatic, bladder, esophageal and gastric cancers. We have obtained positive proof-of-principle data in an animal pancreatic tumor model, which we believe validate BPX-601's activity and rimiducid's ability to modulate therapeutic effect.
- ***BPX-701.*** We are developing a CaspaCIDe TCR product candidate, BPX-701, in collaboration with Leiden University Medical Center, initially for the treatment of PRAME-expressing melanoma, sarcomas and neuroblastoma. Based on *in vitro* studies, BPX-701 has demonstrated strong affinity to panels of cancer cells presenting PRAME peptides and low affinity to non-tumor cells. In other *in vitro* studies, rimiducid administration has shown the ability to eliminate BPX-701 cells.

We expect to file investigational new drug applications, or INDs, for BPX-701 in the second half of 2015 and for BPX-401 and BPX-601 in 2016. Our IND-enabling activities for each of these preclinical product candidates include manufacturing key components and developing a robust process to produce cell products that comply with regulations of the U.S. Food and Drug Administration, or FDA, and other regulatory agencies. We have developed an efficient and scalable process to manufacture genetically modified T cells of high quality and purity. This process is being implemented by our third-party contract manufacturers to produce BPX-501 for our clinical trials. We expect to leverage our resources, capabilities and expertise for the manufacture of our CAR-T and TCR product candidates.

Strategy

Our goal is to become a leading innovator in the field of cellular immunotherapy by maximizing the inherent potential of this therapeutic modality and developing medicines with a differentiated combination of safety and efficacy. The key elements of our strategy to achieve this goal are as follows:

- ***Pursue a broad development strategy that will maximize the market potential of BPX-501.*** We believe that BPX-501 will enable physicians to maximize the benefits of adjunct T-cell therapy for allogeneic HSCT, such as immune system recovery, prevention or treatment of relapse of underlying disease and improvement in stem cell engraftment, while mitigating safety issues associated with the therapy. Based on these attributes, BPX-501 may serve an integral role in the treatment paradigm for allogeneic HSCT in various diseases and increase the overall patient eligibility for the procedure. In order to make BPX-501 accessible to a broad group of patients and maximize the market potential of this product candidate, we are conducting multiple Phase 1/2 clinical trials that include U.S. and European protocols, adult and pediatric patients and different indications and usage of BPX-501. We expect to report data from these clinical trials and discuss registration trial design at an end-of-Phase 2 meeting with the FDA and European regulatory authorities in the first half of 2016.
- ***Focus on developing proprietary CAR-T and TCR product candidates with an improved safety and efficacy profile.*** We intend to build a robust clinical pipeline of our own novel CAR-T and TCR product candidates, which incorporate our proprietary switch technologies, CIDeCAR, GoCAR-T and CaspaCIDe, and focus on indications in which current CAR-T and TCR therapies have significant shortcomings. To this end, we are developing BPX-401 for hematological cancers expressing the CD19 antigen, BPX-601 for solid tumors overexpressing PSCA and BPX-701 for solid tumors expressing PRAME. We believe that these product candidates may address serious safety concerns associated with conventional CAR-T and TCR therapies and achieve higher overall potency and efficacy, thereby widening the therapeutic window compared to other CAR-T and TCR product candidates. We intend to

dedicate significant resources in the near term to advance BPX-401, BPX-601 and BPX-701 as well as our other product candidates toward human proof-of-concept data.

- ***Selectively pursue partnerships and collaborations.*** Although our priority is to develop internal product candidates, we may pursue opportunistic partnerships and collaborations for our technologies, including CaspaCIDe and DeCIDe. In indications outside of our interest or expertise, we may structure transactions in which our molecular switches are incorporated into our partners' CAR-T or TCR product candidates. We intend to build on our existing strong relationships with premier cancer research centers around the world to identify new opportunities and position our company at the forefront of innovations in the field of cellular immunotherapy.
- ***Continue to innovate around our proprietary CID platform.*** We believe that our CID platform can be further leveraged to discover other novel technologies and therapeutic applications to capitalize on additional market opportunities. We intend to evaluate BPX-201 and other product candidates based on our DeCIDe technology in combination with other cancer immunotherapy such as checkpoint inhibitors. We are also developing new switches and two-switch systems to provide greater control over cellular immunotherapy.
- ***Continue to strengthen our intellectual property profile.*** We believe that having a comprehensive patent estate that provides strong barriers to entry is critical to the success of our business. As such, our management team has made a concerted effort to develop and secure our intellectual property since inception. We currently own or have exclusive licenses to over 74 issued patents and 43 pending patent applications. These patents and patent applications include composition and/or method of use claims in the United States, Europe and other jurisdictions. We intend to continue to strengthen our patent estate by developing and filing patents on various aspects of our technologies and product candidates as well as through in-licensing activities with research institutions and other biopharmaceutical companies.
- ***Become a fully integrated cellular immunotherapy company.*** Developing product candidates for cellular immunotherapy is complex and requires significant in-house capabilities in various areas of drug development. Over the years we have built a solid foundation from which to fulfill the highly demanding clinical and regulatory requirements of genetically modified cellular immunotherapy, with expertise in research and discovery, clinical trial management, data analysis, manufacturing, quality assurance and regulatory affairs. We intend to use a portion of the net proceeds from this offering to continue hiring staff with necessary expertise and investing in infrastructure to support the growth of our clinical development activities and to enable us to become the leading cellular immunotherapy company.

Recent Developments

To enable further development of our proprietary technology and product candidates, we completed a private placement of $55 million of Series C convertible preferred stock in August 2014. Investors in the transaction included, among others, Baker Brothers, RA Capital Management, LLC, Perceptive Advisors, LLC, Jennison Associates LLC (on behalf of certain clients), Sabby Capital, LLC, Ridgeback Capital Management, venBio Select, Redmile Group, LLC and AJU IB Investment, as well as our then current investors, including AVG Ventures and Remeditex Ventures.

Certain aspects of our platform technology are licensed from ARIAD Pharmaceuticals, Inc., or ARIAD. In October 2014, we amended our license agreement with ARIAD, pursuant to which we agreed to pay ARIAD $50 million in three tranched payments, including an initial payment of $15 million in connection with the execution of the amendment. In exchange, ARIAD gave us a fully paid-up license to its cell-signaling technology and will return of all of the 1,151,688 shares of our common stock currently held by ARIAD at the time of the second tranche payment. The scope of the license and the field of use were also expanded as part of the amendment. The amended agreement gives us a worldwide exclusive license to ARIAD's cell-signaling technology for broad use in human cell therapies for all diseases on a royalty- and milestone-free basis. See "Business—Our License Agreements."

Risks Associated With Our Business

Our business is subject to numerous risks, as more fully described in the section entitled “Risk Factors” immediately following this prospectus summary. You should read these risks before you invest in our common stock. We may be unable, for many reasons, including those that are beyond our control, to implement our business strategy. In particular, risks associated with our business include:

- We have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses in the future.
- Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of uncertainty. We have never generated any revenue from product sales and may never be profitable.
- We have concentrated our therapeutic product research and development efforts on our CID platform, a novel therapeutic approach, and our future success depends on the successful development of this therapeutic approach.
- Our clinical trials may fail to demonstrate adequately the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.
- We may not be successful in our efforts to use and expand our CID platform to build a pipeline of product candidates and develop marketable products.
- The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates. Further, the FDA may disagree with our regulatory plans and we may fail to obtain regulatory approval of our product candidates.
- Due to the novel nature of our technology and the potential for our product candidates to offer therapeutic benefit in a single administration, we face uncertainty related to pricing and reimbursement for these product candidates. Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.
- We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.
- We have identified a material weakness in our internal control over financial reporting. If our internal control over financial reporting is not effective, we may not be able to accurately report our financial results or file our periodic reports in a timely manner, which may cause investors to lose confidence in our reported financial information and may lead to a decline in our stock price.

Corporate Information

We were incorporated in Delaware in July 2004. Our principal executive offices are located at 2130 W. Holcombe Blvd., Ste. 850, Houston, Texas and our telephone number is (832) 384-1100. Our corporate website address is www.bellicum.com. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. An “emerging growth company” may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may use these provisions until the last day of our fiscal year following the fifth anniversary of the closing of this offering. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer,” our annual gross revenue exceed $1.0 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding after this offering	shares
Option to purchase additional shares	We have granted to the underwriters the option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock.
Use of proceeds	We estimate that we will receive net proceeds of approximately $ million (or approximately $ million if the underwriters' option to purchase additional shares is exercised in full) from the sale of the shares of common stock offered by us in this offering, based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for the following purposes: (1) $ million to fund our ongoing and planned Phase 1/2 clinical trials of BPX-501, (2) $ million to fund pre-clinical and Phase 1/2 clinical trials of BPX-401, BPX-601 and BPX-701 and preclinical development of our other CAR-T and TCR programs, (3) $ million to fund our planned Phase 1/2 clinical trials of BPX-201 in combination with checkpoint inhibitors, (4) $ million to fund build-out of our development and manufacturing capabilities and (5) the remainder to fund other working capital purposes, including general operating expenses. See "Use of Proceeds."
Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of certain of the factors to consider carefully before deciding to purchase any shares of our common stock.
Proposed NASDAQ Global Market symbol	BLCM

The number of shares of our common stock to be outstanding after this offering is based on 3,603,188 shares of common stock outstanding as of June 30, 2014, and assumes:

- the issuance by us of shares of our common stock in this offering;
- the conversion of all of our convertible preferred stock outstanding into an aggregate of shares of common stock upon the closing of this offering;
- the net exercise of outstanding warrants to purchase common stock for an aggregate of shares of common stock (based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus)); and
- none of the holders of Series B convertible preferred stock will elect to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock in connection with this offering.

and excludes:

- 6,559,598 shares of Series C convertible preferred stock issuable upon the exercise of warrants issued by us in August 2014, pursuant to that certain Series C Preferred Stock and Warrant Purchase Agreement, or the Series C Purchase Agreement;
- 2,744,000 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2014, at a weighted-average exercise price of $1.38 per share;
- shares of our common stock reserved for future issuance under our 2014 equity incentive plan, or the 2014 plan, which will become effective as of the date of the effectiveness of the registration statement of which this prospectus forms a part, including the 338,500 shares of common stock reserved for issuance under our 2011 stock option plan, as amended, or the 2011 Plan, and 10,000 shares of common stock reserved for issuance under our 2006 stock option plan, as amended, or the 2006 Plan, which shares will be added to the shares reserved under the 2014 plan;
- shares of common stock reserved for future issuance under our 2014 Employee Stock Purchase Plan, or the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 604,167 shares of common stock issuable upon the exercise of outstanding warrants as of June 30, 2014, at an exercise price of $0.001 per share.

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- a 1-for- reverse stock split of our common stock to be effected prior to the closing of this offering;
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the closing of this offering; and
- no exercise by the underwriters of their option to purchase up to an additional shares of our common stock.

SUMMARY FINANCIAL DATA

The following summary financial data should be read together with our financial statements and related notes, "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The summary financial data in this section are not intended to replace our financial statements and the related notes. We derived the summary statement of operations data for the years ended December 31, 2012 and 2013 and the six months ended June 30, 2014 and the summary balance sheet data as of June 30, 2014 from our audited financial statements and related notes appearing elsewhere in this prospectus. We derived the summary statement of operations data for the six months ended June 30, 2013 from our unaudited financial statements and related notes appearing elsewhere in this prospectus. The unaudited financial data, in management's opinion, have been prepared on the same basis as the audited financial statements and related notes included elsewhere in this prospectus, and include all adjustments, consisting only of normal recurring adjustments, that management considers necessary for a fair presentation of the information for the periods presented. Our historical results are not necessarily indicative of the results that may be expected in the future, and results from our interim period may not necessarily be indicative of the results of the entire year.

(in thousands, except share and per share data)	YEAR ENDED DECEMBER 31, 2012	YEAR ENDED DECEMBER 31, 2013	SIX MONTHS ENDED JUNE 30, 2013 (unaudited)	SIX MONTHS ENDED JUNE 30, 2014
Statement of Operations Data:				
Grant revenues	$ 1,470	$ 1,941	$ 400	$ 1,106
Operating expenses:				
Research and development	5,796	7,050	2,611	4,745
General and administrative	1,943	2,813	1,333	1,911
Total operating expenses	7,739	9,863	3,944	6,656
Loss from operations	(6,269)	(7,922)	(3,544)	(5,550)
Other income (expense):				
Interest income	7	4	1	6
Interest expense	(1)	(51)	(24)	(26)
Total other income (expense)	6	(47)	(23)	(20)
Net loss	$ (6,263)	$ (7,969)	$ (3,567)	$ (5,570)
Preferred stock dividends	(757)	(1,094)	(392)	(1,104)
Net loss available to common stockholders	$ (7,020)	$ (9,063)	$ (3,959)	$ (6,674)
Net loss per share, basic and diluted(1)	$ (2.51)	$ (3.09)	$ (1.35)	$ (1.97)
Weighted-average shares outstanding, basic and diluted	2,801,938	2,934,188	2,934,188	3,382,950
Pro forma net loss (unaudited)		$		
Pro forma net loss per share, basic and diluted (unaudited)(2)		$		
Pro forma weighted-average shares outstanding, basic and diluted (unaudited)(2)				

(1) See Note 2 to our financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate the basic and diluted net loss per common share and the number of shares used in the computation of the per share amounts.

(2) The calculations for the unaudited pro forma net loss per common share, basic and diluted, assume the conversion of all our outstanding shares of convertible preferred stock as of June 30, 2014 into an aggregate of 10,690,528 shares of our common stock.

(in thousands)	AS OF JUNE 30, 2014 ACTUAL	PRO FORMA (1)	PRO FORMA AS ADJUSTED (2)(3)
Balance Sheet Data:			
Cash and cash equivalents	$ 12,157	$	$
Working capital	12,502		
Total assets	16,456		
Convertible preferred stock	48,350	—	—
Accumulated deficit	(34,549)		
Total stockholders' deficit	(34,468)		

(1) Pro forma amounts reflect (1) the conversion of all our outstanding shares of our convertible preferred stock as of June 30, 2014 into an aggregate of shares of our common stock in connection with the closing of this offering, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and (2) the net exercise, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), of 200,002 outstanding warrants (which will expire upon completion of this offering if not exercised) into shares of our common stock.

(2) Pro forma as adjusted amounts reflect the pro forma conversion adjustments described in footnote (1) above, as well as (1) the sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us and (2) the issuance of shares of common stock upon the net exercise of outstanding warrants to purchase common stock (based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus)).

(3) A $1.00 increase (decrease) in the assumed initial public offering price would increase (decrease) each of the cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by $ million, assuming the number of shares offered by us as stated on the cover page of this prospectus remain unchanged and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by $ million, assuming the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Related to Our Business and Industry

We have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses in the future.

We are a clinical stage biopharmaceutical company with a limited operating history. We are not profitable and have incurred losses in each period since our inception in 2004. To date, we have financed our operations primarily through private placements of convertible debt and preferred stock. For the years ended December 31, 2012 and 2013, we reported a net loss of $6.3 million and $8.0 million, respectively. For the six months ended June 30, 2013 and 2014, we reported a net loss of $3.6 million and $5.6 million, respectively. As of June 30, 2014, we had an accumulated deficit of $34.5 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of uncertainty. We have never generated any revenue from product sales and may never be profitable.

We have devoted substantially all of our financial resources and efforts to developing our proprietary CID technology platform, identifying potential product candidates and conducting preclinical studies and clinical trials. We are still in the early stages of developing our product candidates, and we have not completed development of any products. Our ability to generate revenue and achieve profitability depends in large part on our ability, alone or with partners, to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize, product candidates. We do not anticipate generating revenues from sales of products for the foreseeable future. Our ability to generate future revenues from product sales depends heavily on our success in:

- completing clinical trials through all phases of clinical development of our current product candidates, as well as the product candidates that are being developed by our partners and licensees;
- seeking and obtaining marketing approvals for product candidates that successfully complete clinical trials;
- launching and commercializing product candidates for which we obtain marketing approval, with a partner or, if launched independently, successfully establishing a sales force, marketing and distribution infrastructure;
- identifying and developing new product candidates;
- progressing our pre-clinical programs into human clinical trials;
- establishing and maintaining supply and manufacturing relationships with third parties;
- developing new molecular switches based on our proprietary CID technology platform;
- maintaining, protecting, expanding and enforcing our intellectual property; and
- attracting, hiring and retaining qualified personnel.

Because of the numerous risks and uncertainties associated with biologic product development, we are unable to predict the timing or amount of increased expenses and when we will be able to achieve or maintain profitability, if ever. In addition, our expenses could increase beyond expectations if we are required by the FDA, or foreign regulatory agencies, to perform studies and clinical trials in addition to those that we currently anticipate, or if there are any delays in our or our partners completing clinical trials or the development of any of our product candidates. If one or more of the product candidates that we independently develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing such product candidates. Even if we or our partners are able to generate revenues from the sale of any approved products, we may not become profitable and may need to obtain additional funding to continue operations, which may not be available to us on favorable terms, if at all. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or even continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We have concentrated our therapeutic product research and development efforts on our CID platform, and our future success depends on the successful development of this therapeutic approach.

Our proprietary CID technology platform is novel and there are no approved products or product candidates in late-stage clinical trials based on this technology. Additionally, the safety and efficacy profile of rimiducid has not been subject to large scale clinical testing. If rimiducid is found to have a poor safety profile in clinical trials, or if our technology is not effective, we may be required to redesign all of our product candidates, which would require significant time and expense. In addition, our CID platform technology may not be applicable or effective in the development of additional cellular immunotherapies beyond our current programs which would adversely affect our business and prospects.

CAR T cell therapies are novel and present significant challenges.

CAR-T and TCR product candidates represent a relatively new field of cellular immunotherapy and there are no FDA-approved products in this area. Advancing this novel and personalized therapy creates significant challenges for us, including:

- obtaining regulatory approval, as the FDA and other regulatory authorities have limited experience with commercial development of T-cell therapies for cancer;
- sourcing clinical and, if approved, commercial supplies for the materials used to manufacture and process our product candidates;
- developing a consistent and reliable process, while limiting contamination risks, for engineering and manufacturing T cells *ex vivo* and infusing the engineered T cells into the patient;
- educating medical personnel regarding the potential safety benefits, as well as the challenges, of incorporating our product candidates into their treatment regimens; and
- establishing sales and marketing capabilities upon obtaining any regulatory approval to gain market acceptance of a novel therapy.

Our inability to successfully develop CAR-T and TCR cell therapies or develop processes related to the manufacture, sales and marketing of these therapies would adversely affect our business, results of operations and prospects. We believe that we have appropriately accounted for the above factors while pursuing the development and commercialization of our product candidates, but we cannot entirely eliminate the risks associated with novel technology.

Failure to successfully develop and obtain approval of our lead product candidate BPX-501 or our other clinical product candidates could adversely affect our future success.

Our business and future success depends, in part, on our ability to obtain regulatory approval of and then successfully commercialize our lead product candidate, BPX-501 and our other clinical product candidates. BPX-501 is in the early stages of development. All of our product candidates, including BPX-501, will require additional clinical and non-clinical development, regulatory review and approval in multiple jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. In addition, because BPX-501 is our most advanced product candidate,

and because many of our other product candidates are based on similar technology, if BPX-501 encounters safety or efficacy problems, developmental delays or regulatory issues or other problems, our development plans and business for our other product candidates would be significantly harmed. In addition, our product candidates that incorporate the CID "safety switch" combine genetically modified T cells that are used to enhance the patients' immune system and a small molecule that leads to the death of these modified T cells if they cause safety issues.

Our clinical trials may fail to adequately demonstrate the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. We expect there may be greater variability in results for cellular immunotherapy products processed and administered on a patient-by-patient basis, like all of our CID technology-based development and product candidates, than for "off-the-shelf" products, like many drugs. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or unacceptable safety issues, notwithstanding promising results in earlier clinical trials. Most product candidates that commence clinical trials are never approved as products.

We have not completed any clinical studies of our current product candidates. Success in early clinical studies may not be indicative of results obtained in later studies.

Many of our current product candidates have not initiated evaluation in human clinical studies, and we may experience unexpected results in the future. Differences in cell processing, time of administration and patient conditioning, among other factors, may result in our experiencing different results in our clinical trials from those reported in trials by our collaborators, may mean that we experience different results in our clinical trials. In addition, data from preclinical studies and investigator-led Phase 1 or Phase 1/2 clinical trials of BPX-501 therapy should not be relied upon as evidence that later or later-scale clinical trials will succeed. We have designed our planned Phase 1/2 single-arm multicenter clinical trial of BPX-501 primarily to assess safety and efficacy in a small number of adult patients with malignant disease. In addition, we are initiating additional Phase 1 and Phase 1/2 clinical trials of BPX-501 and there are a number of investigator-led clinical trials of BPX-501 ongoing and planned.

Similarly, results from preclinical studies, such as *in vitro* and *in vivo* studies, of BPX-401, BPX-601, BPX-701 and our other preclinical programs may not be indicative of the results of clinical trials of these product candidates. Furthermore, we may not be able to commence human clinical trials on any of our preclinical product candidates on the time frames we expect. Our failure to meet these expected targets would likely have an adverse effect on our stock price.

Even if the clinical trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more clinical trials could be required before we submit our product candidates for approval. To the extent that the results of the clinical trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional clinical trials in support of potential approval of our product candidates.

We may not be successful in our efforts to use and expand our CID platform to build a pipeline of product candidates and develop marketable products.

We believe that our CID platform, which serves as the foundation of our CaspaCIDe, CIDeCAR, GoCAR-T and DeCIDe technologies, can be further leveraged to discover other novel technologies, therapeutic applications and market opportunities. For example, we are currently conducting research in applying our platform TCR therapies for solid tumors, where immune toxicities associated with treatment are even more severe than CAR-T therapies. We are also developing new molecular switches and two-switch systems to provide greater control over cellular immunotherapy.

We are at a very early stage of development and our platform has not yet, and may never lead to, approved or marketable products. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including for reasons related to their harmful side effects, limited efficacy or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our technological approach, we may not be able to obtain product or partnership revenues in future periods, which would adversely affect our business, prospects, financial condition and results of operations.

We rely and will continue to rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, and strategic partners to conduct our preclinical and clinical trials under agreements with us. Negotiations of budgets and contracts with study sites may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with current good clinical practices, or cGCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these cGCPs through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of these third parties fail to comply with applicable cGCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the cGCP regulations. In addition, our clinical trials must be conducted with biologic product produced under current good manufacturing practices, or cGMPs, regulations and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are and will not be our employees and, except for remedies available to us under our agreements with these third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines.

Additionally, we are conducting multiple clinical trials in Europe and may plan additional testing of our technology and product candidates in other foreign jurisdictions. We currently have limited staffing and capabilities in foreign countries, and may not be able to effectively resolve potential disputes with our independent investigators and collaborators.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents; and
- the risk that patients enrolled in clinical trials will drop out of the clinical trials before completion.

In particular, some of our clinical trials will look to enroll patients with characteristics which are found in a very small population, such as patients with CD19-expressing cancers, such as ALL, CLL and non-Hodgkin's lymphomas, and patients with orphan inherited blood disorders. Our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our clinical trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in these clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and antibody therapy, rather than enroll patients in any of our future clinical trials. Patients may also be unwilling to participate in our clinical trials because of negative publicity from adverse events in the biotechnology or gene therapy industries.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these clinical trials and adversely affect our ability to advance the development of our product candidates.

Any adverse developments that occur during any clinical trials conducted by academic investigators, our collaborators or other entities conducting clinical trials under independent INDs may affect our ability to obtain regulatory approval or commercialize our product candidates.

BPX-501 and certain of our other CaspaCIDe product candidates are being used by third parties in clinical trials for which we are collaborating or in clinical trials which are completely independent of our development program. We have little to no control over the conduct of such clinical trials. If serious adverse events occur during these or any other clinical trials using our product candidates, the FDA and other regulatory authorities may delay, limit or deny approval of our product candidate or require us to conduct additional clinical trials as a condition to marketing approval, which would increase our costs. If we receive FDA approval for BPX-501 or any other CaspaCIDe product candidate and a new and serious safety issue is identified in connection with clinical trials conducted by third parties, the FDA and other regulatory authorities may withdraw their approval of the product or otherwise restrict our ability to market and sell our product. In addition, treating physicians may be less willing to administer our product due to concerns over such adverse events, which would limit our ability to commercialize our product.

Adverse side effects or other safety risks associated with our product candidates could delay or preclude approval, cause us to suspend or discontinue clinical trials, abandon product candidates, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could result in the delay, suspension or termination of clinical trials by us, the FDA or other regulatory authorities for a number of reasons. If we elect or are required to delay, suspend or terminate any clinical trial of any product candidates that we develop, the commercial prospects of such product candidates will be harmed and our ability to generate product revenues from any of these product

candidates will be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of the product candidate at issue. Any of these occurrences may harm our business, prospects, financial condition and results of operations significantly.

In other clinical trials involving CAR T cells, the most prominent acute toxicities included symptoms thought to be associated with the release of cytokines, such as fever, low blood pressure and kidney dysfunction. Some patients also experienced toxicity of the central nervous system, such as confusion, cranial nerve dysfunction and speech impairment. Adverse events by worst grade and attributed to CAR T cells were severe and life threatening in some patients. The life threatening events were related to kidney dysfunction and toxicities of the central nervous system. Severe and life threatening toxicities occurred mostly in the first two weeks after cell infusion and generally resolved within three weeks. In the past, several patients have also died in clinical trials by others involving CAR T cells.

Clinical trials are expensive, time-consuming and difficult to design and implement.

Human clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our product candidates are based on new technology and engineered on a patient-by-patient basis, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. In addition, costs to treat patients with relapsed/refractory cancer and to treat potential side effects that may result from therapies such as our current and future product candidates can be significant. Accordingly, our clinical trial costs are likely to be significantly higher than for more conventional therapeutic technologies or drug products. In addition, our proposed personalized product candidates involve several complex and costly manufacturing and processing steps, the costs of which will be borne by us. The costs of our clinical trials may increase if the FDA does not agree with our clinical development plans or requires us to conduct additional clinical trials to demonstrate the safety and efficacy of our product candidates.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

Specifically, genetically engineering T cells faces significant competition in both the CAR and TCR technology space from multiple companies, including Adaptimmune Limited, bluebird bio, Inc., Celgene Corporation, Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG and Pfizer Inc. Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances. For additional information regarding our competition, see "Business—Competition."

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel, including our Chief Executive Officer, our Chief Operating Officer, our Chief Medical Officer and Chief Technology Officer, and our Chief Scientific Officer. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain “key man” insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled scientific and medical personnel.

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of June 30, 2014, we had 29 employees, 28 of whom were full-time. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees, including a Chief Financial Officer;
- managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

There are a small number of individuals with experience in cell therapy and the competition for such individuals is high. Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities. We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including substantially all aspects of regulatory approval, clinical management, and manufacturing. There can be no assurance that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

In addition to expanding our organization, we expect to increase the size of our facility and build out our development and manufacturing capabilities, which will require significant capital expenditures. If these capital expenditures are higher than expected, it may adversely affect our financial condition and capital resources. In

addition, if the increase in the size of our facility is delayed, it may limit our ability to rapidly expand the size of our organization in order to meet our corporate goals.

If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our product candidates.

Our operations have consumed substantial amounts of cash since inception. We expect to continue to spend substantial amounts to continue the clinical development of our product candidates, including our planned clinical development and preclinical studies of our product candidates and other programs. If approved, we will require significant additional amounts in order to launch and commercialize our product candidates.

We estimate that our net proceeds from this offering will be approximately $ million, based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering to fund (1) our ongoing and planned Phase 1/2 clinical trials of BPX-501; (2) pre-clinical and Phase 1/2 clinical trials of BPX-401, BPX-601 and BPX-701 and preclinical development of our other CAR T and TCR programs; (3) our planned Phase 1/2 clinical trials of BPX-201 in combination with checkpoint inhibitors; (4) build-out of our development and manufacturing capabilities; and (5) other working capital purposes, including general operating expenses. We believe that such proceeds together with our existing cash and cash equivalents will be sufficient to fund our operations for at least the next twelve months. However, changing circumstances may cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more money than currently expected because of circumstances beyond our control. We may require additional capital for the further development and commercialization of our product candidates and may need to raise additional funds sooner if we choose to expand more rapidly than we presently anticipate.

Additional funding may not be available on acceptable terms, or at all. We have no committed source of additional capital and if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. We could be required to seek collaborators for our product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to our product candidates in markets where we otherwise would seek to pursue development or commercialization ourselves.

Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us.

We need to oversee manufacturing of a complex supply chain of cellular therapy product candidates, viral vectors and small molecule drugs.

Because of the complex nature of our products, we need to oversee manufacture of multiple components that require a diverse knowledge base and appropriate manufacturing personnel. The supply chain for these components is separate and distinct, and no single manufacturer can supply more than one component of each of our products. Additionally, it is likely that the cell therapy products will need to be made within an appropriate geographic location for the area in which the products will be utilized, so one cell therapy manufacturing facility may not be able to supply diverse geographic areas. Any lack of capabilities to store, freeze, thaw and infuse our cell therapies would adversely affect our business and prospects.

We expect to rely on third parties to manufacture a substantial portion of our clinical cell therapy product candidates, viral vectors and small molecule supplies in the United States and Europe.

We do not currently own any facility that may be used as our clinical-scale manufacturing and processing facility, and must currently rely on outside vendors to manufacture supplies and process our product candidates, which is and will need to be done on a patient-by-patient basis. We have not yet caused our product candidates to be manufactured or processed on a commercial scale. We may not be able to scale patient-by-patient manufacturing and processing to satisfy clinical or commercial demands for any of our product candidates. In addition, our anticipated reliance on a limited number of third-party manufacturers exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA or an equivalent foreign regulatory agency must approve any replacement contractor. This approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of FDA approval, if any.
- Our third-party manufacturers might be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Contract manufacturers may not be able to execute our manufacturing procedures appropriately.
- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.
- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Administration (or corresponding agencies in other geographic locations) to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our products.
- Our third-party manufacturers could breach or terminate their agreement with us.

Each of these risks could delay our clinical trials, the approval, if any of our product candidates by the FDA or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenue. In addition, we will rely on third parties to perform release tests on our product candidates prior to delivery to patients. If these tests are not appropriately done and test data are not reliable, patients could be put at risk of serious harm.

We expect to create our own manufacturing facility for supply of U.S. clinical and/or commercial cell therapy product candidate requirements, but there is no guarantee we will be able to do so.

Our intent to create internal manufacturing infrastructure will rely upon finding personnel with an appropriate background and training to staff and operate the facility on a daily basis. Should we be unable to find such individuals, we may need to rely on external contractors longer than anticipated, and train additional personnel to fill the needed roles. There are a small number of individuals with experience in cell therapy and the competition for such individuals is high.

Specifically, the establishment of a cell-therapy manufacturing facility is a complex endeavor requiring knowledgeable individuals who have successful previous experience in cleanroom designs. Cell therapy facilities, like other biological agent manufacturing facilities, require appropriate commissioning and validation activities to demonstrate that they operate as designed. Additionally, each manufacturing process must be validated through the performance of process validation runs to guarantee that the facility, personnel, equipment, and process work as designed. While we have developed our own manufacturing processes using an in-house process development team to maximize our understanding of our process, there is timing risk associated with in-house product manufacture.

Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Gene-modified cell therapy manufacture requires many specialty raw materials, some of which are manufactured by small companies with limited resources and experience to support a commercial product. Some suppliers typically support biomedical researchers or blood-based hospital businesses and may not have the capacity to support

commercial products manufactured under cGMP by biopharmaceutical firms. The suppliers may be ill-equipped to support our needs, especially in non-routine circumstances like an FDA inspection or medical crisis, such as widespread contamination. We also do not have commercial supply arrangements with many of these suppliers, and may not be able to contract with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key raw materials to support clinical or commercial manufacturing.

In addition, some raw materials are currently available from a single supplier, or a small number of suppliers. We cannot be sure that these suppliers will remain in business, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose.

We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and have no experience in marketing products. We intend to develop an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products, however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or overseas.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We plan to seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We may form or seek strategic alliances, create joint ventures or collaborations or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we rely on third parties to manufacture our drug substance and our drug product, and because we collaborate with various organizations and academic institutions on the advancement of our technology platform, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, such as trade secrets. Despite these contractual provisions, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business.

We may use our financial and human resources to pursue a particular research program or product candidate and fail to capitalize on programs or product candidates that may be more profitable or for which there is a greater likelihood of success.

Because we have limited resources, we may forego or delay pursuit of opportunities with certain programs or product candidates or for indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs for product candidates may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through strategic collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate, or we may allocate internal resources to a product candidate in a therapeutic area in which it would have been more advantageous to enter into a partnering arrangement. We are particularly susceptible to this risk because we are pursing clinical and preclinical development program in each of our CaspaCIDe, DeCIDe, CIDeCAR and GoCAR-T technologies. Resources spent on one of these programs could result in fewer resources to further develop the other programs.

We have limited information available regarding the ultimate cost of our products, and cannot estimate what the cost of our products will be upon commercialization, should that occur.

We do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing and processing of our product candidates, and the actual cost to manufacture and process our product candidates could materially and adversely affect the commercial viability of our product candidates. As a result, we may never be able to develop a commercially viable product. Because of the patient-specific nature of our manufacturing process, it is not amenable to traditional “scale up” to manufacture larger lots as is performed for traditional drugs and biological agents.

We and our contractors utilize hazardous materials in our business operations, and any claims relating to improper handling, storage, or disposal of these materials could harm our business.

Our activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers. Our manufacturers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials, and similar laws in other geographic regions. Although we believe that our manufacturers’ procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Our internal computer systems, or those used by our clinical investigators, contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. While we have not experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our clinical investigators, contractors and consultants, could be subject to power shortages, telecommunications failures, water shortages, floods, earthquakes, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates on a patient by patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

Our employees, independent contractors, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other illegal activity by our employees, independent contractors, consultants, commercial partners and vendors. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to: comply with the laws of the FDA and other similar foreign regulatory bodies; provide true, complete and accurate information to the FDA and other similar foreign regulatory bodies, comply with manufacturing standards we have established, comply with healthcare fraud and abuse laws in the United States and similar foreign fraudulent misconduct laws, or report financial information or data accurately or to disclose

unauthorized activities to us. If we obtain FDA approval of any of our product candidates and begin commercializing those products in the United States, our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. The laws that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other third-party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal Physician Payment Sunshine Act, created under the Health Reform Law, and its implementing regulations, which requires manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the United States Department of Health and Human Services, or HHS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we are subject to state and foreign equivalents of each of the healthcare laws described above, among others, some of which may be broader in scope and may apply regardless of the payor.

Effective upon the completion of this offering, we will adopt a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us

from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to clinical trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of any products we develop, alone or with corporate collaborators. We currently carry limited clinical and product liability insurance for CID-based product candidates. Although we maintain such insurance, our insurance policies may have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income may be limited. As a result of our most recent private placements and

other transactions that have occurred over the past three years, we may have experienced, and, upon completion of this offering, may experience, an "ownership change." We may also experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As of December 31, 2013, we had U.S. net operating loss carryforwards of approximately $26.9 million and U.S. research and development credits of $0.8 million, which could be limited if we experience an "ownership change."

Risks Related to Government Regulation

The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.

We have not previously submitted a Biologics License Application, or BLA, to the FDA, or similar approval filings to comparable foreign authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety, purity and potency for each desired indication. The BLA must also include significant information regarding the chemistry, manufacturing and controls for the product. We expect the novel nature of our product candidates to create further challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of T cell therapies for cancer. In addition, the cell and gene therapy office of the FDA has limited experience with combination products that include a small molecule component. Approval of our product candidates, including BPX-501, will require this FDA office to consult with another division of the FDA, which may result in further challenges in obtaining regulatory approval, including in developing final product labeling. The regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

We may also experience delays in completing planned clinical trials for a variety of reasons, including delays related to:

- the availability of financial resources to commence and complete our planned clinical trials;
- reaching agreement on acceptable terms with prospective clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- obtaining approval at each clinical trial site by an independent institutional review board, or IRB;
- recruiting suitable patients to participate in a clinical trial;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from clinical trial protocol, failing to follow GCPs, or dropping out of a clinical trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of qualified materials under cGMPs and applying them on a subject by subject basis for use in clinical trials.

We could also encounter delays if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such clinical trials are being conducted, the Data Monitoring Committee for such clinical trial, or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or clinical trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates.

The FDA may disagree with our regulatory plans and we may fail to obtain regulatory approval of our product candidates.

Our ongoing and planned Phase 1 and Phase 1/2 clinical trials of BPX-501 are designed to show enhanced immune system recovery in patients following an allogeneic (donor cells as opposed to the patient's own cells) HSCT. Following the completion of those clinical trials, and if the results are satisfactory, we plan to meet with the FDA in an end of phase two meeting to discuss our clinical trial design that could serve as the registration trial for our BLA for BPX-501 in that indication. We, or our institutional collaborators, are conducting and planning additional Phase 1 and Phase 1/2 clinical trials of BPX-501 in clinical trials designed to evaluate BPX-501 as a treatment for patients with recurrent disease (relapse) after an allogeneic HSCT. Following the completion of those clinical trials, and if the results are satisfactory, we plan to meet with the FDA in another end of phase two meeting to discuss whether our planned clinical trial design could serve as the registration trial for our BLA for BPX-501 in that indication. However, the general approach for FDA approval of a new biologic or drug is dispositive data from two adequate and well-controlled, Phase 3 clinical trials of the relevant biologic or drug in the relevant patient population. Phase 3 clinical trials typically involve hundreds of patients, have significant costs and take years to complete. We believe that a single Phase 3 clinical trial strategy is warranted given the limited alternatives for patients for which BPX-501 therapy is potentially beneficial, but the FDA may ultimately require more than one Phase 3 clinical trial and may limit clinical trial designs allowed to serve as a registration trial.

Our clinical trials results may not support approval. In addition, BPX-501 and our other product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our product candidates have the necessary safety, purity, and potency for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;
- we may encounter serious and unexpected adverse events during clinical trials that render our products unsafe for use in humans;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a BLA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve our manufacturing processes and/or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials. Studies and clinical trials conducted in one jurisdiction may not be accepted by

regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties and/or withdrawal of product approval if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a risk evaluation and mitigation strategy, or REMS, in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include, among other things, submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and cGCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or our or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- suspension or termination of manufacturing at one or more manufacturing facilities;
- product seizure or detention, or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community.

The use of engineered T cells as a potential cancer treatment is a recent development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community. We expect physicians in the large bone marrow transplant centers to be particularly influential and we may not be able to convince them to use our product candidates for many reasons. Factors will influence whether our product candidates are accepted in the market, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the availability of adequate coverage, reimbursement and pricing by third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of coverage by third-party payors, including government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies;
- confusion or lack of understanding regarding the effects of rimiducid and the timing and size of dosing of rimiducid after immune cell therapy; and
- the effectiveness of our sales and marketing efforts.

In addition, although we are not utilizing embryonic stem cells or replication competent vectors, adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technologies, and reported side effects from any clinical trials using these technologies or the failure of such clinical trials to demonstrate that these therapies are safe and effective may limit market acceptance our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

We plan to seek orphan drug designation for BPX-501 and rimiducid as a combination therapy, but we may be unable to obtain such designation or maintain the benefits associated with orphan drug status, including market exclusivity.

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition or for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for a disease or condition will be recovered from sales in the United States for that drug or biologic. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a BLA to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity.

Rimiducid has orphan drug designation for the treatment of acute graft-versus-host-disease, or GvHD, in patients undergoing bone marrow transplantation. Since BPX-501 and rimiducid are considered a combination product, we

are currently discussing the designation of orphan for the combination of BPX-501 and rimiducid for treatment of immunodeficiency after allogeneic transplant with the FDA, but exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. In addition, while we intend to seek orphan drug designation for other product candidates, we may never receive such designations.

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.

Successful sales of our product candidates, if approved, depend on the availability of coverage and adequate reimbursement from third-party payors. In addition, because our product candidates represent new approaches to the treatment of cancer, we cannot accurately estimate the potential revenue from our product candidates.

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Coverage and adequate reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. Even if we obtain coverage for a given product, the resulting reimbursement levels might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. Patients are unlikely to use our product candidates unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our product candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

We intend to seek approval to market our product candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our product candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in the EU, the pricing of biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a product candidate. In addition, market acceptance and sales of our product candidates will depend significantly on the availability of coverage and adequate reimbursement from third-party payors for our product candidates and may be affected by existing and future health care reform measures.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In particular, in 2010, the Patient Protection and Affordable Care Act, as

amended by the Health Care and Education Reconciliation Act, collectively, the Healthcare Reform Act, was enacted in the United States. The Healthcare Reform Act and its implementing regulations, among other things, revised the methodology by which rebates owed by manufacturers to the state and federal government for covered outpatient drugs and certain biologics, including our product candidates, under the Medicaid Drug Rebate Program are calculated, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research.

Other legislative changes have been proposed and adopted in the United States since the Healthcare Reform Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, which went into effect on April 1, 2013, and will stay in effect through 2024 unless Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Third party payors may also have difficulty in determining the appropriate coverage of our product candidates, if approved, due to the fact that they are combination products that include a small molecule drug (rimiducid). To the extent there are any delays in determining such coverage or inadequate coverage for all aspects of our combination therapies, it would adversely affect the market acceptance of our product candidates.

Due to the novel nature of our technology and the small size of our target patient populations, we face uncertainty related to pricing and reimbursement for these product candidates.

Our target patient populations are relatively small, as a result, the pricing and reimbursement of our product candidates, if approved, must be adequate to support commercial infrastructure. If we are unable to obtain adequate levels of reimbursement, our ability to successfully market and sell our product candidates will be adversely affected. The manner and level at which reimbursement is provided for services related to our product candidates (e.g., for administration of our product to patients) is also important. Inadequate reimbursement for such services may lead to physician resistance and adversely affect our ability to market or sell our products.

Risks Related to Our Intellectual Property

We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. Technology that we license from others includes rimiducid, which is the small molecule activating agent that forms a part of our current and future product candidates and that we license from ARIAD. ARIAD may terminate or modify our license upon a material breach by us that remains uncured following the date that is 30 days after written notice of a payment breach and 90 days for any other breach, and effective immediately upon certain insolvency events. In addition, ARIAD may terminate our license, upon notice to us, if we do not make certain lump sum installment payments within specific timeframes from the date such payments are due. In addition, ARIAD in-licenses some of the intellectual property rights it licenses to us. To the extent ARIAD fails to meet its obligations under its license agreements, which we are not in control of, we may lose the benefits of our license agreement with ARIAD. We license from Baylor College of Medicine, or Baylor, certain intellectual property related to methods for activating antigen presenting cells and to certain genetic constructs. Baylor may terminate or modify our licenses in the event of a material breach by us that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. In addition, we have funded certain of our ongoing clinical development and will fund certain of our future clinical development with funds from the state of Texas. The state may have rights to commercialize the results of those clinical trials if it determines that we have failed, after notice and an opportunity to cure, to use diligent and commercially reasonable efforts to commercialize or otherwise bring to practical application the results of the funded clinical trials. We are in advanced negotiations with Baylor for an exclusive license to intellectual property concerning the use of inducible caspase technology for elimination of transplanted cells.

Any termination of these agreements could result in the loss of significant rights and could harm our ability to commercialize our product candidates. See “Business—Our License Agreements” for additional information regarding our license agreements.

Disputes may also arise between us and our licensors and other partners regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

If our efforts to protect the proprietary nature of our technologies are not adequate, we may not be able to compete effectively in our market.

Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Certain intellectual property which is covered by our in-license agreements has been developed at academic institutions which have retained non-commercial rights to such intellectual property.

There are several pending U.S. and foreign patent applications in our portfolio, and we anticipate additional patent applications will be filed both in the United States and in other countries, as appropriate. However, we cannot predict:

- if and when patents will issue;
- the degree and range of protection any issued patents will afford us against competitors including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose.

Composition of matter patents for biological and pharmaceutical products are generally considered to be the strongest form of intellectual property. We cannot be certain that the claims in our pending patent applications directed to compositions of matter for our product candidates will be considered patentable by the United States Patent and Trademark Office, or the USPTO, or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid by courts in the United States or foreign countries. Method of use patents have claims directed to the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products “off-label.” Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, patents in our portfolio may not adequately exclude third parties from practicing relevant technology or prevent others from designing around our claims. If the breadth or strength of our intellectual property position with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that patent applications in our portfolio were the first filed patent applications related to our product candidates. Furthermore, for United States applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. For United States applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law with the passage of the America Invents Act (2012) which brings into effect significant changes to the U.S. patent laws that are yet untried and untested, and which introduces new procedures for challenging pending patent applications and issued patents. A primary change under this reform is creating a “first to file” system in the U.S. This will require us to be cognizant going forward of the time from invention to filing of a patent application.

We are aware that patent coverage on rimiducid, the dimerization molecule AP1903, will expire in 2016. Any additional barriers to entry for competitors to use rimiducid after patent expiration may not be effective in preventing such use. Because rimiducid is an inert molecule in the absence of its specific dimerizer binding region that must, itself, be delivered to a cell, we believe that rimiducid is not a drug that could gain regulatory approval on its own. Additionally, we do not believe any generic pathway to approval exists for rimiducid. However, we cannot be certain that third parties will not pursue an abbreviated new drug application for approval of rimiducid.

We rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our product discovery and development processes that involve proprietary know-how, information, or technology that is not covered by patents. We require all of our employees to assign their inventions to us, and require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements; however, we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Recently, under U.S. patent reform, new procedures including *inter partes* review and post grant review have been implemented. As stated above, this reform is untried and untested and will bring uncertainty to the possibility of challenge to our patents in the future. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents, of which we are currently unaware or have not sufficiently analyzed with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover aspects of our formulations, the manufacturing process of our product candidates, constructs or molecules used in or formed during the manufacturing process, methods of use, including combination therapy or patient selection methods or any final product itself, the holders of any such patents may be able to block our ability to develop and commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

We are aware of a third party patent having claims directed to chimeric DNA comprising DNA segments encoding (i) a single chain antibody domain and (ii) transmembrane and cytoplasmic domains of an endogenous protein. Even though we have reason to believe that our BPX-401 and BPX-601 technologies are not covered by claims of this patent, an owner or licensee of the patent still might bring a patent infringement suit against us. If the patent is asserted against us, we may not prevail in defending against claims of infringement and/or challenging the validity of claims in the patent. We may not successfully develop alternative technologies or enter into an agreement by which we obtain rights to the patent. These rights, if necessary, may not be available on terms acceptable to us.

Also, while we are aware there are third party patents having claims that may be considered relevant to BPX-201, BPX-401 and BPX-601 technologies for which we are seeking, or plan to seek, regulatory approval, we believe those patents have a patent term that may expire prior to the time we expect to obtain regulatory approval for these technologies. The estimated expiration dates for those patents were determined according to information on the face pages of the patents, and certain factors that could influence patent term, such as patent term adjustment and patent term extension, for example, were not factored into these estimates. Accordingly, the estimated expiration dates of those patents may not be accurate and one or more of those patents may not expire before we obtain regulatory approval for an applicable technology. Owners or licensees of one or more of those patents may bring a patent infringement suit against us. If one or more of those patents are asserted against us, we may be able to assert a defense for a safe harbor to patent infringement under 35 U.S.C. 271(e)(1) if certain requirements are met. It is possible that (i) certain of these requirements may not be met, and/or (ii) one or more of the third party patents might expire after one or more of our technologies obtain regulatory approval, and consequently we may not successfully assert such a defense to patent infringement. If we are unsuccessful in asserting a defense under 35 U.S.C. 271(e)(1), it is possible we may not prevail in defending against claims of infringement and/or challenging the validity of claims in those patents. We may not successfully develop alternative technologies or enter into agreements by which we obtain rights to applicable patents. These rights, if necessary, may not be available on terms acceptable to us.

We are also aware of third party patents having claims directed to single-chain antibody fragments that bind to prostate stem cell antigen, or PSCA, and those patents may be considered relevant to BPX-601 technologies we are developing. We are currently evaluating whether or not a license may be obtained for rights to those patents. If we determine it is necessary to obtain rights to one or more of those patents, we may not successfully enter into an agreement or agreements required for obtaining rights to those patents, and these rights may not be available on terms acceptable to us. We also may not successfully develop alternative technologies if we cannot secure rights to those patents.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license or use these proprietary rights.

Our product candidates may also require specific formulations to work effectively and efficiently and these rights may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

There can be no assurance that we will be able to successfully complete negotiations and ultimately acquire the rights to the intellectual property that we may seek to acquire in the future.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Interference proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or interference proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Obtaining and maintaining our patents depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent position could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. Such noncompliance events are outside of our direct control for (i) non-U.S. patents and patent applications owned by us, and (ii) patents and patent applications licensed to us by another entity. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or the USPTO.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions (e.g., opposition

proceedings). Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art and that prior art that was cited during prosecution, but not relied on by the patent examiner, will not be revisited. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patents directed to our product candidates. Such a loss of patent rights could have a material adverse impact on our business.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the recent case, *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.,* the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. While we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents.

We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world.

We have limited intellectual property rights outside the United States. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patents to develop their own products and further, may export otherwise infringing products to territories where we have patents, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property, particularly those relating to biopharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to This Offering and Ownership of our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering there has been no public market for shares of our common stock. Although we have applied to list our common stock on The NASDAQ Global Market, an active trading market for our shares may never develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The initial public offering price for our common stock was determined through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of the common stock after the offering. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of the planned clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our CID technology platform and our small molecule drug rimiducid;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;

- the size and growth of our initial target markets;
- our ability to successfully treat additional types of diseases and cancers or at different stages;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immunotherapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and The NASDAQ Global Market and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, our executive officers, directors, and 5% stockholders beneficially owned approximately 45.9% of our voting stock as of September 30, 2014, and, upon the closing of this offering, that same group will hold approximately % of our outstanding voting stock, assuming no exercise of the underwriters' option to purchase additional shares and that none of the holders of Series B convertible preferred stock will elect to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock in connection with this offering, in each case based on the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus). Therefore, even after this offering, these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The initial public offering price is substantially higher than the net tangible book value per share of our common stock. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the book value of our tangible assets after subtracting our liabilities. As a result, investors purchasing common stock in this offering will incur immediate dilution of $ per share, based on the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus). Further, investors purchasing common stock in this offering will contribute approximately % of the total amount invested by stockholders since our inception, but will own only approximately % of the shares of common stock outstanding after giving effect to this offering.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering and the exercise of stock options granted to our employees. To the extent outstanding options or warrants are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a “smaller reporting company” which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Securities Exchange Act of 1934, which will require, among other things, that we file with the Securities and Exchange Commission, or the SEC, annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and The NASDAQ Global Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as “say on pay” and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of this offering. We intend to take advantage of this new legislation but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

We have identified a material weakness in our internal control over financial reporting. If our internal control over financial reporting is not effective, we may not be able to accurately report our financial results or file our periodic reports in a timely manner, which may cause investors to lose confidence in our reported financial information and may lead to a decline in our stock price.

Effective internal control over financial reporting is necessary for us to provide reliable financial reports in a timely manner. In connection with the audits of our financial statements for the years ended December 31, 2012 and 2013 and for the six month period ended June 30, 2014, we concluded that there was a material weakness in our internal control over financial reporting. A material weakness is a significant deficiency, or a combination of significant deficiencies, in internal control over financial reporting such that it is reasonably possible that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

The material weakness related to (a) a lack of internal controls over accounting and financial reporting, particularly surrounding nonroutine transactions and financial reporting, (b) a lack of sufficient staff, including the lack of a chief financial officer or other senior finance executive, and (c) a lack of formalized accounting policy and procedure documentation that is followed by accounting personnel. The material weakness resulted in adjustments that were primarily related to non-routine transactions and impacted intangible assets, prepaid manufacturing costs, accrued liabilities, equity, expenses and income taxes. .

In an attempt to remediate our resource weakness, we are actively attempting to hire a chief financial officer and hire additional finance and accounting personnel to augment our accounting staff and to provide more resources for complex accounting matters and financial reporting. In addition, we are working to establish a standard accounting and operation procedures manual outlining the corporate policies and accounting practices to be followed. However, we cannot assure you that these efforts will remediate our material weakness in a timely manner, or at all, or prevent

restatements of our financial statements in the future. If we are unable to successfully remediate our material weakness or identify any future significant deficiencies or material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports, and our stock price may decline as a result.

In addition, even if we remediate our material weakness, following the completion of this offering, we will be required to expend significant time and resources to further improve our internal controls over financial reporting, including by further expanding our finance and accounting staff. If we fail to adequately staff our accounting and finance function to remediate our material weaknesses and our significant deficiency or otherwise to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, or fail to maintain adequate internal control over financial reporting, any new or recurring material weakness could prevent our management from concluding our internal control over financial reporting is effective and impair our ability to prevent material misstatements in our financial statements, which could cause our business to suffer.

Changes in accounting rules, assumptions and/or judgments could materially and adversely affect us.

Accounting rules and interpretations for certain aspects of our operations are highly complex and involve significant assumptions and judgment. These complexities could lead to a delay in the preparation and dissemination of our financial statements. Furthermore, changes in accounting rules and interpretations or in our accounting assumptions and/or judgments, such as asset impairments, could significantly impact our financial statements. In some cases, we could be required to apply a new or revised standard retroactively, resulting in restating prior period financial statements. Any of these circumstances could have a material adverse effect on our business, prospects, liquidity, financial condition and results of operations.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on shares of common stock outstanding as of June 30, 2014, upon the closing of this offering we will have outstanding a total of shares of common stock. Of these shares, only the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction in the public market immediately following this offering. Jefferies LLC, however, may, in its sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

We expect that the lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. After the lock-up agreements expire, up to an additional shares of common stock will be eligible for sale in the public market, of which shares are held by directors, executive officers and other affiliates and will be subject to volume limitations under Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under our employee benefit plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering, the holders of shares of our common stock as of June 30, 2014 will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the 180-day lock-up agreements described above. See "Description of Capital Stock—Registration Rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plan, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and

costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

Pursuant to our 2014 equity incentive plan, or the 2014 plan, which will become effective on the business day prior to the public trading date of our common stock, our management is authorized to grant stock options to our employees, directors and consultants. Additionally, the number of shares of our common stock reserved for issuance under the 2014 plan will automatically increase on January 1 of each year, beginning on January 1, 2015 and continuing through and including January 1, 2024, by % of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. We intend to use the net proceeds from this offering to fund (1) our ongoing and planned Phase 1/2 clinical trials of BPX-501; (2) pre-clinical and Phase 1/2 clinical trials of BPX-401, BPX-601 and BPX-701 and preclinical development of our other CAR T and TCR programs; (3) our planned Phase 1/2 clinical trials of BPX-201 in combination with checkpoint inhibitors; (4) build-out of our development and manufacturing capabilities; and (5) other working capital purposes, including general operating expenses. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and amended and restated bylaws, which are to become effective at or prior to the closing of this offering, contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer, or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and

- the authority of the board of directors to issue convertible preferred stock on terms determined by the board of directors without stockholder approval and which convertible preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no securities or industry analysts commence coverage of our company, the trading price for our stock would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward-looking statements. We may, in some cases, use words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would” or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes to identify these forward-looking statements. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the success, cost and timing of our product development activities and clinical trials;
- our ability to advance CID-based technologies, including CaspaCIDe, CIDeCAR, GoCAR-T and DeCIDe;
- our ability to obtain and maintain regulatory approval of BPX-501 and any other product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates;
- the commercialization of our product candidates, if approved;
- our plans to research, develop and commercialize our product candidates;
- our ability to attract collaborators with development, regulatory and commercialization expertise;
- future agreements with third parties in connection with the commercialization of our product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel, including a Chief Financial Officer;
- our ability to grow our organization and increase the size of our facilities to meet our anticipated growth;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our use of the proceeds from this offering; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates.

These forward-looking statements reflect our management’s beliefs and views with respect to future events and are based on estimates and assumptions as of the date of this prospectus and are subject to risks and uncertainties. We discuss many of these risks in greater detail under “Risk Factors.” Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $ million (or approximately $ million if the underwriters' option to purchase additional shares is exercised in full) from the sale of the shares of common stock offered by us in this offering, based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us by $ million, assuming the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, to establish a public market for our common stock and to facilitate our future access to the public equity markets. We intend to use the net proceeds from this offering for the following purposes:

- approximately $ million to fund our ongoing and planned Phase 1/2 clinical trials of BPX-501;
- approximately $ million to fund pre-clinical and Phase 1/2 clinical trials of BPX-401, BPX-601 and BPX-701 and preclinical development of our other CAR T and TCR programs;
- approximately $ million to fund our planned Phase 1/2 clinical trials of BPX-201 in combination with checkpoint inhibitors;
- approximately $ million to fund build-out of our development and manufacturing capabilities; and
- the remainder to fund other working capital purposes, including general operating expenses.

We may also use a portion of the remaining net proceeds to in-license, acquire, or invest in complementary businesses, technologies, intellectual property, products or assets. However, we have no current commitments or obligations to do so.

Furthermore, we anticipate that we will use our cash and cash equivalents on hand to pay our obligations under a promissory note held by ARIAD, or the ARIAD note, including $20 million of which we expect to pay upon the closing of this offering and $15 million of which we intend to pay on or prior to June 30, 2016.

Our expected use of the net proceeds from this offering represents our current intentions based upon our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to gain access to additional financing, the relative success and cost of our research, preclinical and clinical development programs and whether we are able to enter into future licensing arrangements. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds of this offering. In addition, we might decide to postpone or not pursue clinical trials or preclinical activities if the net proceeds from this offering and any other sources of cash are less than expected.

Pending their use, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

Prior to the filing of our amended and restated certificate of incorporation in connection with our Series C financing in August 2014, the holders of our Series B convertible preferred stock were entitled to receive an annual accrued dividend equal to 6% of the original purchase price for shares of our Series B convertible preferred stock. These accrued dividends are payable upon conversion of the Series B convertible preferred stock, which will occur in connection with the closing of this offering, and will be paid in cash, unless a holder requests that such dividend be paid in shares of our common stock. As of June 30, 2014, the aggregate accrued dividend was approximately $3.0 million. Except for the foregoing, we do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant. In addition, the terms of our existing line of credit prohibits us from paying dividends. We intend to request a waiver of this prohibition in connection with the payment of the accrued dividend to holders of our Series B convertible preferred stock referred to above.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of June 30, 2014:

- on an actual basis;
- a -for- reserve stock split of our common stock to be effected prior to the effectiveness of the registration statement of which this prospectus is a part;
- on a pro forma basis, giving effect to (1) the conversion of all our outstanding shares of our convertible preferred stock as of June 30, 2014 into an aggregate of shares of our common stock in connection with the closing of this offering, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) and (2) the net exercise, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), of 200,002 outstanding warrants (which will expire upon completion of this offering if not exercised) into shares of our common stock; and
- pro forma as adjusted amounts reflect the pro forma conversion adjustments described above as well as the sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma information below is illustrative only and our capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and the related notes appearing elsewhere in this prospectus.

	AS OF JUNE 30, 2014		
(in thousands, except per share data)	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED (1)
Cash and cash equivalents	$12,157	$	$
Convertible redeemable preferred stock:			
Series A preferred stock, $0.01 par value: 2,800,000 shares authorized and 2,544,539 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	7,634		
Series B preferred stock, $0.01 par value: 8,900,000 shares authorized and 8,145,989 issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	40,716		
Stockholders’ deficit:			
Common stock, $0.01 par value: 19,200,000 shares authorized and 3,603,188 shares issued and outstanding, actual; 200,000,000 shares authorized and shares issued and outstanding, pro forma; and 200,000,000 shares authorized and shares issued and outstanding, pro forma as adjusted	36		
Additional paid-in capital	45		
Accumulated deficit	(34,549)		
Total stockholders’ deficit	(34,468)		
Total capitalization	13,882		

(1) Each $1.00 increase or (decrease) in the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) would increase or (decrease), respectively, the amount of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a one million share increase or (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase or (decrease), respectively, the amount of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock to be outstanding after this offering is based on 3,603,188 shares of common stock outstanding as of June 30, 2014, and assumes:

- the issuance by us of shares of our common stock in this offering;
- the conversion of all of our convertible preferred stock outstanding into an aggregate of shares of common stock upon the closing of this offering;
- the net exercise of outstanding warrants to purchase common stock for an aggregate of shares of common stock (based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus)); and
- none of the holders of Series B convertible preferred stock will elect to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock in connection with this offering.

and excludes:

- 6,559,598 shares of Series C convertible preferred stock issued upon the exercise of warrants issued by us in August 2014, pursuant to that certain Series C Preferred Stock and Warrant Purchase Agreement, or the Series C Purchase Agreement;
- 2,744,000 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2014, at a weighted-average exercise price of $1.38 per share;
- shares of our common stock reserved for future issuance under the 2014 plan, which will become effective as of the date of the effectiveness of the registration statement to which this prospectus is a part including the 338,500 shares of common stock reserved for issuance under the 2011 Plan, and 10,000 shares of common stock reserved for issuance under our 2006 Plan, which shares will be added to the shares reserved under the 2014 plan;
- shares of common stock reserved for future issuance under the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 604,167 shares of common stock issuable upon the exercise of outstanding warrants as of June 30, 2014, at an exercise price of $0.001 per share.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

Our historical net tangible book value as of June 30, 2014, was approximately $13.88 million, or $3.853 per share of our common stock. Our historical net tangible book value is the amount of our total tangible assets less our liabilities and convertible preferred stock which is not included within stockholders' equity. Historical net tangible book value per share is our historical net tangible book value divided by the number of shares of common stock outstanding as of June 30, 2014.

Our pro forma net tangible book value as of June 30, 2014, was $ million, or $ per share of common stock. Pro forma net tangible book value gives effect to (1) the conversion of all our outstanding shares of our convertible preferred stock as of June 30, 2014 into an aggregate of shares of our common stock in connection with the closing of this offering, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) and (2) the net exercise, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), of 200,002 outstanding warrants (which will expire upon completion of this offering if not exercised) into shares of our common stock.

Pro forma as adjusted net tangible book value is our pro forma net tangible book value (deficit), plus the effect of (1) the sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders, and an immediate dilution of $ per share to new investors participating in this offering.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share, the mid-point of the price range set forth on the cover page of this prospectus		$
Historical net tangible book value per share as of June 30, 2014	$	
Pro forma increase in net tangible book value per share as of June 30, 2014 attributable to the conversion of outstanding preferred stock		
Pro forma net tangible book value per share as of June 30, 2014		
Increase in pro forma net tangible book value per share attributable to investors participating in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Pro forma as adjusted dilution per share to investors participating in this offering		$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $ per share and the dilution in pro forma per share to investors participating in this offering by approximately $ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $ and decrease (increase) the dilution in pro forma per share to investors participating in this offering by approximately $, assuming the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of our common stock in this offering, the pro forma as adjusted net tangible book value will increase to $ per share, representing an immediate increase in pro forma as adjusted net tangible book value to existing stockholders of $ per share and an immediate decrease of dilution of $ per share to new investors participating in this offering.

The following table summarizes, on a pro forma as adjusted basis as of June 30, 2014, the number of shares purchased or to be purchased from us, the total consideration paid or to be paid to us, and the average price per share paid or to be paid to us by existing stockholders and investors participating in this offering at an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table below shows, investors participating in this offering will pay an average price per share substantially higher than our existing stockholders paid.

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing stockholders before this offering		%	$	%	$
Investors participating in this offering					
Total		100%	$	100%	

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) would increase (decrease) the total consideration paid by investors participating in this offering, total consideration paid by all stockholders and the average price per share paid by all stockholders by approximately $ million, $ million and $, respectively, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by investors participating in this offering, total consideration paid by all stockholders and the average price per share paid by all stockholders by approximately $ million, $ million and $, respectively, assuming the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of our common stock in this offering, the number of shares of common stock held by existing stockholders will be reduced to % of the total number of shares of common stock to be outstanding after this offering, and the number of shares of common stock held by investors participating in this offering will be further increased to , or % of the total number of shares of common stock to be outstanding after this offering.

The number of shares of our common stock to be outstanding after this offering is based on 3,603,188 shares of common stock outstanding as of June 30, 2014, and assumes:

- the issuance by us of shares of our common stock in this offering
- the conversion of all of our convertible preferred stock outstanding into an aggregate of shares of common stock upon the closing of this offering
- the net exercise of outstanding warrants to purchase common stock for an aggregate of shares of common stock (based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus))
- none of the holders of Series B convertible preferred stock will elect to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock in connection with this offering

and excludes:

- 6,559,598 shares of our Series C convertible preferred stock issuable upon the exercise of warrants, issued by us in August 2014, pursuant to the Series C Purchase Agreement
- 2,744,000 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2014, at a weighted-average exercise price of $1.38 per share
- shares of our common stock reserved for future issuance under the 2014 plan, which will become effective as of the date of the effectiveness of the registration statement to which this prospectus is a part including the 338,500 shares of common stock reserved for issuance under the 2011 Plan, and 10,000 shares of common stock reserved for issuance under the 2006 Plan, which shares will be added to the shares reserved under the 2014 plan
- shares of common stock reserved for future issuance under the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering
- 604,167 shares of common stock issuable upon the exercise of outstanding warrants as of June 30, 2014, at an exercise price of $0.001 per share

We may choose to raise additional capital through the sale of equity or convertible debt securities due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent we issue additional shares of common stock or other equity or convertible debt securities in the future, there will be further dilution to investors participating in this offering.

SELECTED FINANCIAL DATA

This section should be read together with our financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. We derived the selected statement of operations data for the years ended December 31, 2012 and 2013 and the six months ended June 30, 2014 and the selected balance sheet data as of December 31, 2012 and 2013 and June 30, 2014 from our audited financial statements and related notes appearing elsewhere in this prospectus. We derived the selected statement of operations data for the six months ended June 30, 2013 from our unaudited financial statements and related notes appearing elsewhere in this prospectus. The selected financial data in this section are not intended to replace our financial statements and the related notes. The unaudited financial data, in management's opinion, have been prepared on the same basis as the audited financial statements and related notes included elsewhere in this prospectus, and include all adjustments, consisting only of normal recurring adjustments, that management considers necessary for a fair presentation of the information for the periods presented. Our historical results are not necessarily indicative of the results that may be expected in the future and results from our interim period may not necessarily be indicative of the results of the entire year.

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
(in thousands, except share and per share data)	2012	2013	2013 (unaudited)	2014
Statement of Operations Data:				
Grant revenue	$ 1,470	$ 1,941	$ 400	$ 1,106
Operating expenses:				
Research and development	5,796	7,050	2,611	4,745
General and administrative	1,943	2,813	1,333	1,911
Total operating expenses	7,739	9,863	3,944	6,656
Loss from operations	(6,269)	(7,922)	(3,544)	(5,550)
Other income (expense):				
Interest income	7	4	1	6
Interest expense	(1)	(51)	(24)	(26)
Total other income (expense)	6	(47)	(23)	(20)
Net loss	$ (6,263)	$ (7,969)	$ (3,567)	$ 5,570
Net loss available to common stockholders	$ (6,263)	$ (7,969)	$ (1.22)	$ (1.64)
Net loss per share, basic and diluted	$ (2.13)	$ (2.72)	$ (1.22)	$ (1.64)
Weighted-average shares outstanding, basic and diluted(1)	2,801,938	2,934,188	2,934,188	3,382,950
Pro forma net loss (unaudited)		$		
Pro forma net loss per share, basic and diluted (unaudited)(2)		$		
Pro forma weighted-average shares outstanding, basic and diluted (unaudited)(2)				

(1) See Note 2 to our financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate the basic and diluted net loss per common share and the number of shares used in the computation of the per share amounts.

(2) The calculations for the unaudited pro forma net loss per common share, basic and diluted, assume the conversion of all our outstanding shares of convertible preferred stock as of June 30, 2014 into an aggregate of 10,690,528 shares of our common stock.

(in thousands)	AS OF DECEMBER 31, 2012	AS OF DECEMBER 31, 2013	AS OF JUNE 30, 2014
Balance Sheet Data:			
Cash and cash equivalents	$ 1,632	$ 11,168	$ 12,157
Working capital	256	9,963	12,502
Total assets	5,186	14,942	16,456
Convertible preferred stock	21,658	39,926	48,350
Accumulated deficit	(21,010)	(28,979)	(34,549)
Total stockholders' deficit	(19,473)	(28,152)	(34,468)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with "Selected Financial Data" and our financial statements and related notes included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon current beliefs, plans and expectations that involve risks, uncertainties and assumptions, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this prospectus. You should carefully read the "Risk Factors" section of this prospectus to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see the section entitled "Special Note Regarding Forward-Looking Statements."

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. We are using our proprietary Chemical Induction of Dimerization, or CID, technology platform to engineer and then control components of the immune system in real time. By incorporating our CID platform, our product candidates may offer better safety and efficacy outcomes than are seen with current cellular immunotherapies.

We are developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including HSCT, CAR T cell therapy, and dendritic cell vaccines. By incorporating our novel switch technologies, we are developing product candidates with the potential to elicit positive clinical outcomes and ultimately change the treatment paradigm in various areas of cellular immunotherapy. Our clinical product candidates, each of which is a combination product of genetically modified rimiducid, are described below.

- ***BPX-501.*** We are developing a CaspaCIDe product candidate, BPX-501, as an adjunct T-cell therapy administered after allogeneic HSCT, using donor stem cells. BPX-501 is designed to decrease the risk of including T cells with the transplant by enabling the elimination of donor T cells through the triggering of the CaspaCIDe safety switch upon emergence of GvHD. BPX-501 is currently being evaluated in multiple Phase 1/2 clinical trials in the United States and Europe, with the first top-line data expected in the second half of 2015.
- ***BPX-201.*** We are developing a DeCIDe product candidate, BPX-201, as a dendritic cell cancer vaccine made from the patient's own white blood cells, designed to treat mCRPC. It targets the prostate specific membrane antigen, or PSMA, and uses our DeCIDe activation switch technology. BPX-201 is currently being evaluated in an 18-patient Phase 1 clinical trial for mCRPC. We are evaluating opportunities for BPX-201 in combination with other cancer immunotherapies, such as checkpoint inhibitors.

In addition, our preclinical product candidates are designed to overcome the current limitations of CAR-T and TCR therapies and include the following:

- ***BPX-401.*** We are developing a CIDeCAR product candidate, BPX-401, as a next-generation CAR T cell therapy for hematological cancers that express the CD19 antigen.
- ***BPX-601.*** We are developing a GoCAR-T product candidate, BPX-601, for solid tumors overexpressing PSCA, such as prostate, pancreatic, bladder, esophageal and gastric cancers.
- ***BPX-701.*** We are developing a CaspaCIDe TCR product candidate, BPX-701, in collaboration with Leiden University Medical Center, initially for the treatment of PRAME-expressing melanoma, sarcomas and neuroblastoma.

We expect to file INDs for BPX-701 in the second half of 2015 and for BPX-401 and BPX-601 in 2016. Our IND-enabling activities for each of these preclinical product candidates include manufacturing key components and developing a robust process to produce cell products that comply with regulations of the FDA, and other regulatory agencies. We have developed an efficient and scalable process to manufacture genetically modified T cells of high

quality and purity. This process is being implemented by our third-party contract manufacturers to produce BPX-501 for our clinical trials. We expect to leverage our resources, capabilities and expertise for the manufacture of our CAR-T and TCR product candidates.

Recent Developments

To enable further development of our proprietary technology and product candidates, we completed a private placement of $55 million of Series C convertible preferred stock and warrants to purchase Series C convertible preferred stock in August 2014. Investors in the transaction included, among others, Baker Brothers, RA Capital Management, LLC, Perceptive Advisors, LLC, Jennison Associates LLC (on behalf of certain clients), Sabby Capital, LLC, Ridgeback Capital Management, venBio Select, Redmile Group, LLC and AJU IB Investment, as well as our then current investors, including AVG Ventures and Remeditex Ventures.

Certain aspects of our platform technology are inlicensed from ARIAD. In October 2014, we amended our license agreement with ARIAD, pursuant to which we agreed to pay ARIAD $50 million in three tranched payments, including an initial payment of $15 million in connection with the execution of the amendment. In exchange, we received from ARIAD a fully paid-up license to its cell-signaling technology and ARIAD agreed to return of all of the 1,151,688 shares of our common stock currently held by ARIAD at the time of the second tranche payment. The scope of the license and the field of use were also expanded as part of the amendment. The amended agreement gives us a worldwide exclusive license to ARIAD's cell-signaling technology for broad use in human cell therapies for all diseases on a royalty- and milestone-free basis.

Financial Operations Overview

Revenue

To date, we have only recognized revenue from government grants and we have not generated any product revenue. We receive funds from the Cancer Prevention and Research Institute of Texas, or CPRIT, and the National Institute of Health, or NIH, which are awarded based on the progress of the program being funded. Grant money is not received until expenses for the program are incurred. We accrue the revenue based on the costs incurred for the programs associated with the grant.

During 2011, we entered into a grant agreement with CPRIT for approximately $5.7 million covering a three year period from July 1, 2011 through June 30, 2014. The grant allowed us to receive funds in advance of costs and allowable expenses being incurred. On a quarterly basis, we are required to submit a financial reporting package outlining the nature and extent of reimbursed costs under the grant. At the end of each period, any excess funds received in advance, or paid prior to reimbursement, result in a deferred liability or grant receivable.

In the future, we may generate revenue from a combination of product sales, government or other third-party grants, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or a combination of these approaches. We expect that any revenue we generate will fluctuate from quarter to quarter as a result of the timing and amount of license fees, milestone and other payments, and the amount and timing of payments that we receive upon the sale of our products, to the extent any are successfully commercialized. If we fail to complete the development of our product candidates in a timely manner or obtain regulatory approval of them, our ability to generate future revenue, and our results of operations and financial position, would be materially adversely affected.

Funds from the NIH are granted based on the progress of the program being funded. Grant money is not received until expenses for the program are incurred. We accrue the revenue based on the costs incurred for the programs associated with the grant.

Research and Development Expenses

To date, our research and development expenses have related primarily to the development of our CID platform and the identification and development of our product candidates. Research and development expenses consist of expenses incurred in performing research and development activities, including compensation and benefits for research and development employees and consultants, facilities expenses, overhead expenses, cost of laboratory supplies, manufacturing expenses, fees paid to third parties and other outside expenses.

Research and development costs are expensed as incurred. Clinical trial and other development costs incurred by third parties are expensed as the contracted work is performed. We accrue for costs incurred as the services are being provided by monitoring the status of the clinical trial or project and the invoices received from our external service providers. We adjust our accrual as actual costs become known. Where contingent milestone payments are due to third parties under research and development arrangements, the milestone payment obligations are expensed when the milestone results are achieved.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase over the next several years as we seek to conduct our ongoing and planned clinical trials for BPX-501, BPX-201, BPX-401, BPX-601 and BPX-701 and as we selectively develop additional product candidates. However, it is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates.

The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors that include, but are not limited to, the following:

- per patient clinical trial costs;
- the number of patients that participate in the clinical trials;
- the number of sites included in the clinical trials;
- the process of collection, differentiation, selection and expansion of immune cells for our cellular immuno-therapies;
- the countries in which the clinical trials are conducted;
- the length of time required to enroll eligible patients;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up; and
- the efficacy and safety profile of the product candidates.

In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in executive, finance, accounting, business development and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to patent and corporate matters and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities, potential commercialization of our product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company, including expenses related to services associated with maintaining compliance with NASDAQ listing rules and SEC requirements, insurance and investor relations costs.

Other Income (Expense)

Other income (expense), net consists of our interest income and interest expense.

Results of Operations

Comparison of Six Months ended June 30, 2013 and 2014

The following table sets forth our results of operations for the six months ended June 30, 2013 and 2014:

(in thousands)	SIX MONTHS ENDED JUNE 30, 2013 (unaudited)	2014	CHANGE $
Grant revenues	$ 400	$ 1,106	$ 706
Operating expenses:			
Research and development	2,611	4,745	2,134
General and administrative	1,333	1,911	578
Total operating expenses	3,944	6,656	2,712
Loss from operations	(3,544)	(5,550)	(2,006)
Other income (expense):			
Interest income	1	6	5
Interest expense	(24)	(26)	(2)
Other (expense) income	—	—	—
Total other income (expense)	(23)	(20)	3
Net loss	$ (3,567)	$(5,570)	$ (1,903)

Grant Revenues

Grant revenues were $0.4 million and $1.1 million for the six months ended June 30, 2013 and 2014, respectively. The increase in grant revenues is primarily due to additional costs associated with the grant from CPRIT due to patient enrollment which began in August 2013. The increase is also due to the addition of the grant from the NIH. Funds were awarded in April 2013 and April 2014.

Research and Development Expenses

Research and development expenses were $2.6 million and $4.7 million for the six months ended June 30, 2013 and 2014, respectively. The increase in research and development expenses is primarily due to the increase in manufacturing and clinical expenses as a result of increased patient enrollment in our clinical trials for BPX-501 and BPX-201.

General and Administrative Expenses

General and administrative expenses were $1.3 million and $1.9 million for the six months ended June 30, 2013 and 2014, respectively. The increase in general and administrative expenses during this period of $0.6 million was due to our overall growth, including an increase in personnel, legal and accounting expenses, costs related to facilities, travel and entertainment expenses and depreciation expense related to equipment.

Other Income (Expense)

Other expense was $23,000 and $20,000 for the six months ended June 30, 2013 and 2014, respectively. This expense amount was relatively unchanged.

Comparison of the Years Ended December 31, 2012 and 2013

The following table sets forth our results of operations for the years ended December 31, 2012 and 2013:

(in thousands)	YEAR ENDED DECEMBER 31, 2012	2013	CHANGE $
Grant revenue	$ 1,470	$ 1,941	$ 471
Operating expenses:			
Research and development	5,796	7,050	1,254
General and administrative	1,943	2,813	870
Total operating expenses	7,739	9,863	2,124
Loss from operations	(6,269)	(7,922)	(1,653)
Other income (expense):			
Interest income	7	4	(4)
Interest expense	(1)	(51)	(49)
Total other income (expense)	6	(47)	(53)
Net loss	$(6,263)	$(7,969)	$ (1,706)

Grant Revenues

Grants revenues were $1.5 million and $1.9 million for the years ended December 31, 2012 and 2013, respectively. The increase in grant revenues is due to the addition of the grant from the NIH, received in April 2013.

Research and Development Expenses

Research and development expenses were $5.8 million and $7.1 million for the years ended December 31, 2012 and 2013, respectively. The increase in research and development expenses is primarily due to the increase in personnel and clinical expenses as a result of increased patient enrollment in the clinical trials of BPX-501 and BPX-201, as well as an increase in total patient costs of $0.5 million, which includes $0.2 million of clinical site costs and $0.2 million of specific patient treatment costs.

General and Administrative Expenses

General and administrative expenses were $1.9 million and $2.8 million for the years ended December 31, 2012 and 2013, respectively. The increase in expenses is due to our overall growth, including an increase in personnel, legal and accounting expenses, costs related to facilities, travel and entertainment expenses, and depreciation expense related to equipment.

Other Income (Expense)

Other income was $6,000 and other expense was $47,000 for the years ended December 31, 2012 and 2013, respectively. The decrease is primarily due to interest expense incurred on the increase in the outstanding amount under the line of credit described below.

Liquidity and Capital Resources

Sources of Liquidity

We are a clinical stage biopharmaceutical company with a limited operating history. To date, we have financed our operations primarily through private placements of convertible debt and preferred stock and receipt of grants to fund our research and development programs. We have not generated any revenue from the sale of any products. As of December 31, 2013 and June 30, 2014, we had available cash and cash equivalents of $11.1 million and $12.1 million, respectively. Our cash and cash equivalents are held in cash and money market accounts. Cash in excess of immediate requirements is invested with a view toward liquidity and capital preservation, and we seek to minimize the potential effects of concentration and degrees of risk.

We are party to a line of credit which was executed in 2012 for $1 million. The annual interest rate is equal to the prime rate plus 2.75%. We take advances under this line of credit to fund equipment purchases and other capital

expenditures. During 2013, we incurred $550,223 under the line of credit. During 2014, the line of credit was amended to include a credit extension up to $500,000. Interest accrues at a rate of prime plus 2.75% from the date of each advance. Any advances that are outstanding are payable in 24 equal monthly installments of principal, plus all accrued interest, beginning on April 1, 2015.

During the six months ended June 30, 2014, we sold 1,582,706 shares of our Series B convertible preferred stock for net proceeds of $7.3 million, and received $0.2 million pursuant to the exercise of warrants.

On February 12, 2013, we received $3.5 million of cash proceeds through the issuance of promissory notes, bearing interest at 0.21% per annum from February 12, 2013 through July 31, 2013. On July 31, 2013, in connection with the issuance of Series B convertible preferred stock, we repaid the notes with 757,497 shares of Series B convertible preferred stock at a conversion price of $4.625 per share. The converted balances consisted of $3.5 million of principal and $3,426 of outstanding interest payable.

In August 2014, we completed a private placement of 10,091,743 shares of Series C convertible preferred stock and received gross proceeds of $55 million, resulting in net proceeds of $51.5 million. In connection with the Series C convertible preferred stock financing, we also issued warrants to purchase up to 6,559,598 shares of Series C convertible preferred stock at an exercise price of $6.00 per share. The warrants are exercisable for five years and terminate earlier upon a merger or sale of the Company or upon the effectiveness of a registration statement filed with the SEC on or prior to March 31, 2015, in connection with an initial public offering for gross proceeds of at least $50 million and a per share price of at least $6.50 (as adjusted for any stock splits, dividends, combinations or recapitalizations). If this offering closes prior to March 31, 2015, we would expect substantially all of the warrants to be exercised for cash, which would provide additional proceeds of up to approximately $39 million.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, laboratory and related supplies, clinical costs, legal and other regulatory expenses and general overhead costs. Specifically, we expect to use capital to repay the ARIAD note and expand our manufacturing capabilities.

The successful development of any product candidate is highly uncertain. As such, at this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the development of BPX-501 or our other current and future product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from the sale of product candidates. This is due to the numerous risks and uncertainties associated with developing medical treatments, including the uncertainty of:

- successful enrollment in, and completion of, clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity; and
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others.

A change in the outcome of any of these variables with respect to the development of any of our product candidates would significantly change the costs and timing associated with the development of that product candidate.

Because all of our product candidates are in the early stages of clinical and preclinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of product candidates or whether, or when, we may achieve profitability. Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity or debt financings and collaboration arrangements.

In addition to the amounts necessary to fund development and commercialization of our product candidates, we will also need funds to pay our obligations under the ARIAD note. We anticipate using our cash and cash equivalents to pay such obligations, including $20 million which we expect to pay upon closing of this offering and $15 million which we intend to pay on or prior to June 30, 2016.

We plan to continue to fund our operations and capital funding needs through equity and/or debt financing. We may also consider new collaborations or selectively partnering our technology. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our existing stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us. Any of these actions could harm our business, results of operations and future prospects.

Outlook

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect that the net proceeds from this offering, together with our existing cash and cash equivalents as of June 30, 2014 and the net proceeds from the issuance and sale of our Series C convertible preferred stock in August 2014, will enable us to fund our operating expenses and capital expenditure requirements into 2016. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Furthermore, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for product development and commercialization sooner than planned. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials. Our future funding requirements will depend on many factors, as we:

- initiate or continue clinical trials of BPX-501 and any other product candidates;
- continue the research and development of our product candidates;
- seek to discover additional product candidates;
- seek regulatory approvals for our product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize products which receive regulatory approval;
- enhance operational, financial and information management systems and hire additional personnel, including personnel to support development of our product candidates and, if a product candidate is approved, our commercialization efforts; and
- incur additional costs associated with becoming a public company.

Cash Flows

The following table set forth a summary of our cash flows for the six months ended June 30, 2014 and 2013, respectively:

	FOR THE YEAR ENDED DECEMBER 31		FOR THE SIX MONTHS ENDED JUNE 30	
	2012	2013	2013	2014
(in thousands)			(unaudited)	
Net cash used in operating activities	(7,744)	(7,613)	$ (3,419)	$(6,210)
Net cash used in investing activities	(2,047)	(366)	(231)	(122)
Net cash provided by financing activities	3,516	17,515	4,050	7,321
Net cash (outflow) inflow	(6,275)	9,536	$ 400	$ 989

Operating Activities

Net cash used in operating activities was $6.2 million for the six months ended June 30, 2014, which was derived from a net loss of $5.5 million, in addition to the following primary components: an increase in prepaid expenses and other current assets of $0.7 million driven primarily by the increase in grant receivables, a decrease in accrued payroll of $0.5 million driven primarily by payment of accrued bonuses, and stock-based compensation of $0.4 million.

Net cash used in operating activities was $3.4 million for the six months ended June 30, 2013, which was derived from a net loss of $3.6 million, in addition to the following primary components: a decrease in prepaid expenses and other current assets of $0.4 million, a decrease in accounts payable of $0.4 million, a decrease in deferred revenue—grants of $0.4 million, and stock-based compensation of $0.4 million.

Investing Activities

Net cash used in investing activities for the six months ended June 30, 2014 was $0.1 million, which was derived solely from the purchase of property and equipment. Net cash used in investing activities for the six months ended June 30, 2013 was $0.2 million, which was derived solely from the purchase of property and equipment.

Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2014 was $7.3 million, which was derived from proceeds from issuance of convertible preferred stock. Proceeds from issuance of common stock of $0.2 million were offset by payments on note payable of $0.2 million. Net cash provided by financing activities for the six months ended June 30, 2013 was $4.1 million, which was derived from proceeds from notes payable and slightly offset by payments on notes payable.

Contractual Obligations

Our contractual obligations as of December 31, 2013 were as follows:

		PAYMENTS DUE BY PERIOD			
	TOTAL	LESS THAN 1 YEAR	1 -3 YEARS	3-5 YEARS	MORE THAN 5 YEARS
Long term debt	$ 800,000	$ 400,000	$ 400,000	$ —	$ —
Operating lease agreements	1,803,170	601,057	1,202,113	—	—
Contract manufacturing agreements	2,967,600	789,600	2,178,000	—	—
Facility lease agreement	240,000	192,000	48,000	—	—
License Agreements	200,000	50,000	150,000		
Total contractual obligation	$6,010,770	$ 2,032,657	$3,978,113	$ —	$ —

Critical Accounting Policies and Significant Estimates

Our financial statements are prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. In many instances, we could have reasonably used different accounting estimates, and in other instances changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ significantly from management's estimates. To the extent that there are material differences between these estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected. While our significant accounting policies are described in the Notes to our financial statements, we believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies related to the more significant areas involving management's judgments and estimates.

Revenue Recognition—We have not yet generated any revenue from product sales. Our sole source of revenue is grant revenue related to a $5.7 million research grant received from CPRIT, covering a three-year period from July 1, 2011 through June 30, 2014 and a $361,644 research grant from NIH. Grant payments received prior to our performance of work required by the terms of the research grant are recorded as deferred revenue and recognized as grant revenue once work is performed and qualifying costs are incurred.

Licenses and Patents—Licenses and patent costs are expensed as incurred. Costs related to the license of patents from third parties and internally developed patents are classified as research and development expenses. Legal costs related to patent applications and maintenance are classified as general and administrative expenses.

Research and Development—Research and development expenses include salaries, related payroll expenses, consulting fees, laboratory costs, manufacturing costs, and clinical trial expenses. All costs for research and development are expensed as incurred.

Contract Manufacturing Services—Contract manufacturing services are expensed as incurred. Prepaid costs are capitalized and amortized as services are performed.

Stock-Based Compensation—Stock-based compensation cost is measured at the date of grant based on the estimated fair value of the award, net of estimated forfeitures. We estimate the grant date fair value and the resulting stock-based compensation expense using the Black-Scholes option pricing model. The grant date fair value of a stock-based award is recognized as an expense over the requisite service period of the award on a straight-line basis.

We account for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of these options is measured using the Black-Scholes option pricing model reflecting an expected life that is assumed to be the remaining contractual life of the option. The compensation costs of these arrangements are subject to re-measurement over the vesting terms as earned.

We determine the fair value of each grant of stock options using the estimated fair value of our common stock and the assumptions set forth below. Each of these inputs is subjective and generally requires significant judgment.

Our board of directors intends all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the date of grant. The estimated fair value of our common stock was determined at each valuation date in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Our board of directors, with the assistance of management, developed these valuations using significant judgment and taking into account numerous factors, including developments at our company, market conditions and independent third-party valuations as of December 31, 2011, 2012, and 2013 and July 31, 2014.

For all option grant dates through December 31, 2013, the enterprise value was determined based on a Probability Weighted Expected Return Method, or PWERM, Option Pricing Method, or the OPM backsolve method. The allocation of these enterprise values to each part of our capital structure, including our common stock, was done based on OPM. OPM treats the rights of the holders of preferred and common shares as equivalent to call options on any value of the enterprise above certain break points of value based upon the liquidation preferences of the holders of preferred shares, as well as their rights to participation and conversion. Thus, the estimated value of the common stock can be determined by estimating the value of its portion of each of these call option rights. The OPM backsolve method derives the implied equity value of a company from a recent transaction involving the company's own securities issued on an arms-length basis. The Discounted Cash Flow method estimates value based on the expectation of future net cash flows, which are then discounted back to the present using a rate of return derived from alternative companies of similar type and risk profile. Under the PWERM the value is estimated based upon analysis of future values for the enterprise under varying scenarios, probabilities are ascribed to these scenarios based on expected future outcomes. Following the closing of this offering, the fair value of our common stock will be determined based on the closing price of our common stock on the NASDAQ Global Market.

Income Taxes—Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. This method also requires the

recognition of future tax benefits such as net operating loss and tax credit carry forwards, to the extent that realization of such benefits is more likely than not. A valuation allowance is recorded when the realization of future tax benefits is uncertain. We record a valuation allowance for the full amount of deferred tax assets, which would otherwise be recorded for tax benefits relating to the operating loss and tax credit carryforwards, as realization of such deferred tax assets cannot be determined to be more likely than not.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of operations in the period that includes the enactment date.

We account for uncertain tax positions in accordance with the provisions of ASC 740, Income Taxes. When uncertain tax positions exist, we recognize the tax benefit of tax positions to the extent that the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. As of December 31, 2013 and 2012, we had no uncertain tax positions and no interest or penalties have been charged to us for the years ended December 31, 2013 and 2012. If incurred, we will classify any interest and penalties as a component of interest expense and operating expense, respectively. We are subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The tax years 2004 through 2013 remain open to examination by the U.S. Internal Revenue Service.

Recently Issued Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-10 (“ASU No. 2014-10”), which eliminated the definition of a Development Stage Entity and the related reporting requirements. ASU No. 2014-10 is effective for annual reporting periods beginning after December 15, 2014, with early adoption allowed. We chose to adopt ASU No. 2014-10 early, effective in its financial statements for the six months ended June 30, 2014.

JOBS Act

In April 2012, the JOBS Act was enacted. Section 107(b) of the JOBS Act provides that an emerging growth company may take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Quantitative and Qualitative Disclosures about Market Risk

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of June 30, 2014, we had cash and cash equivalents of $12.1 million consisting of cash and money market accounts in highly rated financial institutions in the United States.

A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

In connection with this offering, Ernst & Young LLP became our independent registered public accounting firm effective as of August 25, 2014, and PMB Helin Donovan, LLP was dismissed as our independent registered public accounting firm effective as of July 31, 2014. The decision to appoint Ernst & Young LLP to re-audit our financial statements for the years ended December 31, 2013 and December 31, 2012, and dismiss PMB Helin Donovan, LLP was approved by our board of directors on July 31, 2014.

The report of PMB Helin Donovan, LLP on our financial statements for the years ended December 31, 2013 and December 31, 2012 did not contain an adverse opinion or a disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or accounting principles.

In connection with the audit of our financial statements for the years ended December 31, 2013 and December 31, 2012 and through PMB Helin Donovan, LLP's dismissal, there were no disagreements with PMB Helin Donovan, LLP on any matters of accounting principles or practices, financial statement disclosures or auditing scope or procedures, which if not resolved to PMB Helin Donovan, LLP's satisfaction would have caused PMB Helin Donovan, LLP to make reference to the matter in their report.

There have been no reportable events as set forth in Item 304(a)(1)(v) of Regulation S-K in connection with our audited financial statements for the years ended December 31, 2013 and December 31, 2012 and PMB Helin Donovan LLP's dismissal.

BUSINESS

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. Cellular immunotherapy has the potential to transform medicine by harnessing immune cells, principally T cells, to attack and eliminate harmful diseased cells in the body. Unlike traditional small molecule and biologic therapies which are predictably metabolized and eliminated from the body, cellular immunotherapies are unpredictable and uncontrollable. We are using our proprietary Chemical Induction of Dimerization, or CID, technology platform to engineer and then control components of the immune system in real time. By incorporating our CID platform, our product candidates may offer better safety and efficacy outcomes than are seen with current cellular immunotherapies.

We are developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including hematopoietic stem cell transplantation, or HSCT, CAR T cell therapy, and dendritic cell vaccines. HSCT, also known as bone marrow transplantation, has for decades been curative for many patients with hematological cancers or orphan inherited blood disorders. However, application of HSCT is limited by graft-versus-host-disease, or GvHD, a condition in which the transplanted immune cells recognize the host cells as foreign and attack them. Since the transplanted cells can persist indefinitely, GvHD does not resolve by itself and is a major cause of transplant-related morbidity and mortality. CAR T cell therapy is an innovative approach in which a patient's T cells are genetically modified to carry chimeric antigen receptors, or CARs, which redirect the T cells against cancer cells. While high objective response rates have been reported in some hematological malignancies, serious and sometimes fatal toxicities have arisen in patients treated with CAR T cell therapies. In solid tumors, where the behavior of CAR T cells is particularly unpredictable and results have been inconsistent, researchers are developing enhanced CAR T cell approaches called "armored CARs" that raise even greater safety concerns. Lastly, despite the integral role that dendritic cells play in the immune system, they are difficult to activate appropriately and as a result their use has delivered only modest therapeutic benefit.

Our proprietary CID platform is designed to address these challenges. Events inside a cell are controlled by cascades of specialized signaling proteins. CID consists of molecular switches, modified forms of these signaling proteins, which are triggered inside the patient by infusion of a small molecule, rimiducid (AP1903), instead of by natural upstream signals. We include these molecular switches in the appropriate immune cells and deliver the cells to the patient in the manner of conventional cellular immunotherapy. We have developed two such switches: a "safety switch," designed to initiate programmed cell death, or apoptosis, of the immunotherapy cells, and an "activation switch," designed to stimulate activation and in some cases proliferation of the immunotherapy cells. Each of our technologies incorporates one of these switches, for enhanced, real time control of safety and efficacy:

- ***CaspaCIDe*** is our safety switch, incorporated into our HSCT and T-cell receptor, or TCR, product candidates, where it is inactive unless the patient experiences a serious side effect. In that event, rimiducid is administered to fully or partially eliminate the cells, with the goal of terminating or attenuating the therapy and resolving the serious side effect.
- ***CIDeCAR*** consists of CAR T cells modified to include our CaspaCIDe safety switch and in which the CAR incorporates the signaling domains of two proteins, MyD88 and CD40. Together, these form our proprietary dual co-stimulatory domain, MC, which is designed to activate T cells in the presence of cancer cells more potently than co-stimulatory molecules CD28 and 4-1BB, which are used in current CAR T cell therapy. Incorporation of CaspaCIDe in a CIDeCAR product candidate is intended to allow the enhanced potency of MC co-stimulation to be deployed safely in patients.
- ***GoCAR-T*** consists of CAR T cells that are modified to include the proprietary dual co-stimulatory domain, MC. In contrast to CIDeCAR, MC is structured in GoCAR-T as a molecular switch, separate from the chimeric antigen receptor, which itself contains no co-stimulatory domains. GoCAR-T is designed to allow control of the activation and proliferation of the CAR T cells through the scheduled administration of a course of rimiducid infusions that may continue until the desired patient outcome is achieved. In the event

of emergence of side effects, the level of activation of the GoCAR-T cells is designed to be attenuated by reducing the rimiducid administration schedule.

- ***DeCIDe*** consists of dendritic cells that are modified to include the same MC switch used in GoCAR-T. Upon exposure to rimiducid, dendritic cells containing DeCIDe become highly activated in a process that is less susceptible to being turned off by the immune system's natural inhibitory processes. By administering rimiducid after the patient has been vaccinated and the dendritic cells have had time to migrate to the draining lymph nodes, our DeCIDe product candidates are designed to be activated in a potent and long-lasting manner.

By incorporating our novel switch technologies, we are developing product candidates with the potential to elicit positive clinical outcomes and ultimately change the treatment paradigm in various areas of cellular immunotherapy. Our clinical product candidates; each of which is a combination product of genetically modified immune cells and rimiducid, are described below.

- ***BPX-501.*** We are developing a CaspaCIDe product candidate, BPX-501, as an adjunct T-cell therapy administered after allogeneic HSCT, using donor stem cells. In a typical allogeneic HSCT procedure, a patient receives a full complement of immune cells including both donor stem cells and donor T cells. T cells in the transplant often cause serious and potentially fatal side effects, such as GvHD. BPX-501 is designed to decrease the risk of including T cells with the transplant by enabling the elimination of donor T cells through the triggering of the CaspaCIDe safety switch upon emergence of GvHD. In a 10-patient Phase 1 clinical trial with CaspaCIDe modified T cells, conducted by an academic collaborator, four patients developed GvHD after donor T-cell infusion. A single dose of rimiducid rapidly eliminated over 90% of the modified T cells and resolved GvHD in all four patients without recurrence of GvHD. These findings have been replicated in preliminary data from three patients in a second clinical trial of CaspaCIDe-modified T cells. BPX-501 is currently being evaluated in multiple Phase 1/2 clinical trials in the United States, with the first top-line data expected in the second half of 2015.
- ***BPX-201.*** We are developing a DeCIDe product candidate, BPX-201, as a dendritic cell cancer vaccine made from the patient's own white blood cells, designed to treat metastatic castrate-resistant prostate cancer or, mCRPC. It targets the prostate specific membrane antigen, or PSMA, and uses our DeCIDe activation switch technology. BPX-201 is currently being evaluated in an 18-patient Phase 1 clinical trial for mCRPC. We are evaluating opportunities for BPX-201 in combination with other cancer immunotherapies, such as checkpoint inhibitors.

In addition, our preclinical product candidates are designed to overcome the current limitations of CAR-T and TCR therapies and include the following:

- ***BPX-401.*** We are developing a CIDeCAR product candidate, BPX-401, as a next-generation CAR T cell therapy for hematological cancers that express the CD19 antigen. CD19 is an antigen expressed in many hematological cancers, including acute lymphocytic leukemia, or ALL, chronic lymphocytic leukemia, or CLL, and certain non-Hodgkin's lymphomas. We believe that, while the activity of CAR T cell therapy has been demonstrated in early-stage clinical trials by third party researchers in these indications, safety issues, such as cytokine release syndrome, a systemic inflammatory response that is produced by elevated levels of cytokines that are associated with T-cell activation and proliferation, remain a major concern, which may be addressed by BPX-401.
- ***BPX-601.*** We are developing a GoCAR-T product candidate, BPX-601, for solid tumors overexpressing the prostate stem cell antigen, or PSCA, such as some prostate, pancreatic, bladder, esophageal and gastric cancers. We have obtained positive proof-of-principle data in an animal pancreatic tumor model, which we believe validate BPX-601's activity and rimiducid's ability to modulate therapeutic effect.
- ***BPX-701.*** We are developing a CaspaCIDe TCR product candidate, BPX-701, in collaboration with Leiden University Medical Center, initially for the treatment of PRAME-expressing melanoma, sarcomas and neuroblastoma. Based on *in vitro* studies, BPX-701 has demonstrated strong affinity to panels of cancer cells presenting PRAME peptides and low affinity to non-tumor cells. In other *in vitro* studies, rimiducid administration has shown the ability to eliminate BPX-701 cells.

We expect to file investigational new drug applications, or INDs, for BPX-701 in the second half of 2015 and for BPX-401 and BPX-601 in 2016. Our IND-enabling activities for each of these preclinical product candidates, include manufacturing key components and developing a robust process to produce cell products that comply with regulations of the U.S. Food and Drug Administration, or FDA, and other regulatory agencies. We have developed an efficient and scalable process to manufacture genetically modified T cells of high quality and purity. This process is being implemented by our third-party contract manufacturers to produce BPX-501 for our clinical trials. We expect to leverage our resources, capabilities and expertise for the manufacture of our CAR-T and TCR product candidates.

Strategy

Our goal is to become a leading innovator in the field of cellular immunotherapy by maximizing the inherent potential of this therapeutic modality and developing medicines with a differentiated combination of safety and efficacy. The key elements of our strategy to achieve this goal are as follows:

- ***Pursue a broad development strategy that will maximize the market potential of BPX-501.*** We believe that BPX-501 will enable physicians to maximize the benefits of adjunct T-cell therapy for allogeneic HSCT, such as immune system recovery, prevention or treatment of relapse of underlying disease and improvement in stem cell engraftment, while mitigating safety issues associated with the therapy. Based on these attributes, BPX-501 may serve an integral role in the treatment paradigm for allogeneic HSCT in various diseases and increase the overall patient eligibility for the procedure. In order to make BPX-501 accessible to a broad group of patients and maximize the market potential of this product candidate, we are conducting multiple Phase 1/2 clinical trials that include U.S. and European protocols, adult and pediatric patients and different indications and usage of BPX-501. We expect to report data from these clinical trials and discuss registration trial design at an end-of-Phase 2 meeting with the FDA and European regulatory authorities in the first half of 2016.
- ***Focus on developing proprietary CAR-T and TCR product candidates with an improved safety and efficacy profile.*** We intend to build a robust clinical pipeline of our own novel CAR-T and TCR product candidates, which incorporate our proprietary switch technologies, CIDeCAR, GoCAR-T and CaspaCIDe, and focus on indications in which current CAR-T and TCR therapies have significant shortcomings. To this end, we are developing BPX-401 for hematological cancers expressing the CD19 antigen, BPX-601 for solid tumors overexpressing PSCA and BPX-701 for solid tumors expressing PRAME. We believe that these product candidates may address serious safety concerns associated with conventional CAR-T and TCR therapies and achieve higher overall potency and efficacy, thereby widening the therapeutic window compared to other CAR-T and TCR product candidates. We intend to dedicate significant resources in the near term to advance BPX-401, BPX-601 and BPX-701 as well as our other product candidates toward human proof-of-concept data.
- ***Selectively pursue partnerships and collaborations.*** Although our priority is to develop internal product candidates, we may pursue opportunistic partnerships and collaborations for our technologies, including CaspaCIDe and DeCIDe. In indications outside of our interest or expertise, we may structure transactions in which our molecular switches are incorporated into our partners' CAR-T or TCR product candidates. We intend to build on our existing strong relationships with premier cancer research centers around the world to identify new opportunities and position our company at the forefront of innovations in the field of cellular immunotherapy.
- ***Continue to innovate around our proprietary CID platform.*** We believe that our CID platform can be further leveraged to discover other novel technologies and therapeutic applications to capitalize on additional market opportunities. We intend to evaluate BPX-201 and other product candidates based on our DeCIDe technology in combination with other cancer immunotherapy such as checkpoint inhibitors. We are also developing new switches and two-switch systems to provide greater control over cellular immunotherapy.
- ***Continue to strengthen our intellectual property profile.*** We believe that having a comprehensive patent estate that provides strong barriers to entry is critical to the success of our business. As such, our management team has made a concerted effort to develop and secure our intellectual property since inception. We currently own or have exclusive licenses to over 74 issued patents and 43 pending patent applications. These patents and patent applications include composition and/or method of use claims in the

United States, Europe and other jurisdictions. We intend to continue to strengthen our patent estate by developing and filing patents on various aspects of our technologies and product candidates as well as through in-licensing activities with research institutions and other biopharmaceutical companies.

- ***Become a fully integrated cellular immunotherapy company.*** Developing product candidates for cellular immunotherapy is complex and requires significant in-house capabilities in various areas of drug development. Over the years we have built a solid foundation from which to fulfill the highly demanding clinical and regulatory requirements of genetically modified cellular immunotherapy, with expertise in research and discovery, clinical trial management, data analysis, manufacturing, quality assurance and regulatory affairs. We intend to use a portion of the net proceeds from this offering to continue hiring staff with necessary expertise and investing in infrastructure to support the growth of our clinical development activities and to enable us to become the leading cellular immunotherapy company.

Recent Developments

To enable further development of our proprietary technology and product candidates, we completed a private placement of $55 million of Series C convertible preferred stock and warrants to purchase Series C convertible preferred stock in August 2014. Investors in the transaction included, among others, Baker Brothers, RA Capital Management, LLC, Perceptive Advisors, LLC, Jennison Associates LLC (on behalf of certain clients), Sabby Capital, LLC, Ridgeback Capital Management, venBio Select, Redmile Group, LLC and AJU IB Investment, as well as our then current investors, including AVG Ventures and Remeditex Ventures.

Certain aspects of our platform technology are inlicensed from ARIAD Pharmaceuticals, Inc., or ARIAD. In October 2014, we amended our license agreement with ARIAD, pursuant to which we agreed to pay ARIAD $50 million in three tranched payments, including an initial payment of $15 million in connection with the execution of the amendment. In exchange, we received from ARIAD a fully paid-up license to its cell-signaling technology and ARIAD agreed to return of all of the 1,151,688 shares of our common stock currently held by ARIAD at the time of the second tranche payment. The scope of the license and the field of use were also expanded as part of the amendment. The amended agreement gives us a worldwide exclusive license to ARIAD's cell-signaling technology for broad use in human cell therapies for all diseases on a royalty- and milestone-free basis.

Cellular Immunotherapy

Cellular immunotherapy harnesses a patient's own immune cells to attack and eliminate harmful disease cells in the body. The immune system is the body's defense network. It consists of a number of cells and organs that, working together, recognize and respond to threats in the form of pathogens. T cells are a type of white blood cell that recognize pathogens and can target and eliminate them upon full activation through the addition of appropriate co-stimulatory signals.

Dendritic cells, another component of the immune system, are antigen-presenting cells found in skin and other tissues like the lining of the gut that can sense and respond to the environment. Dendritic cells engulf and process potential threats they encounter, presenting them as antigens to T cells and B cells to allow the body to mount an immune response.

The following three therapeutic applications of cellular immunotherapy have been the primary areas of research and development by research institutes and biopharmaceutical companies, given their promise of effectively treating patients suffering from severe and life-threatening diseases.

HSCT. HSCT is the transplantation of stem cells and other immune cells derived from bone marrow, peripheral blood or umbilical cord blood. The transplantation may be autologous, using the patient's own cells, or allogeneic, using a donor's cells. HSCT is often the only curative option for a wide range of treatment-refractory hematological cancers, such as ALL, acute myeloid leukemia, or AML, and chronic myeloid leukemia, or CML. HSCT is also used as a high-risk treatment for orphan inherited blood disorders, such as sickle cell disease, beta-thalassemia and certain immune disorders.

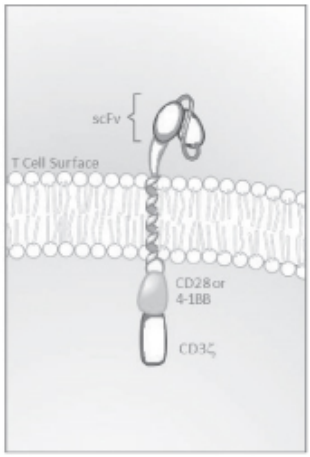
Dendritic Cell Therapy. Whereas HSCT and CAR T cells involve direct administration of T cells to the patient, dendritic cell therapies are designed to indirectly stimulate T cells already present in the patient. Given the

important role of dendritic cells in initiating an immune response in the body, substantial research has been conducted to leverage the attributes of dendritic cells to treat cancer. Cancer vaccines are the most common form of dendritic cell-based therapy. These vaccines entail collecting certain monocytes, a type of white blood cell, from the patient's body, maturing them into dendritic cells, "loading" them *ex vivo* with the patient's cancer antigens, and sometimes modifying them in other ways to improve their potency, and then re-infusing the modified dendritic cells in the patient.

Genetically Modified T-cell Therapy (CAR-T and TCR). This approach entails collecting a patient's T cells, genetically modifying them *ex vivo*, or outside of the body, to incorporate specific receptors which target cancer cells and then re-infusing the modified T cells back into the patient. Two types of cancer-specific receptors are typically used, CARs that recognize whole antigens on the surface of cancer cells, and TCRs that bind to cancer-associated peptides, or fragments of proteins, from either inside or on the surface of the cancer cells. In early human clinical trials, CAR T cell therapy has demonstrated an unprecedented ability to achieve durable complete responses in some leukemias and lymphomas, even in patients who have suffered multiple relapses.

The following graphic shows how a standard CAR is constructed. A CAR includes:

- A single-chain Fv fragment, or scFv, the component of an antibody that recognizes a target antigen;
- Co-stimulatory domains of CD28 or 4-1BB, which are the signaling components of proteins expressed on T cells that provide co-stimulatory signals required for T-cell activation and survival; and
- CD3ζ chain, a component of the T-cell receptor, which provides the initial signal when the receptor engages with the antigen.



These components are normally found on three separate proteins but in a CAR they are fused together into a single receptor molecule. Introduction of a CAR creates a T cell that has been engineered to react in a potent way against a specified target cell surface antigen. Cancer cells have developed mechanisms to avoid activating the immune system which may be circumvented by CAR T cells.

Limitations of Current Cellular Immunotherapy Approaches.

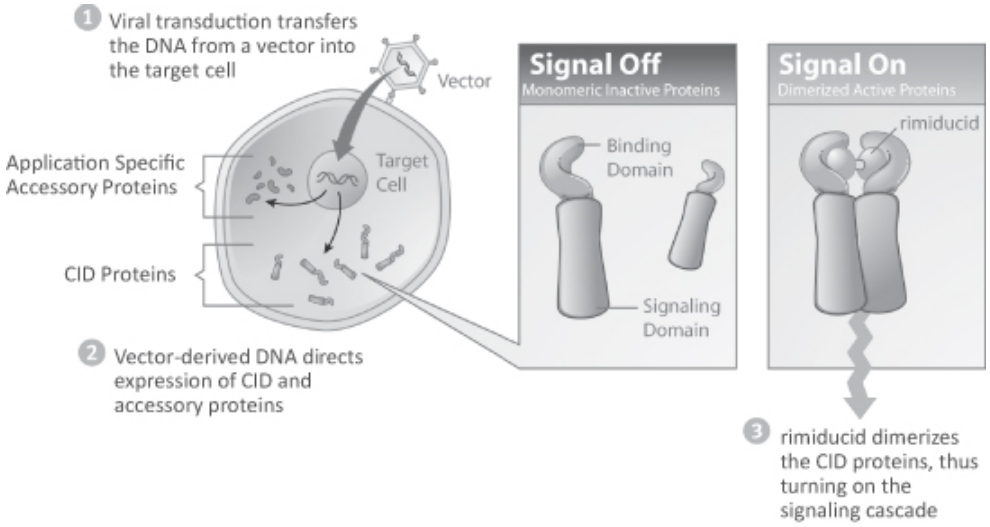
Despite rapid advances in various approaches to cellular immunotherapy and the biopharmaceutical industry's considerable investment in research and development, certain challenges have prevented these therapies from realizing their maximum potential. Some of these obstacles and issues are highlighted below:

Cellular Immunotherapy Approach	Safety Challenges	Efficacy Challenges
Allogeneic HSCT	• GvHD and viral infections are frequent and potentially fatal side effects	• Attempts to control GvHD (steroids, T-cell depletion, etc.) increase likelihood of relapse of underlying disease and viral infection
Dendritic Cell Therapy		• Moderate efficacy due to insufficient activation of immune system and susceptibility to the inhibitory effects of the immune system
CAR-T	• Serious immune toxicity (cytokine release syndrome) • Standard-of-care (steroids) is ineffective; long ICU stay, relapse of underlying disease, infections and death • Other safety approaches have slow onset of action or have safety issues of their own • Off-target or off-organ toxicities for certain antigen targets	• CARs have not demonstrated the same high response rates to solid tumor antigens as have been seen against CD19-targeted leukemias • Small number of validated tumor antigens that can be targeted • For certain antigen targets, severe toxicity from treatment prevents sufficient therapeutic window for clinical benefit
TCR	• High risk of off-target or off-organ toxicities	• Human clinical data still early

Our Proprietary CID Technology Platform

Our proprietary CID technology platform is designed to address the challenges of current cellular immunotherapies. Cellular activities and functions, such as growth, activation, proliferation and cell death, are controlled by cascades of specialized signaling proteins. Our CID platform consists of molecular switches, modified forms of these signaling proteins, which are triggered inside the patient by infusion of a small molecule, rimiducid, instead of by natural upstream signals. Our product candidates are based on either a "safety switch," or an "activation switch." After rimiducid is administered, the "safety switch" is designed to lead to programmed cell death, or apoptosis, and the "activation switch" is designed to lead to proliferation and/or activation of immune cells.

We incorporate the molecular switches in the appropriate immune cells and administer them to the patient. After the modified immune cells are inside the patient's body, specific functions of these cells may be controlled by administering rimiducid by intravenous, or IV, infusion. Rimiducid has been designed to bind to specifically designed domain of CID switch proteins. Once introduced, rimiducid couples, or dimerizes, CID switch proteins together to create a cluster that triggers the signaling cascade. Aside from its impact on CID-modified immune cells bearing switch proteins, rimiducid has no other known effect on the body. To date, rimiducid has been used in more than 150 infusions in humans without any reported serious adverse events related to rimiducid.



Our proprietary CID-based product candidates depend on the following signaling molecules to trigger signaling cascades, resulting in different cell activities:

- ***Caspase-9: Signaling Molecule for Apoptosis.*** Caspase-9 is the initiating enzyme in the apoptosis pathway. When activated, caspase-9 starts a signaling cascade, including the activation of caspase-3, which ultimately leads to apoptosis, a non-inflammatory process of cell elimination.
- ***MyD88/CD40: Signaling Molecules for Activation and Proliferation.*** Myeloid differentiation primary response gene, or MyD88, is a protein that has functions in cellular responses to stimuli such as stress, cytokines and bacteria or viruses. CD40 is a co-stimulatory protein found on antigen-presenting cells, such as dendritic cells and B cells and is required for their activation. Although the effects of MyD88 and CD40 have been studied previously in dendritic cell therapies, our novel approach applies them to T cell based immunotherapies.

Our Proprietary Switch Technologies

With the CID platform as the foundation, we have created different molecular switch technologies customized for specific cellular immunotherapy approaches and therapeutic indications. The table below summarizes our key switch technologies.

	CaspaCIDe	CIDeCAR	GoCAR-T	DeCIDe
Cell Type	Donor T cells (HSCT) or patient T cells (CAR-T or TCRs)	Patient T cells	Patient T cells	Patient dendritic cells
Proprietary Component	caspase-9 switch	caspase-9 switch + MC	MC switch	MC switch
Applications	HSCT TCR Therapy	CAR-T Therapy	CAR-T Therapy	Cancer Vaccine
Potential Safety Benefit	Can modulate effect with rimiducid which trigger T-cell apoptosis	Can modulate effect with rimiducid which triggers T-cell apoptosis	Can modulate effect with rimiducid which triggers T-cell activation & proliferation	Limited life span and do not proliferate
Potential Efficacy Benefit	Widens therapeutic window for maximum benefit from treatment	Widens therapeutic window; MC may enhance T-cell potency	Widens therapeutic window; MC may enhance T-cell potency	May help avoid inhibitory effects of the immune system
Product Candidates	BPX-501 BPX-701	BPX-401	BPX-601	BPX-201

CaspaCIDe

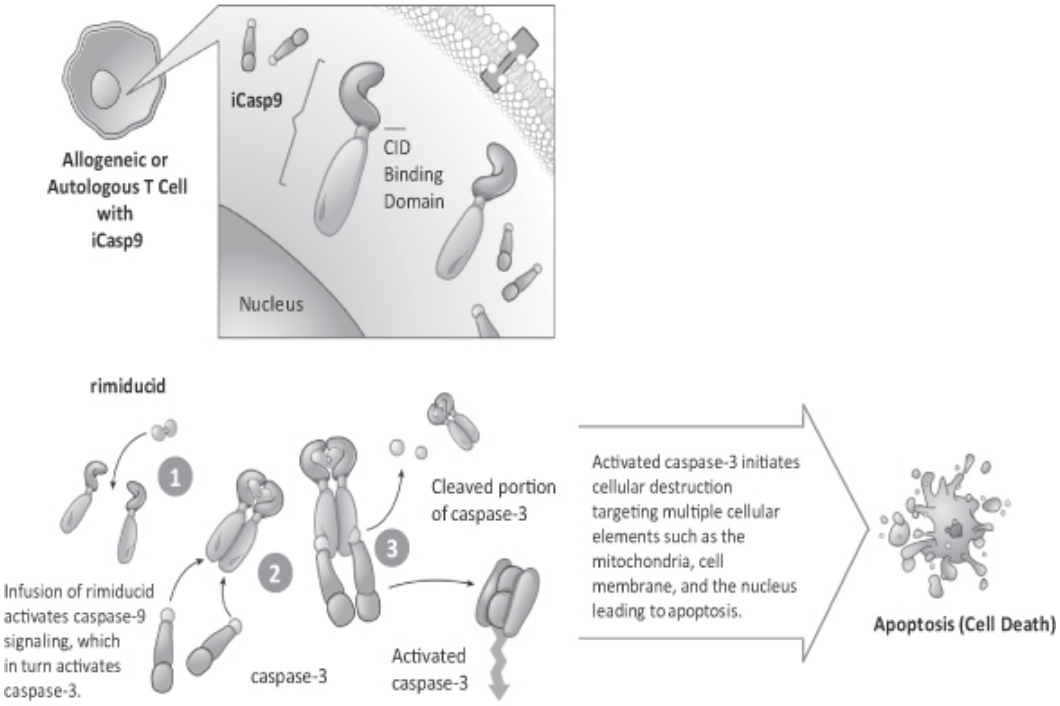
CaspaCIDe is our CID safety switch technology designed to eliminate cells in the event of toxicity. The CaspaCIDe switch consists of the CID-binding domain coupled to the signaling domain of caspase-9, an enzyme that is part of the apoptotic pathway. Infusion of rimiducid is designed to trigger activation of this domain of caspase-9 (iCasp9), which in turn leads to selective apoptosis of the CaspaCIDe-containing cells. Because CaspaCIDe is designed to be permanently incorporated into our cellular therapies, the safety switch has the potential to be available for use long after the initial therapy is delivered. This technology is applied to our lead clinical product candidate, BPX-501, an adjunct T-cell therapy after allogeneic HSCT, and to our TCR product candidate, BPX-701.

We believe that CaspaCIDe is the optimal cell therapy safety switch technology. The only other widely reported approach used in the clinic is based on the Herpes simplex virus thymidine kinase, or HSV-tk, a non-human and as such immunogenic protein which is activated to kill the cell by the widely-used anti-viral drug, ganciclovir. Comparative studies have demonstrated CaspaCIDe's superiority to HSV-tk, based on lack of immunogenicity, effectiveness in rescuing animals from toxicities that have progressed, lack of dependence on the cell cycle for cell elimination, and most importantly, speed of elimination. In human trials, CaspaCIDe has demonstrated clinical efficacy in human patients beginning as soon as 30 minutes after administration of the activating drug, rimiducid. Lastly, rimiducid is bio-inert in the absence of cells containing a CID switch, and has no other clinical use;

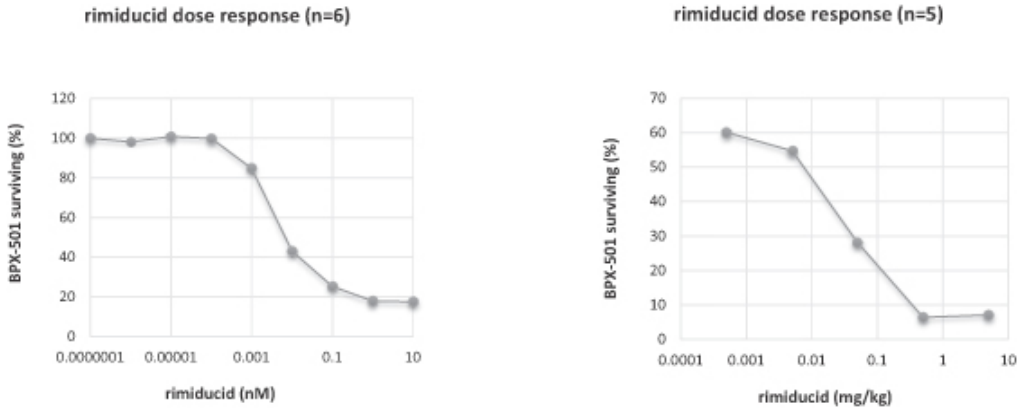
ganciclovir has side effects, and physicians are reluctant to lose the ability to use it to treat viral infections in patients treated with cells containing HSV-tk.

Other cell elimination approaches described in the literature include gene modification of cells to express truncated epidermal growth factor receptor, or EGFRt, or codon-optimized CD20. Administration of the monoclonal antibodies cetuximab or rituximab, respectively, is intended to trigger antibody-dependent cellular cytotoxicity, or ADCC, mediated cell elimination. While CaspaCIDe eliminates cells via the apoptotic pathway, the body's non-inflammatory mechanism for this important function, we believe an ADCC-mediated mechanism may add to complications in patients already in an inflammatory crisis, such as seen with serious cytokine release syndrome after CAR T cell therapy. Moreover, cetuximab and rituximab, both anti-cancer therapies that have potentially serious side effects, are unlikely to be usable in a titratable manner. Lastly, these approaches have yet to demonstrate efficacy in clinical trials.

The following diagram reflects the mechanism of action of our CaspaCIDe safety switch:



CaspaCIDe has been evaluated in numerous preclinical studies and clinical trials. We observed the dose response to rimiducid by measuring the viability of BPX-501 cells in culture following the addition of increasing amounts of rimiducid to the culture medium as well as by measuring the survival of BPX-501 cells *in vivo* in immune-deficient mice following injection of increasing doses of rimiducid. In these preclinical studies, rimiducid rapidly and consistently reduced or eliminated CaspaCIDe-containing cells in a dose-dependent manner. In addition to using our CaspaCIDe technology for the substantial elimination of cellular therapy (like an "off" switch), we are studying partial elimination of a cellular therapy (like a "dimmer" switch) by delivering reduced doses of rimiducid.



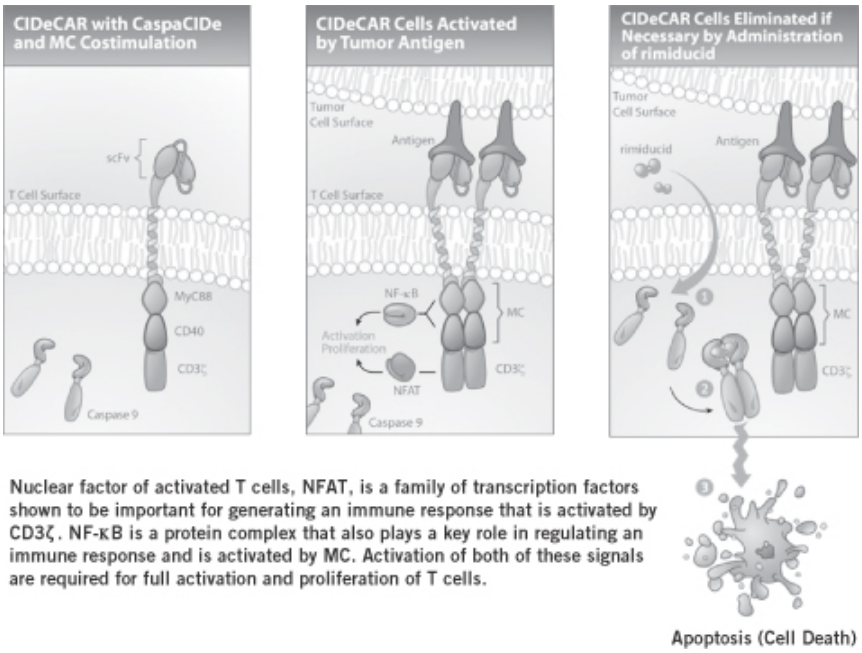
***In vitro* and *in vivo* effect of rimiducid on killing of CaspaCIDe-containing T cells. (Left) BPX-501 T cells made from six healthy donors were cultured for 24 hours with log-dilutions of rimiducid (0 – 10 nM). (Right) Five groups of three immune deficient mice were injected intravenously with 10 million human BPX-501 T cells followed by varying doses of rimiducid (0 – 5 mg/kg) 24 hours later. One day later, the spleens were isolated and analyzed for the presence of BPX-501 T cells by flow cytometry.**

In addition to our internal preclinical and clinical development activities, we are collaborating with renowned cancer research centers with expertise in cellular immunotherapy to apply our CaspaCIDe safety switch to the collaborators' CAR-T product candidates. The National Cancer Institute, or NCI, has initiated a Phase 1/2 clinical trial for sarcoma and other solid tumors with a CAR construct targeting a solid tumor antigen combined with CaspaCIDe. Although we are not the sponsor of this clinical trial, we believe that it may extend clinical proof of principle for CaspaCIDe from the HSCT setting to the CAR T cell setting.

CIDeCAR

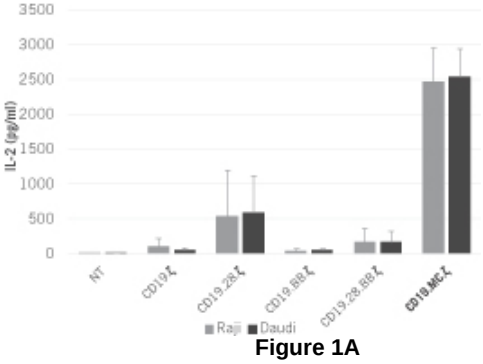
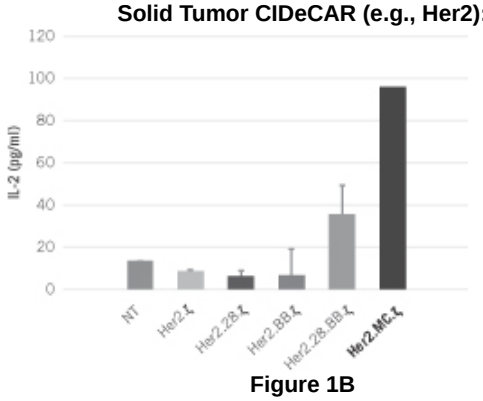
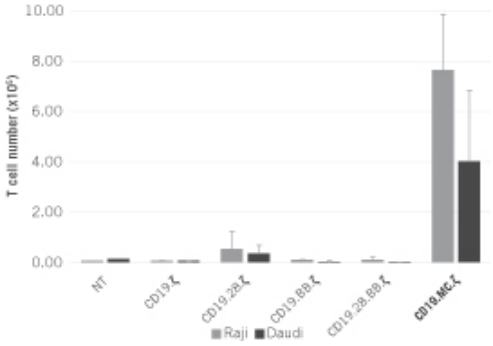
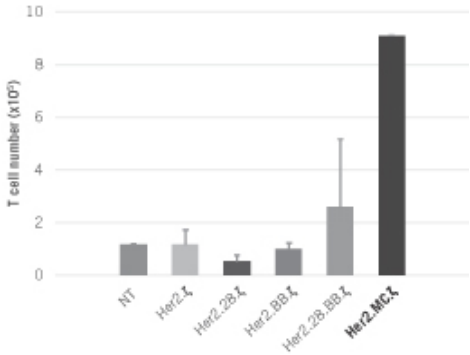
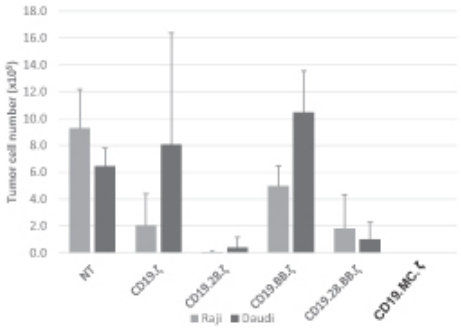
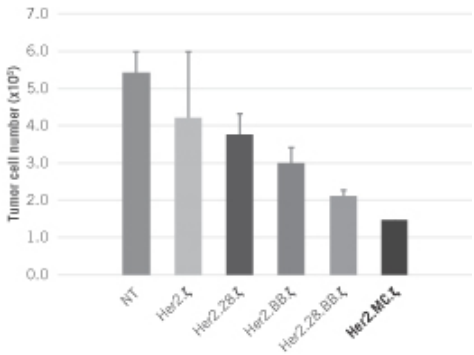
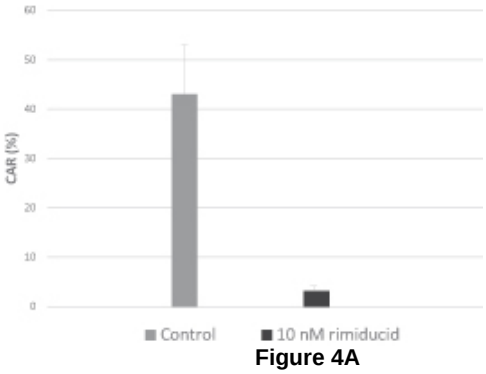
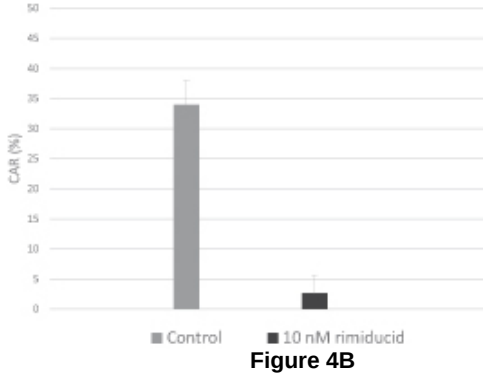
CIDeCAR consists of a CAR T cell that incorporates MC, our proprietary novel dual co-stimulatory domain, for improved T-cell activation and proliferation, and the CaspaCIDe safety switch. CAR interaction with cancer cell antigens is designed to lead to MC signaling, which then leads to activation of T cells. In the event of serious toxicity, rimiducid activation of caspase-9 is designed to eliminate the CIDeCAR T cells.

The following diagrams reflect the mechanism of action of our CIDeCAR technology:



In order to improve the effectiveness of CAR T cells in settings other than blood cancers located principally in the bone marrow, such as leukemia, some researchers have been working to develop “armored CARs” in which supplemental co-stimulatory signals or pro-inflammatory cytokines are added to the CAR T cells. Like an “armored CAR,” we include MC in our CIDeCAR technology in order to increase the potency of the therapy in these indications. While promising, these approaches may exacerbate safety issues found in standard CARs. We incorporate CaspaCIDe into CIDeCAR to address these safety concerns.

In proof-of-principle preclinical studies of CIDeCAR technology, CIDeCAR candidate BPX-401 and CIDeCAR solid tumor CAR targeting Her2, both of which incorporate MC, in place of the standard co-stimulatory molecules CD28, 4-1BB, or both together, were evaluated *in vitro*. These preclinical studies show that CIDeCAR technology results in enhanced activation, proliferation and tumor cell killing compared to standard comparator CARs. In addition, these studies demonstrate elimination of these CIDeCAR T cells after exposure to rimiducid.

	BPX-401 (CD19 CIDeCAR)	Solid Tumor CIDeCAR (e.g., Her2):
Enhanced Activation	 Figure 1A	 Figure 1B
Enhanced Proliferation	 Figure 2A	 Figure 2B
Enhanced Tumor Cell Killing	 Figure 3A	 Figure 3B
Rimiducid's Ability to Eliminate CIDeCAR T Cells	 Figure 4A	 Figure 4B

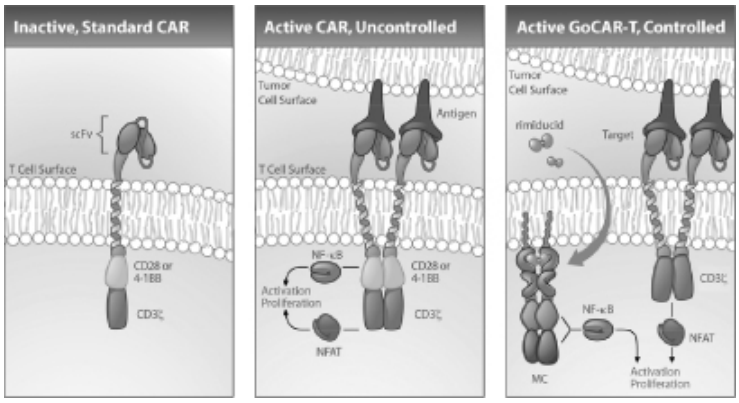
BPX-401 (CD19.MC.ζ) and solid tumor CIDeCAR candidate targeted Her 2 (Her2.MC.ζ) were compared to non-modified T cells, or NT, and other comparably-targeted CAR-T constructs, such as early generation CAR-T with CD3ζ alone (CD19.ζ and Her2.ζ), current generation CAR-T with CD3ζ and either CD28 (CD19.28.ζ or Her2.28.ζ), 4-1BB (CD19.BB.ζ or Her2.BB.ζ), or both co-stimulatory molecules (CD19.28.BB.ζ or Her2.28.BB.ζ). The cells were cultured together with their target-expressing cancer cells (Daudi and Rajii cell lines for CD 19, SK-BR-3-GFP for Her2). The cultures were analyzed for the presence of cytokines e.g. IL-2, and both tumor cell and T cell number. In addition, we evaluated the ability of the CaspaCIDe safety switch to eliminate both CIDeCARs by counting T cell number before, and after overnight exposure, to rimiducid.

GoCAR-T

Our GoCAR-T technology incorporates a switch that activates CAR T cells when triggered by both rimiducid and the targeted antigen expressed on the surface of the cancer cells. Current generation CAR T cell constructs consist of a CD3ζ domain and one or more co-stimulatory molecules that are both activated when a cancer antigen binds to the portion of the chimeric antigen receptor on the outside of the engineered T cell. This reliance on antigen for activation of the CAR T cell results in an unpredictable and inherently uncontrollable therapeutic effect. For example, CAR T cells that target the CD19 receptor have been shown to proliferate two-fold in some patients, 100-fold in others. Solid tumor CAR T cells often fail to proliferate at all. In each situation, the physician has no effective way to intervene to achieve greater consistency, once the cells have been administered.

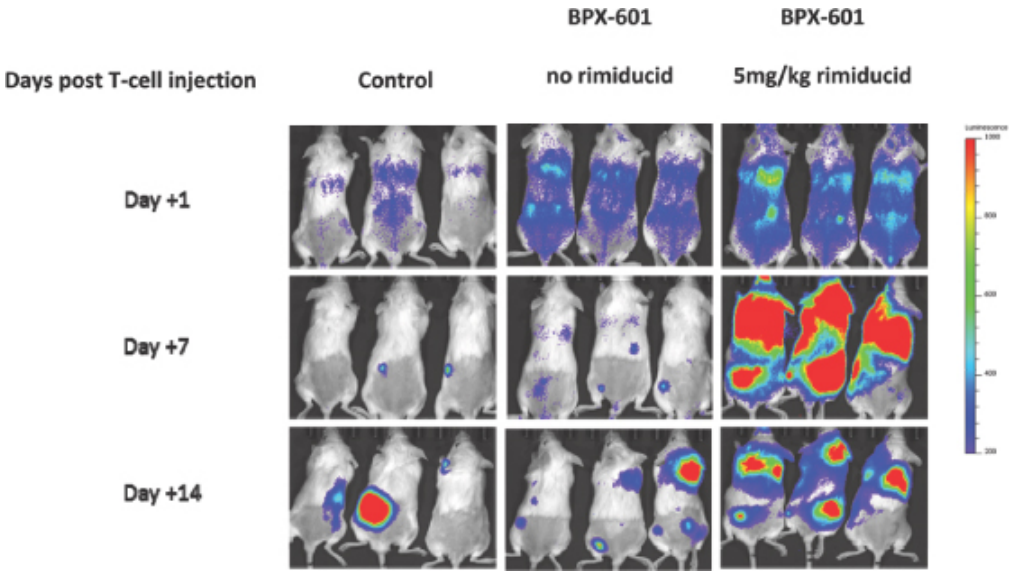
Our GoCAR-T technology is designed to change current paradigm by separating the CIDeCAR dual co-stimulatory domain, MC, from the antigen recognition domain and moving it onto a separate molecular switch that can be controlled by rimiducid. GoCAR-T cells can only be fully activated when exposed to both the cancer cells and rimiducid (see figure below). This separation is designed to control the degree of activation of the CAR T cells through adjustments to the amount of rimiducid administered, but still in a tumor-dependent manner.

Comparison of Conventional CAR-T Technology vs. GoCAR-T



In a proof-of-principle *in vitro* study of our GoCAR-T technology (shown below) GoCAR-T cells targeting the PSCA antigen can only be fully activated, as evidenced by production of IL-2 (left panel) and T-cell proliferation (right panel) when the GoCAR-T cells are exposed to both their target PSCA-expressing human pancreatic cancer cells and rimiducid.

In further *in vivo* studies of GoCAR-T technology, target antigen PSCA-expressing Capan-1 human pancreatic tumors were established in immune-deficient, or NSG, mice. After seven days, five mice received control T cells modified only with firefly luciferase, an imaging protein, and 10 mice received T cells modified with MC in the form of a molecular switch or iMC, plus a PSCA. ζ CAR (together, BPX-601) and firefly luciferase. Five mice in this second group also received 5 mg/kg rimiducid weekly. T-cell imaging clearly demonstrated that GoCAR-T cells can be stimulated to proliferate *in vivo* when exposed to target antigen-expressing cancer cells by rimiducid administration.

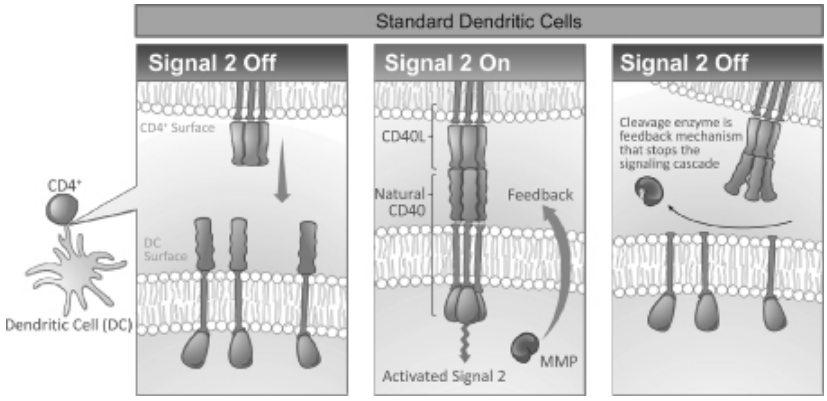


T cells were transduced with firefly luciferase, allowing their number to be measured *in vivo* in live animals by the degree of luminescence seen upon exposure to its subtrate, luciferin, which was injected intraperitoneal prior to each imaging session. Luminescent scale shown from low (blue) to high (red) correlating to T cell number.

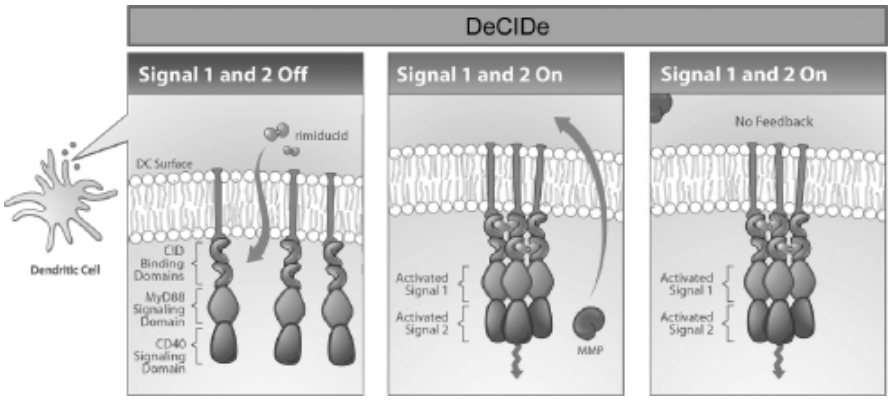
We believe these studies together provide proof-of-principle that GoCAR-T technology may allow rimiducid to modulate the therapeutic effect from initiation of treatment, turning CAR T cell therapy from an uncontrollable, and largely unpredictable class into a more predictable therapy which can be adjusted, like a small molecule, to the patient's therapeutic window to the appropriate level.

DeCIDe

DeCIDe technology is used to control the activation of dendritic cells. Dendritic cells are an important part of the immune system, processing antigens for presentation to T cells. Optimal stimulation of dendritic cells requires the activation of both the CD40 and toll-like receptor, or TLR, pathways, which results in maturation and activation of the dendritic cells as well as production of key cytokines, such as IL-12. These processes lead to a therapeutic response to the antigen by the patient's immune system. The potency of an immune response is governed by the maturation of dendritic cells in the patient's lymph nodes as well as the duration of interaction between activated dendritic cells with circulating T cells.



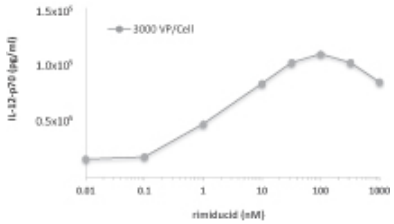
Activation of CD40 receptors on dendritic cells normally occurs via engagement of the trimeric CD40 ligand expressed on the surface of activated T helper cells (figure below, panels 1 and 2). This potent activation signal for dendritic cells may be quickly turned off by the action of certain proteases (MMP for example), which can cut and remove the CD40 ligand-binding portion of CD40 receptors (panel 3).



To take control of the activation of the dendritic cells and the resulting immune response to cancer, we have taken the signaling domains of CD40 and MyD88, and coupled them to our CID binding domain, to create our inducible MC switch, which we then insert into dendritic cells along with the PSMA antigen. Upon exposure to rimiducid, DeCIDe-containing dendritic cells are designed to become highly activated in a process that is no longer susceptible to being turned off by MMP (second set of panels below). Our DeCIDe technology, thus, potentially enables us to

activate dendritic cells with rimiducid after the patient has been vaccinated and the dendritic cells have migrated to the draining lymph nodes in a potent and long-lasting manner.

Fully activated dendritic cells exhibit a number of important traits, including increases to the levels of important cell surface markers, and production of important cytokines, such as IL-12. As demonstrated below, cultured BPX-201 cells, which are dendritic cells transduced with our DeCIDe switch technology, produce supra-normal levels of IL-12 in response to rimiducid. These data suggest that in addition to the temporal control of dendritic cell activation that DeCIDe technology affords, once exposed to rimiducid, DeCIDe-containing dendritic cells become highly activated, which may lead to more potent anti-cancer activity in patients.



Dendritic cells were cultured and infected for 2 hours with 3000 viral particles (VP) containing our DeCIDe technology. The following day, cells were treated with serially diluted AP1903 (rimiducid) (0.01 -1000 nM) for 24 hours post-infection. Supernatant fluids were subsequently harvested and assayed for IL-12.

Our DeCIDe technology is applied to our cancer vaccine product candidate BPX-201.

Our Product Candidates

Based on our CID platform and associated technologies, we have built a robust pipeline of controllable immunotherapy product candidates with the potential for clear differentiation compared to other cellular immunotherapies. Our product candidate pipeline is set forth below:

Product Candidate	Technology	Indication	Research/ In Vitro	In Vivo	IND Enabling	Ph. 1/2	Upcoming Milestone Events
Clinical Product Candidates							
BPX-501	CaspaCIDe	Allogeneic HSCT					• Initiate additional Ph. 1/2 trials in 2H 2014 • Topline data from Ph. 1/2 trials in 2H 2015 • End-of-Ph. 2 meeting in 1H 2016
		Relapse after HSCT					
BPX-201	DeCIDe	Progressive mCRPC & other PSMA-expressing solid tumors					• Initiate Ph. 1/2 checkpoint inhibitor combo trial in 2015
Preclinical Product Candidates							
BPX-401	CIDeCAR	CD19-expressing hematological cancers					• Initiate Ph. 1/2 trial in 1H 2016
BPX-601	GoCAR-T	PSCA-overexpressing solid tumors					• Initiate Ph. 1/2 trial in 2H 2016
BPX-701	CaspaCIDe TCR	PRAME-expressing melanomas					• Initiate Ph. 1/2 trial in 2H 2015

BPX-501: CaspaCIDe Product Candidate for Hematological Diseases

BPX-501 is an adjunct T-cell therapy administered after allogeneic HSCT that incorporates our CaspaCIDe technology. We are developing BPX-501 in the initial indications of hematological cancers and orphan inherited blood disorders. In the indication of hematological cancers, we are pursuing two regulatory pathways: (1) support of immune system recovery following allogeneic HSCT, and (2) the treatment of the relapse of underlying disease following allogeneic HSCT. In orphan inherited blood disorders, we are pursuing a parallel regulatory pathway for immune system recovery following allogeneic HSCT.

We are currently conducting two Phase 1/2 clinical trials of BPX-501 in the United States: BP-001, a clinical trial in adults in which BPX-501 is administered after initial allogeneic HSCT for hematological cancers, and BP-003, a clinical trial in children with orphan inherited blood disorders in which BPX-501 is administered after initial allogeneic HSCT. In addition, we are planning to initiate additional Phase 1/2 clinical trials in the United States and Europe during the remainder of 2014 and 2015, as part of our strategy to pursue a global regulatory approval and expand the potential addressable patient population for BPX-501.

HSCT Market Overview

HSCT is used to treat a wide range of hematological cancers, such as ALL, AML and CML, as well as orphan inherited blood disorders, such as sickle-cell disease, beta-thalassemia and certain immune disorders, due to its ability to achieve long-term disease remission or functional cure. The majority of pediatric HSCT procedures are for inherited blood disorders while the majority of HSCT in adults are for hematological cancers. Autologous transplantations (using patient's stem cells) and allogeneic transplantations (using donor stem cells) comprise 55% and 45%, respectively, of approximately 50,000 HSCT procedures conducted annually worldwide. Within the allogeneic HSCT market, finding a compatible donor is a major limitation to successful treatment. A test comparing the human leukocyte antigen, or HLA, types, which are proteins found on most cells in the body, is used to measure compatibility of the donor and the patient. A sibling of the patient with an exactly matching HLA types is an ideal donor for the patient. However, only 30% of potential allogeneic HSCT patients have such a match, and this percentage is expected to decrease as the average family size among the population continues to decrease. A suitable match can be identified in databases of unrelated donors for approximately 60% of patients of European descent, but a suitable match of patients from other ethnicities is difficult to find and occurs in approximately 10% of patients. This leaves a large pool of patients in need of alternative treatment options.

Because of the challenges in identifying matched donors, there has been a growing interest in the use of hematopoietic stem cells from haplo-identical (half-matched) donors for HSCT, or haplo-HSCT. Identifying potential haplo-HSCT donors is much easier and faster because biological first degree relatives are all haplo-identical to the patient. Although haplo-HSCT techniques have improved patient eligibility for transplantation and increased the use of allogeneic HSCT, patients face substantial health risks, such as GvHD, low immune function and higher likelihood of relapse of underlying hematological disease.

Limitations of Current Treatments

In haplo-HSCT procedures, GvHD is the biggest health risk. GvHD develops when donor T cells attack the patient's cells, recognizing antigens on the patient's cells as foreign. The current standard of care for treating GvHD is high-dose steroids. However, in many cases, steroids' slow onset of action or lack of effect in certain patients has led to death. In addition, steroids may suppress all T-cell activity which may leave patients open to infection. According to a 2010 study published by the American Society for Blood and Marrow Transplantation, patients who fail to achieve a complete response to steroid therapy for severe GvHD within 14 days accounted for 83% of all deaths within six months of initiating GvHD treatment.

Various techniques have been developed to deplete allo-reactive (GvHD-causing) donor T cells in order to prevent GvHD. However, these approaches tend to eliminate the helpful T cells, as well as the harmful ones, leaving the patient immuno-compromised for a year or longer and prone to relapse of underlying disease. In addition, these procedures reduce the probability of stem cell engraftment and increase the risk of opportunistic infections in the patient.

Adding back defined numbers of donor T cells after T-cell depletion can help restore some functions of the patient's immune system, but the risk of GvHD increases with increasing T cell doses. Unfortunately, the maximum dose of donor T cells that can be safely added back varies widely from patient to patient.

Our Solution

We are developing BPX-501 as an adjunct donor T-cell therapy designed to improve stem cell engraftment and accelerate immune system recovery, while providing for rapid and effective resolution of GvHD, should it occur, with the administration of rimiducid. As a result, BPX-501 is designed to enable a broader range of non-matched donors and make haplo-HSCT a viable treatment option for a broader patient population. We have identified two potential applications of BPX-501:

- an add-back of donor T cells administered to accelerate immune system recovery after allogeneic haplo-HSCT in which the T cells in the transplanted stem cells were depleted; and
- a donor T cell infusion administered to prevent or treat relapse of underlying disease after allogeneic HSCT independent of donor match

For each of these indications, BPX-501 potentially allows the patient to receive the benefits of adjunct donor T-cell therapy, while mitigating associated health risks. If a patient develops GvHD after an infusion of BPX-501, the physician can administer rimiducid to eliminate the modified donor T cells inside the patient, in order to potentially resolve GvHD. In clinical trials to date, GvHD-causing cells have been eliminated as quickly as 30 minutes after administration of rimiducid, and GvHD symptoms have resolved within one to two days.

CASPALLO: Phase 1 Clinical Trial

As reported in the *New England Journal of Medicine* in 2011, the Texas Children's Hospital, in collaboration with Baylor College of Medicine, under an agreement with us, conducted a Phase 1 clinical trial of T cells genetically modified to include CaspaCIDe. The CaspaCIDe switch (iCasp9) used in these cells was identical to the one used in BPX-501. The only differences between these cells and BPX-501 were cell processing techniques used and method of treatment. In this clinical trial, the CaspaCIDe T cells had been depleted of most of the allo-reactive cells prior to administration. The clinical trial enrolled ten pediatric patients selected to undergo allogeneic haplo-HSCT with T-cell depletion as a treatment for high-risk hematological cancers. Each patient received CaspaCIDe T cells between 30 and 90 days post-transplant. There were no immediate toxicities reported to us for this treatment.

Of the ten patients in the clinical trial, five of six patients with an original diagnosis other than ALL achieved complete remission throughout the trial period. Of four ALL patients, who do not typically respond well to donor lymphocyte infusions, one achieved complete remission throughout the trial period and three achieved remission lasting between five and 19 months, but later died.

Four patients in the clinical trial developed acute GvHD from two to six weeks after infusion of CaspaCIDe T cells. They were given a single dose of 0.4 mg/kg rimiducid. This resulted in a rapid decline in the level of circulating CaspaCIDe T cells. Within 30 minutes, the level of these cells decreased by 90% and within 24 hours, 99% of the most activated cells were eliminated. The characteristic acute GvHD skin rash in the four patients resolved within 24 to 48 hours and required no further treatment. There were no reported adverse events associated with rimiducid administration.

The following table reflects the results of treatment for each patient in the study:

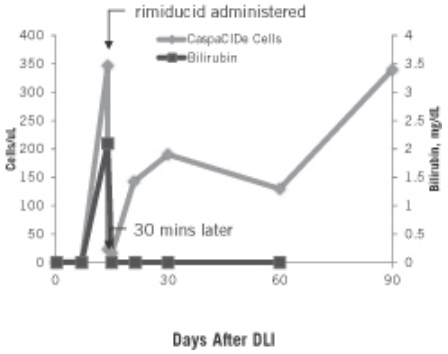
Patient #	Diagnosis	Days from Transplant to T-cell Infusion	Infused T Cell / kg	Occurrence of GvHD	Rimiducid Dosing	GvHD Resolution	Status at Trial Completion
1	Secondary AML	66	1×10^6	Yes, Grade ½*	Yes	Yes	Complete remission throughout trial period
2	B-ALL	80 & 111	1×10^6	Yes, Grade 1*	Yes	Yes	Complete remission for 552 days; death from progressive disease on Day 591
3	T-ALL	93	3×10^6	No	No	NA	Complete remission throughout trial period
4	T-ALL	30	3×10^6	Yes, Grade 1*	Yes	Yes	Complete remission for 57 days; death from progressive disease on Day 158
5	B-ALL	42	1×10^7	Yes, Grade 1*	Yes	Yes	Complete remission for 158 days; death from progressive disease on Day 164
6	Biphenotypic leukemia	87	1×10^6	No	No	NA	Complete remission throughout trial period
7	T-cell lymphoblastic lymphoma	75 & 368	1×10^7	No	No	NA	Complete remission throughout trial period
8	T-ALCL	40	1×10^7	No	No	NA	Complete remission throughout trial period
9	MDS monosomy 7	90 & 271	1×10^7 1×10^6	No	No	NA	Complete remission throughout trial period after 2nd HSCT
10	Biphenotypic leukemia	124 & 248	1×10^7 5×10^6	No	No	NA	Death from respiratory failure on Day 615

* Grade 1 GvHD was characterized by skin rash only, and Grade 1/2 GvHD was characterized by skin rash and elevated liver enzymes.

The data highlighted below in one of the patients from the CASPALLO trial who developed GvHD illustrates that:

- the CaspaCIDe T cells, including those responsible for causing GvHD, were eliminated in 30 minutes after rimiducid administration;
- patient's skin rash and elevated bilirubin, indicating Grade 2 GvHD involving the liver, returned to normal within 24 hours in response to rimiducid; and
- T cells re-expanded without recurrence of chronic or acute GvHD.

Case History of Three-year-old Haplo-HSCT Patient Who Developed Grade 2 Liver GvHD



The published report describing long-term follow-up of patients in this trial demonstrated that infusion of CaspaCIDe T cells could promote the control of cytomegalovirus, or CMV, Epstein-barr virus, or EBV, adenovirus, or AdV, BK virus, or BKV, and (in one patient) *Aspergillus* infections after haplo-HSCT. All patients with these infections quickly reduced both their viral loads and clinical symptoms. The researchers noted that in patients with viral reactivation, the infusion of rimiducid did not permanently delete virus-specific CaspaCIDe T cells since these cells consistently recovered, contributed to the elimination of the infection and remained detectable for months.

DOTTI: Ongoing Phase 1 Clinical Trial

The Texas Children's Hospital and Baylor College of Medicine, under an agreement with us, are conducting another Phase 1 clinical trial of CaspaCIDe T cells in pediatric patients with similar parameters as the CASPALLO clinical trial, except that the CaspaCIDe T cells were not depleted of allo-reactive cells prior to administration. This clinical trial has enrolled 11 patients as of September 30, 2014 and is ongoing, with top-line data expected by the end of 2014. As of September 30, 2014, we have been informed that three patients who developed GvHD were treated with rimiducid and that each demonstrated rapid resolution of GvHD and control of viral infections.

The collaborators have shared data with us from one of these patients in the clinical trial that was treated with rimiducid. In this 14 year-old patient who developed severe GvHD, rimiducid induced the following effects:

- severe skin rash was resolved within 25 minutes;
- a105° fever returned to normal within one hour; and
- levels of various cytokines, including IL-6, returned to normal in 2.5 to 24 hours.

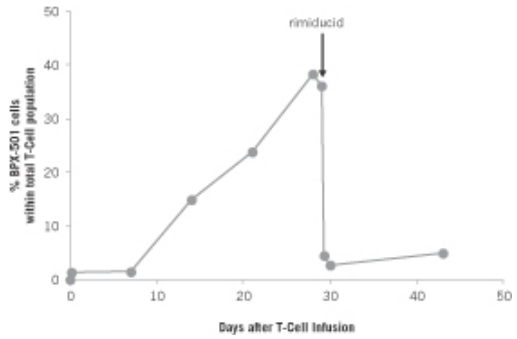
University of Texas, MD Anderson 2012-0501: Ongoing BPX-501 Phase 1/2 Clinical Trial

We are collaborating with the University of Texas, MD Anderson Cancer Center on an ongoing investigator-led open-label Phase 1/2 clinical trial of our product candidate, BPX-501. This clinical trial is expected to enroll 10 adults in the United States who have previously received allogeneic haplo-HSCT. BPX-501 is given as a prophylaxis treatment to prevent relapse of underlying disease. Three patients have been enrolled, and one patient has been treated with rimiducid for GvHD.

In this patient, BPX-501 T cells demonstrated engraftment and expansion after administration, increasing to 38% of the total T-cell population by Week 4 after administration. Shortly thereafter, the patient developed stage 3 skin GvHD, comprised of a skin rash involving over 80% of the patient's body. The patient received a brief course of

steroids and received a dose of rimiducid as part of the clinical trial protocol. The graph below shows greater than 95% reduction of BPX-501 T cells within three hours of rimiducid dosing (the first time point examined), followed by resolution of symptoms of GvHD within two days.

First Dosing of Rimiducid to Treat Grade 3 GvHD in a Patient Treated with BPX-501



* Stage 3 skin GvHD was characterized by greater than 80% of the body covered in a rash.

BPX-501 Development Plan

We are pursuing a development strategy that will make BPX-501 available to a broad patient population in need of a better HSCT treatment regimen. As a result, we have designed our existing Phase 1/2 clinical trial protocols to consist of U.S. and European trials, adult and pediatric patients and different indications and BPX-501 usage. The table below outlines our ongoing and planned Phase 1/2 clinical trials for BPX-501.

Clinical Trial Protocol	Location	Number of Patients	End Points	Status
BP-001: Phase 1/2 dose escalation trial of haplo-identical, CD34+, T-cell-depleted HSCT for hematologic cancers	U.S.	8-12 adult patients dose escalation Up to 24 additional patients	-Safety -Immune recovery -GVHD outcomes -Relapse	Trial ongoing at multiple sites
BP-003: Phase 1/2 dose escalation trial of haplo-identical, CD34+, T-cell-depleted HSCT for orphan inherited blood disorders	U.S.	Up to 20 pediatric patients	-Safety -Immune recovery -GVHD outcomes	Trial ongoing at 1 site
BP-004: Phase 1/2 dose escalation trial of haplo-identical, αßTCR, partial T-cell-depleted HSCT for hematologic cancers and orphan inherited blood disorders	U.S. and Europe	30 pediatric patients each in U.S. and Europe	-Safety -Immune recovery -GVHD outcomes -Relapse	Initiate in late 2014 at multiple sites
BP-005: Phase 1 dose escalation trial of haplo-identical, αßTCR, partial T-cell-depleted HSCT for hematologic cancers	U.S. and Europe	Up to 36 adults patients	-Safety -Immune recovery -GVHD outcomes -Relapse	Initiate in 1H 2015
BP-006 (MDACC 2012-0501): Phase 1/2 dose escalation trial of matched related and unrelated patients with prophylactic BPX-501 for hematologic cancers	U.S.	10 adult patients	-Safety -Immune recovery -GVHD outcomes -Relapse	3 patients enrolled; 1 treated with rimiducid
BP-008: Phase 1/2 dose escalation trial of BPX-501 for tumor recurrence or minimal residual disease after allogeneic HSCT, and rimiducid dose escalation	U.S. and Europe	25 adult and pediatric patients	-Safety -Tumor response -GVHD outcomes	Initiate in 1H 2015
BP-010: Phase 1/2 dose escalation trial of haplo-identical HSCT for minimal residual disease of hematologic cancers	U.S and Europe	20 adult and pediatric patients	-Safety -Tumor response -GVHD outcomes	Initiate in 1H 2015

We intend to conduct end-of-Phase 2 meetings with the FDA and the European regulatory agencies in the first half of 2016 to determine the optimal path for BPX-501 approval and appropriate designs for registration trials.

BPX-201: DeCIDe Cancer Vaccine Product Candidate

We are developing BPX-201 as a dendritic cell cancer vaccine designed to treat mCRPC. BPX-201 is an autologous therapy, in which the patient's own white blood cells are extracted and modified *ex vivo*. The cells are matured and then genetically engineered to express the DeCIDe switch domains and the PSMA antigen. Then, the modified cells are washed, apportioned into individual doses, and frozen for later administration to the patient.

By incorporating the DeCIDe switch that activates therapy only in the presence of rimiducid, physicians may be able to strategically time the immune system's attack on cancer cells. The rationale behind this approach is to allow BPX-201 cells to bypass critical immune checkpoints that can potentially reduce therapeutic effect and migrate to nearby lymph nodes to initiate a potent and durable antigen-specific T-cell response.

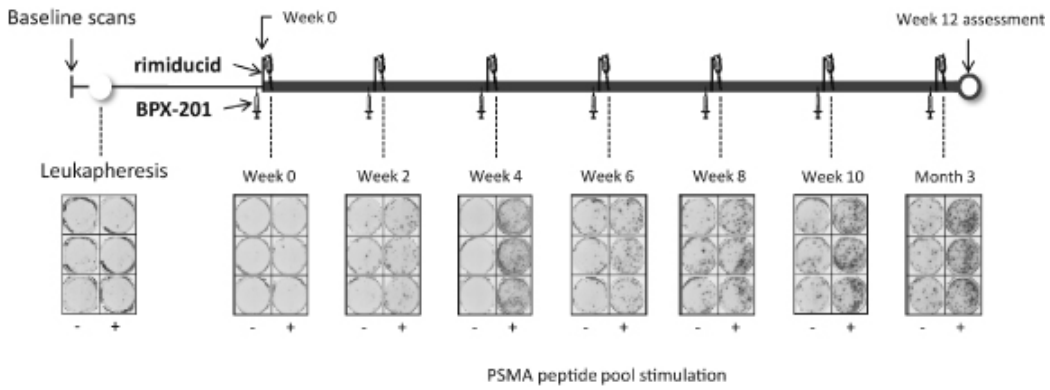
BPX-201 is currently being evaluated in an 18-patient Phase 1 clinical trial for mCRPC. We are also intending to conduct preclinical studies to evaluate opportunities for BPX-201 in other solid tumors and as combination therapy with a checkpoint inhibitor.

We are evaluating opportunities for BPX-201 in combination with other cancer immunotherapies, such as checkpoint inhibitors. Checkpoint inhibitors act by removing inhibitory signals on antigen- or tumor- specific T cells already present in the patient's body. In the data shown below, BPX-201 shows the potential to stimulate proliferation of PSMA-specific T cells thereby providing a mechanism to successfully combine BPX-201 with checkpoint inhibitors. There are multiple checkpoint inhibitors in clinical and preclinical development, allowing us to potentially create a competitive situation in partnering BPX-201 with one or more of them.

BPX-201 Phase 1 Clinical Trial

We are evaluating BPX-201 in a multi-site Phase 1 dose escalation clinical trial in mCRPC patients to study its safety and preliminary efficacy. We anticipate that a total of 18 patients will receive BPX-201 every two weeks for a total of six cycles. Each dose of BPX-201 will be followed by a single dose of rimiducid given the following day. Enrolled patients undergo leukapheresis (harvesting of certain white blood cells) after baseline scans confirm progressive mCRPC. After manufacture and release of BPX-201, patients receive intradermal vaccination of BPX-201 every two weeks, for a total of six doses. Twenty four hours after each vaccine administration, patients are administered a two-hour infusion of rimiducid to activate the BPX-201 cells after they have had time to migrate to the draining lymph nodes.

BPX-201 Clinical Trial Timeline and Stimulation of Immune System



As demonstrated in the figure above, the data from a patient enrolled in the first cohort of the trial demonstrated an increasing immune response to PSMA with each successive dose of BPX-501 through the first 12 weeks of treatment. The magnitude of the immune response is indicated by the number of spots in the three petri dishes with exposure ("+") compared to without exposure ("-") to target antigen PSMA peptides.

BPX-401: CIDeCAR Product Candidate for Hematological Cancers

We are developing BPX-401 for the treatment of hematological cancers overexpressing the CD19 antigen, such as ALL, CLL and certain types of non-Hodgkin's lymphoma. We have generated preclinical proof-of-principle data *in vitro* showing that BPX-401 has significant CAR T cell activation and proliferation potential, and may be more effective in killing cancer cells compared to other CAR-T constructs. We intend to file an IND and initiate a Phase 1/2 clinical trial in the first half of 2016.

The current standard of care in these indications, chemotherapy combined with monoclonal antibody therapies, works to varying degrees with high disease relapse rates. CD19-targeted CAR-T therapies have elicited high objective response rates in some of these B cell cancers, but they have demonstrated major safety risks.

BPX-401 Preclinical Data

BPX-401 was compared *in vitro* to non-modified T cells and other CAR-T constructs targeting the CD19 antigen, such as early generation CAR-T with CD3ζ alone, and current generation CAR-T with CD3ζ and either CD28, 4-1BB, or both co-stimulatory molecules. We have conducted *in vitro* studies that indicate, in addition to the safety feature, BPX-401 compares favorably to other therapies under development by third parties as measured by cell proliferation, production of key cytokines and *in vitro* tumor cell killing. These attributes may translate to best-in-class anti-tumor activity *in vivo.* The data from these studies is described under "Business—CIDeCAR".

BPX-601: GoCAR-T Product Candidate for Solid Tumors

We are currently conducting preclinical studies of BPX-601 for the treatment of solid tumors overexpressing the PSCA antigen. PSCA is highly expressed in some pancreatic cancers, as well as in a portion other solid tumors, including bladder, esophageal and gastric cancers. Although many product candidates are in development for these cancers, there are currently no approved products targeting PSCA. We intend to initiate a Phase 1/2 clinical trial in the second half of 2016. In order to commercialize this product candidate, we may need to obtain an additional intellectual property license.

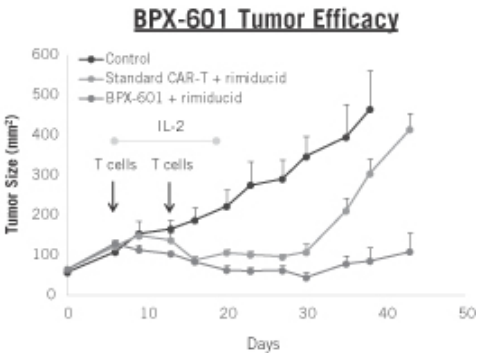
BPX-601 Preclinical Data

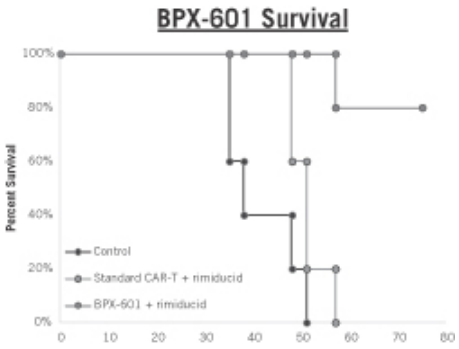
BPX-601 *in vitro* data included under "Business—GoCAR-T" showed that BPX-601 cells targeting the PSCA antigen can only be fully activated, as evidenced by production of IL-2 and CAR T cell proliferation, when they are exposed to both their target PSCA-expressing cancer cells and rimiducid. In addition, *in vivo* T-cell imaging clearly demonstrated that BPX-601 cells can be stimulated to proliferate when exposed to target antigen-expressing cancer cells by the administration of rimiducid.

BPX-601 was evaluated for anti-tumor activity against PSCA-target antigen expressing human pancreatic cancer (Capan-1) in an immune-deficient mouse model. Three groups of five mice each were engrafted with Capan-1 tumor cells then treated with either non-modified T cells, T cells expressing a standard CD3ζ CAR-T construct targeting PSCA, or BPX-601 construct containing the PSCA CD3ζ CAR and inducible MC on Day 6 and Day 13. For this study, mice were given IL-2 support, a common practice for CAR-T treatment, until Day 21. All mice received 5 mg/kg of rimiducid twice a week. As expected, in the arm treated with unmodified T-cell control, average tumor size rapidly

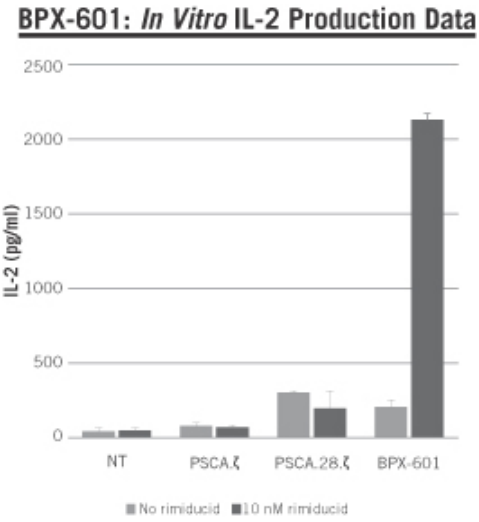
increased, and no mice survived beyond Day 51. In the arm treated with a comparative PSCA CD3ζ CAR construct, the treatment did suppress tumor size to an extent, but shortly after the second injection of T cells and removal of IL-2 support, tumor size began to increase. By Day 57 all the mice in this arm were dead. In the BPX-601 arm, average tumor size remained low long after the second injection of T cells and removal of IL-2 support. Four out of five mice were still alive after 75 days, at which time the experiment was ended.

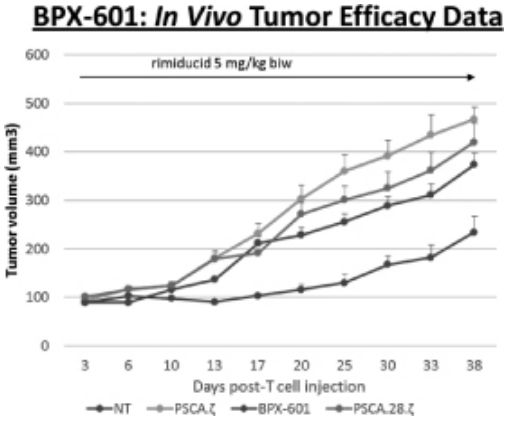
BPX-601 : *In Vivo* Preclinical Data in Mice





Because the data above suggested that BPX-601 cells were effective even after withdrawal of IL-2 support, and since fully activated GoCAR-T cells produce higher levels of the critical T-cell growth cytokine, IL-2, than standard CD28-containing CARs (see figure below, left panel), we evaluated whether IL-2 support was necessary for the proliferation and anti-tumor effects of BPX-601 cells against human pancreatic cancers. Therefore, in a similar experiment to the one above (see figure below, right panel), anti-tumor efficacy *in vivo* was assessed by treating immune-deficient mice engrafted with Capan-1 (human pancreatic) tumor cells with two doses of BPX-601 cells on Days 4 and 6, but without any IL-2 support. All groups received 5 mg/kg of rimiducid twice per week. Tumors were best controlled in mice treated with BPX-601 cells and rimiducid compared to control T cells or standard CD28-containing CAR T cells, which were largely ineffective and not significantly different from non-transduced control T cells.





These data demonstrate that BPX-601 may be effective in treating PSCA-expressing solid tumors in patients.

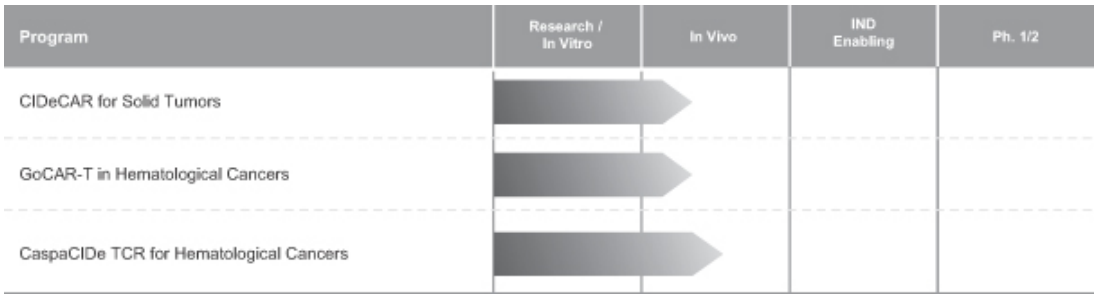
BPX-701: CaspaCIDe TCR Product Candidate for Solid Tumors

We are developing BPX-701, a TCR-based therapy that incorporates our CaspaCIDe technology, in collaboration with Leiden University Medical Center, for the treatment of PRAME-expressing melanoma, sarcomas and neuroblastomas.

BPX-701 is designed to target preferentially-expressed antigen in melanoma, or PRAME, a gene that is predominantly expressed in human melanomas but not in normal tissues. As initially reported in Clinical Cancer Research 2011, PRAME-specific clones showed high reactivity against a panel of PRAME positive tumor cell lines, metastatic melanoma, sarcomas and neuroblastoma tissues, and no reactivity against normal cell types, with the exception of low reactivity against kidney epithelial cells and intermediate reactivity against mature dendritic cells, or DCs. In other TCR programs, despite careful evaluation of normal tissues to identify potential off target effects, unexpected cross-reactivities have been encountered in clinical trials, leading to serious adverse events including patient deaths. BPX-701 containing the CaspaCIDe safety switch, has demonstrated complete elimination in response to rimiducid. Therefore, we believe a PRAME-TCR with CaspaCIDe can provide safety in the clinical development of this TCR.

Other Development Programs

We believe that our CIDeCAR, GoCAR-T and CaspaCIDe TCR technologies have broad applicability against a range of cancer targets which form the basis for additional development programs, some of which are described below:



CIDeCAR for Solid Tumors

Beyond hematological cancers, we are studying the full potential of CIDeCAR to enable treatment of more challenging solid tumor cancers in which concerns regarding toxicity are paramount in the field of cell therapy. To this end, we are conducting preclinical studies of various CIDeCAR product candidates targeting solid tumor antigens.

GoCAR-T in Bulky Hematological Cancers

The cell therapy treatment of bulky hematological cancers presents many of the same efficacy and safety challenges as the treatment of solid tumors. As such, we believe the potential for GoCAR-T cells to proliferate may lead to consistent, predictable efficacy for the treatment of these cancers. We are currently conducting preclinical studies of product candidates for the treatment of bulky hematological cancers, such as certain non-Hodgkin's lymphomas, as well as CLL.

CaspaCIDe TCR for Hematological Cancers

We are working with our collaborator, Leiden University Medical Center, to evaluate an additional TCR with high affinity for certain peptides for the treatment of hematological cancers, including ALL, CLL, MCL and MM. The TCR construct incorporates the CaspaCIDe safety switch.

Manufacturing, Processing and Delivering to Patients

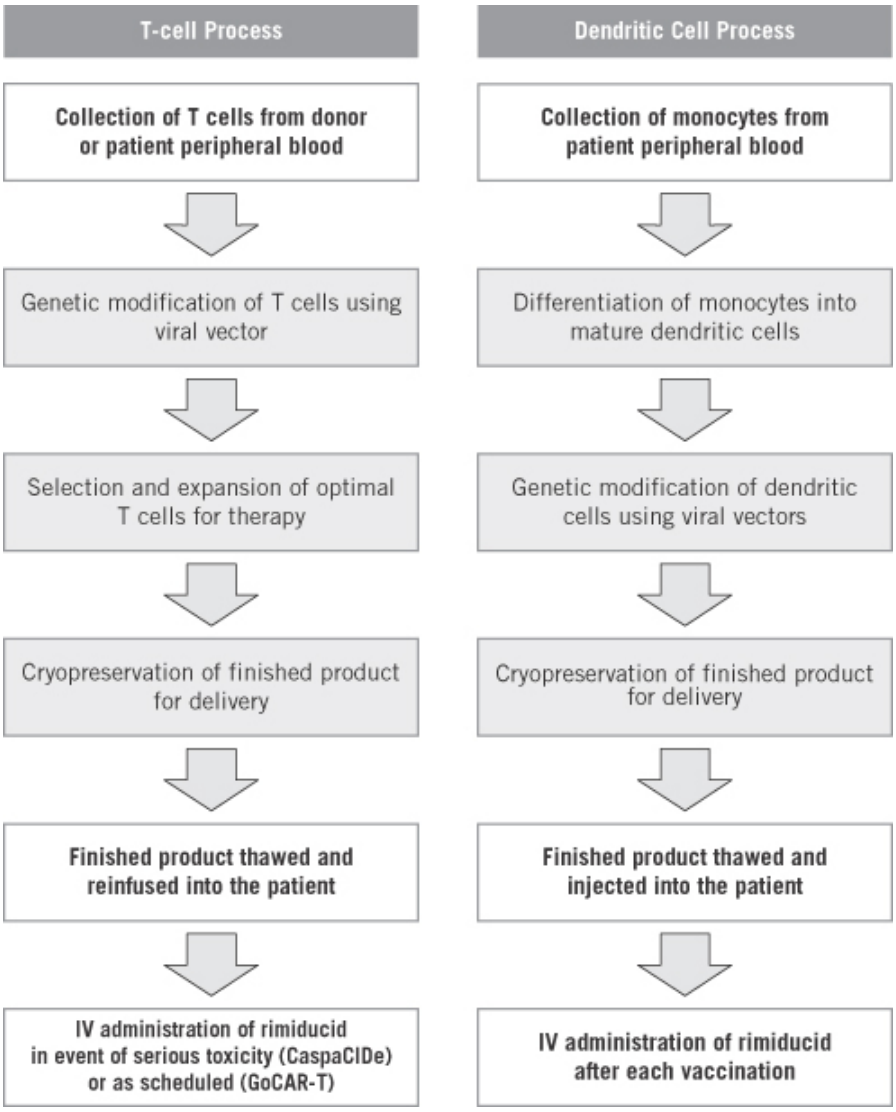
Our product candidates require a combination of three critical components: (1) viral vectors with DNA content encoded for our proprietary switch proteins and co-stimulatory and other accessory molecules, (2) patient-specific donor T cells or dendritic cells that are genetically modified by our viral vectors, and (3) the synthetic small molecule rimiducid which activates the switch proteins. Each of these components requires a separate supply chain and shares the same regulatory requirements applicable for biological or chemical materials suitable for human use. Details on each of these components are described below:

- ***Viral Vectors.*** We use a retrovirus to transduce our T cell based product candidates. We believe that the retrovirus is optimal for T cell transduction given that it is an integrating vector that induces long-term gene expression, exhibits high transduction efficiency, has large capacity for DNA content, and have been safely used in clinical trials. To transduce dendritic cells, we use a specific type of adenovirus, which has been shown to be efficient at transducing this cell type and is cost-effective to manufacture and scale. The vector production is performed at multiple third-party supplier facilities under GMP procedures and requirements. These suppliers have significant experience and expertise in vector manufacturing and have dedicated capacity to satisfy demand for large clinical trials and product commercialization.
- ***Genetically Modified T Cells and Dendritic Cells.*** We have agreements with reputable contract manufacturing organizations, or CMOs, with facilities in both the United States and Europe for processing and manufacturing our genetically modified T cells and dendritic cells. We have designed and refined a proprietary process for cell engineering that has been improved from lab-based open procedures used in academic and research settings to a functionally closed system that is more appropriate for large-scale clinical trials and commercialization. Our system is compliant with current guidelines and regulations for cell-based manufacturing in the United States and Europe and has been successfully transferred and implemented by our CMOs.
- ***Rimiducid.*** Rimiducid is a synthetic small molecule which has been rationally designed to trigger the proprietary switch proteins in our CID platform. We have separate third-party manufacturers for the active pharmaceutical ingredient, or API and the finished drug product. Manufacturers of both the API and finished drug product are licensed to manufacture a variety of marketed drugs worldwide and have been selected based on their ability to provide supplies for our clinical trials and future commercialization.

Given that our product candidates are for patients whose conditions can rapidly deteriorate, we are focused on continuously refining our overall cell therapy process (manufacturing, processing and delivery to patient) to be more efficient.

Our current process cycle from our product candidates, from collection of white blood cells to infusion of the final product, can be completed in as little as two weeks and are customized to be complementary to the treatment procedure of interest in order to prevent any delays or complications.

The key steps of processing our T-cell and dendritic-cell product candidates are depicted below:



Intellectual Property

We seek to protect proprietary technology, inventions, and improvements that are commercially important to our business by seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We also seek to rely on regulatory protection afforded through orphan drug designations, data exclusivity, market exclusivity and patent term extensions where available as well as contractual agreements with our academic and commercial partners.

To achieve this objective, a strategic focus for us has been to identify and license key patents and patent applications that serve to enhance our intellectual property and technology position. Our intellectual property estate includes: (1) claims directed to core CID technologies and components used in our products; (2) claims directed to methods of treatment for therapeutic indications; (3) claims directed to specific products; and (4) claims directed to innovative methods for generating new constructs for genetically engineering T cells and dendritic cells. We believe our patent estate, together with our efforts to develop and patent next generation technologies, provides us with a substantial intellectual property position.

However, the area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties. We are aware there are third party patents having claims that may be considered relevant to the BPX-201 technology for which we are seeking, regulatory approval, however, we believe these patents have a patent term that may expire prior to the time we expect to obtain regulatory approval for this technology. We believe that if claims in one or more of the patents referenced in the previous sentence are asserted against us, we may be able to assert a defense for a safe harbor to patent infringement under 35 U.S.C. 271(e)(1) if certain requirements are met. Please refer to the section entitled “Risk Factors—Risks Related to Our Intellectual Property” herein for associated risks.

We are aware of a third party patent having claims directed to chimeric DNA comprising DNA segments encoding (i) a single chain antibody domain and (ii) transmembrane and cytoplasmic domains of an endogenous protein. We believe that our BPX-401 and BPX-601 technologies are not covered by claims of this patent. Please refer to the section entitled “Risk Factors—Risks Related to Our Intellectual Property” herein for associated risks.

We are aware of third party patents having claims that may be considered as being directed to single-chain antibody fragments that bind to PSCA and these patents may be considered relevant to BPX-601 technologies we are developing. We currently are evaluating whether or not we need to obtain rights to these patents under a license, and if it is determined that we need to obtain such rights, whether these rights can be obtained. Please refer to the section entitled “Risk Factors—Risks Related to Our Intellectual Property” herein for associated risks.

To our knowledge, our patent estate, on a worldwide basis, includes 74 issued patents (18 of which are in the United States) and 43 pending patent applications (22 of which are in the United States) which we own or for which we have an exclusive (either in its entirety or within our field of use) commercial license as of September 30, 2014. Of these:

- We have internally developed technology disclosed in three pending provisional patent applications and two utility patent applications in the United States, and two pending international (PCT) patent applications, which relates to our CIDeCAR technology. If these provisional patent applications are converted to utility patent applications, and U.S. patents issue from these, the estimated expiration date of the last to expire patent is in 2034 or later.
- We have internally developed technology disclosed in three pending provisional patent applications and one utility patent application in the United States, and one pending international (PCT) patent application, which relates to our GoCAR-T technology. If these provisional patent applications are converted to utility patent applications, and U.S. patents issue from these, the estimated expiration date of the last to expire patent is in 2034 or later.
- We have internally developed technology disclosed in a U.S. provisional patent application, which relates to a “non-inducible” CAR and “non-inducible” co-stimulatory polypeptide, which may also be used in combination with our CIDeCAR technology. If this provisional patent application is converted to a utility patent application, and a U.S. patent issues from it, the estimated expiration date of the patent is 2034 or later.
- Pursuant to our licenses from Baylor, we have exclusive commercial rights to three issued U.S. patents expiring in 2024 or later, six pending U.S. utility patent applications, and 19 pending patent applications in foreign jurisdictions that relate to our GoCAR-T, BPX-201 and certain of our other technologies. If U.S. patents issue from the currently pending U.S. patent applications, the estimated expiration date of the last to expire patent is 2031 or later.

- Pursuant to our license agreement with ARIAD, as amended, we have exclusive commercial rights within our field of use to 69 patents (14 in the United States and 55 in foreign jurisdictions), which relate to homodimerizer technology. The estimated expiration date of the last to expire U.S. patent is February 2016. Also pursuant to this license agreement, we have exclusive commercial rights within our field of use to two pending applications (one in the United States and one in a foreign jurisdiction) which relate to homodimerizer technology. If a U.S. patent issues from the currently pending U.S. patent application, the estimated expiration date of the last to expire patent is 2032 or later.

These provisional, pending, or issued patents include composition of matter and/or method of use claims.

As noted above, patent coverage on rimiducid, the dimerization molecule AP1903, will expire in 2016. However, we believe that additional barriers to entry exist for a competitor attempting to use rimiducid after patent expiration. Because rimiducid is an inert molecule in the absence of its specific dimerizer binding region that must, itself, be delivered to a cell, we believe that rimiducid is not a drug that could gain regulatory approval on its own. The FDA has assigned combination product status to BPX-501 and we believe that this will be the case for each future product candidate of ours that incorporates rimiducid. Therefore, we believe that no generic pathway to approval exists for rimiducid. This is significant because potential competitors will not be able to use of an abbreviated new drug application pathway for approval of rimiducid, but must instead go through the full clinical approval process for a combination product.

Rimiducid is a relatively complex drug substance to manufacture. We have substantial experience in manufacturing of rimiducid and in preparing it for patient infusion. Our manufacturing know-how is a valuable asset and we incorporate contractual confidentiality terms in all agreements with our third party manufacturers. We believe that a competitor will face substantial obstacles with respect to time and cost in order to derive a clinically acceptable manufacturing process.

Our strategy is also to develop and obtain additional intellectual property covering manufacturing processes and methods for genetically engineering T cells expressing new constructs. To support this effort, we have established expertise and development capabilities focused in the areas of preclinical research and development, manufacturing and manufacturing process scale-up, quality control, quality assurance, product delivery and storage, regulatory affairs and clinical trial design and implementation. As appropriate, we expect to file additional patent applications to expand this layer of our intellectual property estate.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the date of filing of the first non-provisional application to which priority is claimed. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office in granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier-filed patent. The term of a patent that covers an FDA-approved drug or biologic may also be eligible for a patent term restoration of up to five years under the Hatch-Waxman Act, which is designed to compensate for the patent term lost during the FDA regulatory review process. The length of the patent term restoration is calculated based on the length of time the drug or biologic is under regulatory review. A patent term restoration under the Hatch-Waxman Act cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug or biologic may be restored. Moreover, a patent can only be restored once, and thus, if a single patent is applicable to multiple products, it can only be extended based on one product. Similar provisions are available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug or biologic. When possible, depending upon the length of clinical trials and other factors involved in the filing of a biologic license application, or BLA, we expect to apply for patent term extensions for patents covering our product candidates and their methods of use.

We may rely, in some circumstances, on trade secrets to protect our technology. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or

security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Our License Agreements

License Agreement with ARIAD Pharmaceuticals, Inc.

2011 License Agreement

On March 7, 2011, we entered into an amended and restated exclusive license agreement, or restated ARIAD license, with ARIAD which restated a license agreement entered into in 2006. Under the restated ARIAD license, ARIAD granted to us an exclusive (even as to the ARIAD) license, with the right to grant sublicenses, under ARIAD's patent rights relating to dimerizers, genetic constructs coding for dimerizer binding domains, vectors containing said constructs, cells containing said constructs and methods of inducing biological processes in cells containing said constructs. These licensed patent rights were limited in the 2011 restated license to defined products in the fields of cell transplantation and certain types of cancer.

In connection with the initial license, in 2006, we issued 206,111 shares of our common stock to ARIAD which were subject to antidilution protection that ultimately resulted in additional issuances to ARIAD by us of 945,577 shares our common stock, such that ARIAD received a total of 1,151,688 shares of our common stock under the license agreement. In addition, we paid ARIAD a license fee of $250,000 in connection with the restatement in 2011. The restated ARIAD license also provided for certain royalty and milestone payments, which were subsequently terminated pursuant to an omnibus amendment agreement with ARIAD (see below).

Under the restated ARIAD license, we are required to diligently proceed with the development, manufacture and sale of licensed products. The restated ARIAD license is subject at all times to restrictions and obligations under a license agreement by and between ARIAD Gene Therapeutics, Inc. (one of ARIAD's affiliates which merged into ARIAD) and the academic institution from with ARIAD obtained its license to the underlying technology. While we are not required to pay royalties or fees to such academic institution, no sublicensee of ours may enter into a sublicense with respect to any intellectual property owned by the academic institution without its consent, which terms must be consistent with those included in the agreement between ARIAD and such academic institution.

The restated ARIAD license will expire upon expiration of the last license term of a licensed product covered by the agreement, which is the later of (i) 12 years from the date of the first commercial sale of the licensed product, or (ii) the expiration of the last to expire valid patent claim on the licensed product. Either party to the license may terminate or modify the restated ARIAD license upon a material breach by the other party that remains uncured following the date that is 30 days after written notice of a payment breach and 90 days for any other breach, and effective immediately upon bankruptcy of the other party. We may terminate the restated ARIAD license in our sole discretion at any time if we determine not to develop or commercialize any licensed product. In addition, upon termination of the restated ARIAD license prior to expiration, we must transfer any ownership and any beneficial ownership in any orphan drug designation or any similar designation in any jurisdiction of orphan drug status of the ARIAD dimerizer to ARIAD.

2014 Amendment

In September 2014, we entered into an omnibus amendment agreement with ARIAD, which in part amended the restated ARIAD license to expand the license to cover a broader scope of dimerizers and licensed products for use and exploitation in any human therapeutic field of use other than *in vivo* administration of genetic material directly into a human being using viral vectors for the purpose of producing proteins or other macromolecules that are expressed or secreted for therapeutic or prophylactic purposes.

In connection with the amendment, we issued a promissory note to ARIAD for a principal amount of $50,000,000 in return for the termination of all obligations to make milestone and royalty payments to ARIAD in the future. The principal does not accrue interest unless we are in default, in which case it accrues at a rate of 10% per annum. We made an initial principal payment of $15,000,000 in connection with the execution of the amendment. We are required to pay $20,000,000 in a second lump sum installment on or before June 30, 2015 and to pay

$15,000,000 in a third lump sum installment on or before June 30, 2016. If we undergo a change of control while the note is outstanding, all remaining principal becomes due and payable upon the closing of such change of control. The second and third installment payments are also accelerated in the event that we raise predetermined amounts through public offerings of our securities. When we make the second installment payment, provided it is not later than December 31, 2015, ARIAD must return to us all of its 1,151,688 shares of our common stock and all of the agreements related to ARIAD's rights a stockholder of us will terminate. If we fail to make either of the second installment payment or third installment payment on the applicable due date, 50% of any funds we raise in a debt or equity financing will be applied against such past due installment payments.

ARIAD may terminate the restated ARIAD license, upon notice to us, if we do not make the second installment payment referred to above on or before June 30, 2016 or the second and third installment payments referred to above on or prior to June 30, 2017.

License Agreements with Baylor College of Medicine

2008 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor College of Medicine, or Baylor, dated March 20, 2008, or the 2008 Baylor license agreement, we obtained an exclusive, worldwide and fully paid up license to certain intellectual property, including intellectual property related to methods for activating antigen presenting cells and to genetic constructs coding for membrane bound inducible cytoplasmic CD40.

As consideration for the 2008 Baylor license agreement, we issued to Baylor 40,000 shares of our common stock and assumed responsibility for all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the patents subject to the 2008 Baylor license agreement.

The 2008 Baylor license agreement is subject to certain restrictions and is nonexclusive with respect to (i) the making or use of the licensed intellectual property for use in non-commercial research, patient care, teaching, and other educational purposes; (ii) any non-exclusive license covering the licensed intellectual property that Baylor grants to other academic or research institutions for noncommercial research purposes; and (iii) any non exclusive licenses that Baylor is required to grant to the U.S. or foreign state pursuant to an existing or future treaty with the U.S., and (iv) a non-exclusive license granted to ARIAD Pharmaceuticals, Inc. under the terms of a materials transfer agreement between Baylor and ARIAD.

Baylor may terminate or modify the 2008 Baylor license agreement in the event of a material breach that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. We may terminate the 2008 Baylor license agreement, or any portion thereof, at our sole discretion at any time upon 30 days' written notice to Baylor. Upon termination of the 2008 Baylor license agreement, all rights to the intellectual property immediately revert to Baylor.

2010 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor, dated June 27, 2010, or the 2010 Baylor license agreement, we obtained an exclusive, worldwide license to certain intellectual property, including intellectual property related to methods for treating prostate cancer, methods of administering T cells to a patient, and methods of activating antigen presenting cells with constructs comprising MyD88 and CD40.

Pursuant to the terms of the 2010 Baylor license agreement, we paid Baylor a license execution fee of $30,000. In addition, we are required to pay a low annual maintenance fee on each anniversary of the agreement date.

The terms of the 2010 Baylor license agreement also require us to make royalty payments of less than one percent, subject to certain annual minimums, on net sales of products covered by the license. In addition, to the extent we enter into a sublicensing agreement relating to a licensed product, we are required to pay Baylor a percentage in the mid-single digits on all non-royalty income received from sublicensing revenue. We are required to make milestone payments, of up to $735,000 in aggregate, upon successful completion of clinical and regulatory milestones regarding the first two products covered by this license.

The 2010 Baylor license agreement will expire upon expiration of the last patent contained in the licensed patent rights, on a country-by-country basis, upon which we will have a perpetual, paid-in-full license in such country. Baylor may terminate or modify the 2010 Baylor license agreement in the event of a material breach by us that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. We may terminate the 2010 Baylor license agreement, or any portion thereof, at our sole discretion at any time upon 60 days' written notice to Baylor. Upon termination of the 2010 Baylor license agreement for any reason prior to expiration, we must assign to Baylor each authorized sublicense agreement that is currently in effect on the date of termination.

Grant Agreement

Grant Agreement with Cancer Prevention and Research Institute of Texas

On July 27, 2011, we entered into a Cancer Research Grant Contract, or the Grant Contract, with the Cancer Prevention and Research Institute of Texas, or CPRIT, under which CPRIT awarded a grant not to exceed approximately $5.7 million to be used by us for the execution of defined clinical development of BPX-501. In addition, CPRIT may award supplemental funding not to exceed ten percent of the total grant amount based upon our progress. To date, we received approximately $5.6 million under the grant. The Grant Contract terminated on June 30, 2014, but obligations exist as to licensing, royalty payments, and indemnification provisions.

Pursuant to the Grant Contract, we granted the CPRIT with a non-exclusive, irrevocable, royalty-free, perpetual, worldwide license to the intellectual property facilitated by the Grant Contract for and on behalf of CPRIT and other governmental entities and agencies of the State of Texas for education, research and other non-commercial purposes only.

The terms of the Grant Contract require that we pay tiered royalties in the low- to mid-single digit percentages on revenues from sales and licenses of intellectual property facilitated by the Grant Contract. If a third party acquires substantially all of our assets, we have the option to buyout from the royalty obligations by paying a buyout amount that is equal to a percentage of the net grant award proceeds received by us under the Grant Contract, less the aggregate amount of all royalties paid at the time of the buyout. The applicable percentage depends on the timing of the buyout and ranges from 125% to 200%.

We are required to use diligent and commercially reasonable efforts to commercialize or otherwise bring to practical application the results of the funded clinical trial. If CPRIT notifies us of our failure to (i) make the required effort to commercialize any product covered by this agreement or (ii) perform our obligations with respect to protection of intellectual property, the rights to any intellectual property and proprietary and confidential information may, at CPRIT's option, revert to CPRIT and CPRIT, at its own cost, can take over the prosecution and maintenance of any impacted patents and commercialize such product candidate. CPRIT's option is subject to our ability to cure any failures identified by CPRIT within 30 days.

Competition

The biopharmaceutical industry is characterized by intense and dynamic competition to develop new technologies and proprietary therapies. Any product candidates that we successfully develop and commercialize will have to compete with existing therapies and new therapies that may become available in the future. While we believe that our proprietary CID platform, differentiated product candidates and scientific expertise in the field of cellular immunotherapy provide us with competitive advantages, we face potential competition from various sources, including larger and better-funded pharmaceutical, specialty pharmaceutical and biotechnology companies, as well as from academic institutions, governmental agencies and public and private research institutions.

Our lead product candidate, BPX-501, is an adjunct therapy for HSCT with alternative donors that potentially improves stem cell engraftment, accelerates host immune system recovery and treats GvHD. The current standard-of-care that addresses some of the safety challenges associated with HSCT, primarily GvHD, is high-dose steroids. We are aware of other companies that are developing product candidates to improve the outcome of HSCT, including Kiadis Pharma Netherlands B.V. and Molecular Medicine S.p.A.

T-cell based treatments for cancer, such as CAR-T and TCR therapies, have recently been an area of significant research and development by academic institutions and biopharmaceutical companies. BPX-401, BPX-601 and BPX-701 based on our CIDeCAR and Go-CART technologies will compete with product candidates from a number of companies that are currently focused on this therapeutic modality, including Adaptimmune Limited, bluebird bio, Inc., Celgene Corporation, Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG and Pfizer Inc.

BPX-201 based on our DeCIDe technology is a dendritic cell-based cancer vaccine for the treatment of metastatic prostate cancer and other solid tumors. PROVENGE®, marketed by Dendreon Corporation, is the first approved cancer vaccine for the treatment of mCRPC. We are aware of other companies focused on developing cancer vaccines, including Advaxis, Inc., Argos Therapeutics, Inc., Biovest International, Inc., ImmunoCellular Therapeutics, Ltd., Immune Design, Inc., Inovio Pharmaceuticals, Inc., Intrexon Corporation and Northwest Biotherapeutics, Inc.

Many of our competitors, either alone or with their strategic partners, have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of product candidates, obtaining FDA and other regulatory approvals of treatments and commercializing those treatments. Accordingly, our competitors may be more successful than us in obtaining approval for treatments and achieving widespread market acceptance. Our competitors' treatments may be more effective, or more effectively marketed and sold, than any treatment we may commercialize and may render our treatments obsolete or non-competitive before we can recover the expenses of developing and commercializing any of our treatments.

Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical study sites and subject registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available. We expect any treatments that we develop and commercialize to compete on the basis of, among other things, efficacy, safety, convenience of administration and delivery, price, the level of generic competition and the availability of reimbursement from government and other third-party payers.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, we expect that our therapeutic products, if approved, will be priced at a significant premium over competitive generic products and our ability to compete may be affected in many cases by insurers or other third-party payers seeking to encourage the use of generic products.

Government Regulation and Product Approval

As a biopharmaceutical company that operates in the United States, we are subject to extensive regulation. Our cell products will be regulated as biologics. With this classification, commercial production of our products will need to occur in registered and licensed facilities in compliance with cGMP for biologics.

The FDA regulates human cells, tissues, and cellular and tissue-based products, or HCT/Ps, under a two-tiered framework, based on risk categorization. Higher risk HCT/Ps are regulated as biologics. Manufacturers of biologics are subject to extensive government regulation. For example, such products must complete extensive clinical trials, which must be conducted pursuant to an effective investigational new drug application, or IND. The FDA must review and approve a BLA before a new biologic may be marketed.

FDA considers our investigational products to be “combination products” because our products involve a biologic (the engineered cells) that is intended to be used with a small molecule chemical drug (AP1903, licensed from ARIAD). In general, biologics such as our engineered cells are regulated through FDA’s Center for Biologics Evaluation and Research, or CBER, while synthetic drugs are regulated through FDA’s Center for Drug Evaluation and Research, or CDER. When FDA encounters a combination product such as our products, the agency determines which of the two centers will have primary responsibility for regulating the product by determining the primary mode of action for the product. In this case, we believe that the cellular component of the combination contributes the primary mode of action and, as a result, that FDA will regulate our investigational products as biologics, through CBER.

Government authorities in the United States (at the federal, state and local level) and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biopharmaceutical products such as those we are developing. Our product candidates must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in foreign countries. Generally, our activities in other countries will be subject to regulation that is similar in nature and scope as that imposed in the United States, although there can be important differences. Additionally, some significant aspects of regulation in Europe are addressed in a centralized way, but country-specific regulation remains essential in many respects. The process for obtaining regulatory marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Product Development Process

In the United States, the FDA regulates new drugs and biological products under the Federal Food, Drug and Cosmetic Act, or FDCA; the Public Health Service Act, or PHSA; and implementing regulations. Products are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative, criminal, or civil sanctions. FDA sanctions could include, among other actions, refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any administrative, criminal, or civil enforcement action could have a material adverse effect on us. The FDA has limited experience with commercial development of T cell therapies for cancer. The process required by the FDA before a biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices, or GLPs, and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to the FDA’s regulations commonly referred to as good clinical practices, or GCPs, and any additional requirements for the protection of human research patients and their health information, to establish the safety and efficacy of the proposed biological product for its intended use;
- submission to the FDA of a BLA for marketing approval that includes substantial evidence of safety, purity, and potency from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with cGMP, to assure that the facilities, methods and controls are adequate to preserve the biological product’s identity, strength, quality and purity and, if applicable, the FDA’s current good tissue practices, or GTPs, for the use of HCT/Ps;
- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA; and
- FDA review and approval, or licensure, of the BLA.

Before testing any biological product candidate, including our product candidates, in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs. The clinical trial sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions regarding the proposed clinical trials and places the trial on a clinical hold within that 30-day time period. In such a case, the IND sponsor must resolve FDA's outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a biological product candidate at any time before or during clinical trials due to safety concerns or non-compliance. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such clinical trials.

Clinical trials involve the administration of the biological product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's regulations comprising the GCP requirements, including the requirement that all research patients provide informed consent. Further, each clinical trial must be reviewed and approved by an institutional review board, or IRB, at or servicing each institution at which the clinical trial will be conducted. An IRB is independent from the trial sponsor and is charged with protecting the welfare and rights of clinical trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Clinical trials also must be reviewed by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees basic and clinical research conducted at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment.

Human clinical trials for biologic products are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1.* The biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2*. The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- *Phase 3*. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the progress of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA, the NIH and the investigators for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or *in vitro* testing that suggest a significant risk for human patients, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immunotherapy trials. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Human immunotherapy products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the clinical trials in order to establish the safety, efficacy, purity and potency of immunotherapy products, or that the data generated in these clinical trials will be acceptable to the FDA to support marketing approval.

Concurrently with clinical trials, companies usually complete additional studies and must also develop additional information about the physical characteristics of the biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

Federal law requires that we register all of our clinical trials on a publicly accessible website. We must also provide results information for most of our clinical trials, other than Phase 1 clinical trials.

U.S. Review and Approval Processes

After the completion of clinical trials of a biological product, FDA approval of a BLA must be obtained before commercial marketing of the biological product. The BLA must include results of product development, laboratory and animal studies, human trials, information on the manufacture and composition of the product, proposed labeling and other relevant information. The FDA may grant deferrals for submission of certain data or full or partial waivers. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the BLA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each BLA must be accompanied by a significant user fee. The FDA adjusts the PDUFA user fees on an annual basis. PDUFA also imposes an annual product fee for biological products and an annual establishment fee on facilities used to manufacture prescription biological products. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the application also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth

substantive review of the BLA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, potent, and/or effective for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may refer applications for novel biological products or biological products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the biological product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to assure the safe use of the biological product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve a BLA without a REMS, if required.

Before approving a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. For immunotherapy products, the FDA also will not approve the product if the manufacturer is not in compliance with the GTPs, to the extent applicable. These are FDA regulations and guidance documents that govern the methods used in, and the facilities and controls used for, the manufacture of HCT/Ps. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require HCT/P establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND trial requirements and GCP requirements. To maintain compliance with cGMPs, GTPs, and GCPs, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production, and quality control.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the BLA in its present form, the FDA will issue a complete response letter that describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product.

Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a REMS or other risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials, sometimes referred to as Phase 4 clinical trials, designed to further assess a biological product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

In addition, under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA must contain data to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any product for an indication for which orphan designation has been granted. However, if only one indication for a product has orphan designation, a pediatric assessment may still be required for any applications to market that same product for the non-orphan indication(s). Sponsors in satisfaction of this obligation may receive an additional six months of marketing exclusivity for all dosage forms and all indications with the same active moiety as the drug studied.

Orphan Drug Designation
Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not shorten the duration of the regulatory review or approval process, but does provide certain advantages, such as a waiver of PDUFA fees, enhanced access to FDA staff, and potential waiver of PREA requirements discussed above .

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

We are currently in discussions with FDA regarding orphan drug designation for our investigational products.

Expedited Development and Review Programs
The FDA has a Fast Track program that is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for Fast Track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs, or if the drug has been designated as a qualified infectious disease product. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. Under Fast Track, the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA. Even if Fast Track designation is granted, it may be rescinded if the product no longer meets the qualifying criteria.

Any product, submitted to the FDA for approval, including a product with a Fast Track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it treats a serious condition and, if approved, would provide a significant improvement in safety and effective. The FDA will attempt to direct additional resources to the evaluation of an application for a new product designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product treats a serious condition, provides a meaningful advantage over available therapies, and demonstrates an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform appropriate post-marketing clinical studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product. The FDCA

also provides expedited procedures for FDA withdrawal of approval of a product approved through accelerated approval. Fast Track designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process.

In 2012 the FDA established a Breakthrough Therapy Designation which is intended to expedite the development and review of products that treat serious or life-threatening conditions. The designation requires preliminary clinical evidence that may demonstrate substantial improvement on a clinically significant endpoint over available therapies. The designation includes all of the Fast Track program features, as well as more intensive FDA interaction and guidance, organizational committment, and other potential actions to expedite review. The Breakthrough Therapy Designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same product if relevant criteria are met. If a product is designated as breakthrough therapy, FDA will expedite the development and review of such product. Even if a Breakthrough Therapy Designation is granted, it may be rescinded if the product no longer meets the qualifying criteria.

Where applicable, we plan to request Fast Track and Breakthrough Therapy Designation for our product candidates, including BPX-051, BPX-401 and BPX-601. Even if we receive one or both of these designations for our product candidates, the FDA may later decide that our product candidates no longer meets the conditions for qualification. In addition, these designations may not provide us with a material commercial advantage.

Post-Approval Requirements

Any product for which we receive FDA approval is subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, and complying with FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved uses (known as "off-label use"), limitations on industry-sponsored scientific and educational activities, and requirements for promotional activities involving the internet. Although physicians may prescribe legally available products for off-label uses, if the physicians deem it to be appropriate in their professional medical judgment, manufacturers may not market or promote such off-label uses.

In addition, quality control and manufacturing procedures must continue to conform to applicable manufacturing requirements after approval to ensure the long-term stability of the product. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved BLA, including, among other things, recall or withdrawal of the product from the market, seizure of product manufactured not in accordance with GMPs, suspension or termination of manufacturing activities at one or more facilities, or other civil or criminal sanctions. In addition, changes to the manufacturing process are strictly regulated, and depending on the significance of the change, may require prior FDA approval before being implemented. Other types of changes to the approved product, such as adding new indications and claims, are also subject to further FDA review and approval.

The FDA also may require post-marketing testing, known as Phase 4 testing, and surveillance to monitor the effects of an approved product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of a REMS or other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

U.S. Patent Term Restoration and Marketing Exclusivity

The Biologics Price Competition and Innovation Act, or BPCIA, amended the PHSA to authorize the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. Among other requirements, a competitor seeking approval of a biosimilar must file an application to establish its molecule as highly similar to an approved innovator biologic, without any clinically meaningful differences in terms of safety, purity, and potency. The BPCIA, however, bars the FDA from approving biosimilar applications for 12 years after an innovator biological product receives initial marketing approval. This 12-year period of data exclusivity may be extended by six months, for a total of 12.5 years, if the FDA requests that the innovator company conduct pediatric clinical investigations of the product. Although a statutory provision exists for FDA approval of biosimilars, FDA has yet to provide clarity on many aspects of the regulatory pathway for such products. Furthermore, the first biosimilar applications have only recently been submitted to FDA, and it remains to be seen how FDA will apply the statutory biosimilar provisions to biological products such as ours.

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some of our U.S. patents, if granted, may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years, as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application. Only one patent applicable to an approved product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may intend to apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare and Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, or DOJ, and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, sales, marketing and scientific/educational grant programs must comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the privacy provisions of the Health Insurance Portability and Accountability Act, or HIPAA, the sunshine provisions of the Affordable Care Act, and similar state laws, each as amended.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any good, facility, item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between biologic manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Affordable Care Act to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

The federal false claims laws, including but not limited to the federal civil False Claims Act, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government Pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of the product for unapproved (i.e., off-label), and thus non-reimbursable, uses.

HIPAA created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

We may be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's security standards directly applicable to business associates independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Additionally, the federal Physician Payments Sunshine Act within the Affordable Care Act, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members. CMS published certain data reported by covered manufacturers for the first reporting period on September 30, 2014.

We will also be required to begin satisfying the product tracing, verification, and reporting requirements set out in the newly enacted Drug Quality and Security Act.

In order to distribute products commercially, we must also comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state.

Several states have enacted legislation requiring pharmaceutical and biotechnology companies to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to

pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private "qui tam" actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage and establish adequate reimbursement levels for such products. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price of a product or for establishing the reimbursement rate that such a payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform

In March 2010, President Obama enacted the Affordable Care Act, which has the potential to substantially change healthcare financing and delivery by both governmental and private insurers, and significantly impact the pharmaceutical and biotechnology industry. The Affordable Care Act will impact existing government healthcare programs and will result in the development of new programs.

Among the Affordable Care Act's provisions of importance to the pharmaceutical and biotechnology industries, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs, that began in 2011;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, retroactive to January 1, 2010, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

We anticipate that the Affordable Care Act will result in additional downward pressure on coverage and the price that we receive for any approved product, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

There have also been changes to the reimbursement landscape in the U.S. since the passage of the Affordable Care Act. On August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our products and/or additional pricing pressure. In addition, it is possible that there will be further legislation or regulation that could harm our business, financial condition, and results of operations.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

Europe / Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products. Whether or not we obtain FDA approval of a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the EU, for example, a clinical trial application must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the clinical trial application is approved in accordance with a country's requirements, clinical trial development may proceed. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under EU regulatory systems, we must submit a marketing authorization application. The application used to file the BLA in the United States is similar to that required in the EU, with the exception of, among other things, country-specific document requirements.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

Employees

As of June 30, 2014, we had 29 employees, 28 of whom are full-time, 24 of whom were engaged in research and development activities and five of whom were engaged in business development, finance, information systems, facilities, human resources or administrative support. None of our employees is subject to a collective bargaining agreement. We consider our relationship with our employees to be good.

Facilities

We lease a 14,255 square foot facility in Houston, Texas for administrative and research and development activities that expires in October 2019. We believe that our existing facilities are adequate to meet our current needs, and that suitable additional alternative spaces will be available in the future on commercially reasonable terms.

Legal Proceedings

From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any material legal proceedings.

MANAGEMENT

Executive Officers and Directors

The following table sets forth certain information regarding our current executive officers and directors:

NAME	AGE	POSITION(S)
Executive Officers		
Thomas J. Farrell	51	President and Chief Executive Officer and Director
Kevin M. Slawin, M.D.	53	Chief Medical Officer and Chief Technology Officer and Director
David M. Spencer, Ph.D.	52	Chief Scientific Officer
Annemarie Moseley, Ph.D., M.D.	59	Chief Operating Officer
Ken Moseley, J.D.	58	Vice President of Intellectual Property and Legal Affairs
Joseph Senesac	44	Vice President of Manufacturing
Non-Employee Directors		
Frank B. McGuyer ( )	63	Director
Dennis Stone, M.D.( )	63	Director
James Brown ( )	50	Director
Reid M. Huber, Ph.D.( )	42	Director

(1) Member of the compensation committee.
(2) Member of the audit committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Thomas J. Farrell has served as our Chief Executive Officer since February 2006 and as a member of our board of directors since April 2007. Prior to joining us, he was the founding president and chief executive officer of San Diego-based Cylene Pharmaceuticals, Inc. a private pharmaceutical development company. Mr. Farrell received his B.A. in Engineering from the University of Cambridge and M.B.A. from Stanford Graduate School of Business, where he was an Arjay Miller Scholar. Our board of directors believes that Mr. Farrell's experience in the pharmaceutical industry and his long-standing services as our Chief Executive Officer qualify him to serve on our Board of Directors.

Kevin M. Slawin, M.D. founded Bellicum with David Spencer, Ph.D., in July 2004 and has served as a member of our board of directors since its founding. Since April 2014, Dr. Slawin has served as our Chief Medical Officer and Chief Technology Officer. From February 2006 to April 2014, he served as our Executive Chairman and Chief Medical Officer. Dr. Slawin was the chairman of the board and our Chief Executive Officer, President and Secretary from September 2004 until February 2006. Previously, Dr. Slawin had a long tenure in academic medicine at Baylor College of Medicine, where he most recently was the Dan Duncan Professor in Prostate Cancer and Prostatic Diseases, and Director, The Baylor Prostate Center, until 2007. He received his B.A. and M.D. from Columbia University, where he was inducted into Phi Beta Kappa and Alpha Omega Alpha, and completed an American Foundation of Urologic Diseases Scholar Fellowship in Urologic Oncology at Baylor College of Medicine. Our board of directors believes that D. Slawin's educational and professional experiences as well as his experience as one of our founders qualifies him to serve on our Board of Directors.

David M. Spencer, Ph.D. founded Bellicum with Kevin M. Slawin, M.D. in July 2004 and served as a member of our board of directors until September 2004. He has served as our scientific advisor to the Company since our inception and has served as our Chief Scientific Officer since November 2011, a position that he also held part-time as a consultant since September 2004. From January 1996 to November 2011 he served as professor in the department of Pathology and Immunology at Baylor College of Medicine and as vice chairman of the department from January 2010 to November 2011. Dr. Spencer is the original inventor of our CID technology, and together with Dr. Slawin, developed the first clinical applications of the technology, DeCIDe and CaspaCIDe. He received his B.A. degree in Chemistry from the University of California, San Diego and his Ph.D. in Biology at Massachusetts Institute of Technology and was a postdoctoral fellow at Stanford University.

Annemarie Moseley, Ph.D., M.D. has served as our Chief Operating Officer since November 2012. From October 2011 until November 2012, she served as our Senior Vice President of Clinical, Regulatory and Quality. From July 2005 to September 2011 Dr. Moseley served as Chief Executive Officer and Chief Medical Officer at REPAIR Technologies, Inc., a private biotechnology company. Dr. Moseley has over 20 years of industry experience in translational medicine and clinical development of stem cell therapies, immunotherapies, biological devices and combination products, including overseeing the first late-stage Graft versus Host Disease study in patients who underwent hematopoietic stem cell transplant. She received her B.S. and M.S. from the University of Texas at Arlington, and received her Ph.D. in Physiology and Biochemistry from Utah State. She received her M.D. from Baylor College of Medicine where she completed an internal medicine residency and a genetics fellowship.

Ken Moseley, J.D. has served as our Vice President of Intellectual Property and Legal Affairs since December 2011 and as our Corporate Secretary since February 2012. From March 2009 to September 2011, he served as General Counsel at REPAIR Technologies, Inc., a private biotechnology company. From February 2002 to March 2009 he served as General Counsel at Cognate Bioservices, a private biotechnology company. He received his B.S. degree from the University of Houston and his B.A. degree from Rice University. He received his J.D. from the University of Houston Law Center. He is a registered U.S. patent attorney and is a member of the State Bars of Texas and California.

Joseph Senesac has served as our Vice President of Manufacturing since September 2011. From February 2009 to August 2011, he served as Senior Director of Biologics Manufacturing and Development in the Human Therapeutics Division at Intrexon Corporation, a public biotechnology company. Prior to Intrexon, from May 1996 to February 2009, Mr. Senesac served in various positions at Introgen Therapeutics, which at that time was a public gene therapy company, with his final role being Director of Process Sciences and Development. Mr. Senesac received a B.A. in Chemistry and Economics from Knox College, and an M.B.A. from the University of Colorado at Colorado Springs.

Non-Employee Directors

Frank B. McGuyer has served as a member of our board of directors since March 2009. He is the founder of, and since December 1988 has served as the chairman of the board of directors and chief executive officer of, McGuyer Homebuilders Inc., a private construction company. He received his B.B.A. with honors at Southern Methodist University. Our board of directors believes that Mr. McGuyer's operational, business and investment experience qualifies him to serve on our board of directors.

Dennis Stone, M.D. has served as a member of our board of directors since March 2012. Since August 2011 he has served as chief scientific officer and director of Remeditex Ventures, a private investment firm. Prior to Remeditex Ventures, from December 1983 to August 2011. Dr. Stone was a Professor of Internal Medicine, Physiology, and Biochemistry at University of Texas, Southwestern Medical Center, or UTSW, and from September 1988 to August 2011, he served as the vice president of technology development for UTSW. He received his B.A. through the Plan II Program at The University of Texas at Austin and his M.D. from UTSW. Our board of directors believes that Dr. Stone's medical and technology development backgrounds, as well as his experience investing in and advising biotechnology companies, qualifies him to serve on our board of directors.

James Brown has served as a member of our board of directors since November 2011. Since July 2009 he has served as managing director of AVG Ventures, a private investment firm. From 2003 to 2009, Mr. Brown was an independent investor and served on a number of private company boards of directors. From 1999 to 2002, he served as executive vice president and general manager of OpenTV, Inc., a technology and media company, were he co-founded and managed the company's applications business unit, prior to its sale to Liberty Media in 2002. Earlier in his career, Mr. Brown was a partner in the law firms of McDermott, Will & Emery and Pillsbury Madison & Sutro. He received his B.S. in accounting from Weber State University and his J.D. from BYU Law School. Our board of directors believes that Mr. Brown's business experience and his success as an investor and entrepreneur qualify him to serve on our board of directors.

Reid M. Huber, Ph.D. has served as a member of our board of directors since October 2014. Dr. Huber currently serves as the Executive Vice President and Chief Scientific Officer of Incyte Corporation, a publicly traded biotechnology company, where he has held various management positions since January 2002. From 1998 to 2002,

Dr. Huber held scientific research positions at DuPont Pharmaceuticals Company, a private chemicals and health care company. Prior to DuPont Pharmaceuticals Company, from 1997 to 1998 Dr. Huber held intramural pre-doctoral and post-doctoral fellowships at the National Institutes of Health. Dr. Huber received his B.S. in biochemistry/molecular genetics from Murray State University and his Ph.D. in molecular genetics from Washington University. Our board of directors believes that Dr. Huber's extensive background in the pharmaceutical industry and current management experience at a public biotechnology company qualify him to serve on our board of directors.

Board Composition

Our business and affairs are organized under the direction of our board of directors, which currently consists of six members. The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling and direction to our management. Our board of directors meets on a regular basis and additionally as required.

Our board of directors has determined that all of our directors, except and , are independent directors, as defined by Rule 5605(a)(2) of the NASDAQ Listing Rules.

In accordance with the terms of our amended and restated certificate of incorporation and bylaws, which will be effective immediately prior to consummation of this offering, our board of directors will be divided into three classes, class I, class II and class III, with members of each class serving staggered three-year terms.

Effective upon the closing of this offering, our board of directors will be comprised of the following classes:

- Class I, which will consist of , and , whose terms will expire at our annual meeting of stockholders to be held in 2015;
- Class II, which will consist of , and , and whose terms will expire at our annual meeting of stockholders to be held in 2016; and
- Class III, which will consist of and , and whose terms will expire at our annual meeting of stockholders to be held in 2017.

At each annual meeting of stockholders to be held after the initial classification, the successors to directors whose terms then expire will serve until the third annual meeting following their election and until their successors are duly elected and qualified. The authorized size of our board of directors is currently six members. The authorized number of directors may be changed only by resolution by a majority of the board of directors. This classification of the board of directors may have the effect of delaying or preventing changes in our control or management. Our directors may be removed for cause by the affirmative vote of the holders of at least 66 2/3% of our voting stock.

Board Leadership Structure

Our board of directors is currently chaired by who has authority, among other things, to call and preside over Board of Directors meetings, to set meeting agendas, and to determine materials to be distributed to the Board of Directors. Accordingly, the Chairman has substantial ability to shape the work of the Board of Directors. We believe that separation of the positions of Chairman and Chief Executive Officer reinforces the independence of the Board of Directors in its oversight of our business and affairs. In addition, we have a separate chair for each committee of the Board of Directors. The chairs of each committee are expected to report annually to the Board of Directors on the activities of their committee in fulfilling their responsibilities as detailed in their respective charters or specify any shortcomings should that be the case. In addition, we believe that having a separate Chairman creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board of Directors to monitor whether management's actions are in the best interests of us and our stockholders. As a result, we believe that having a separate Chairman can enhance the effectiveness of the Board of Directors as a whole.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is

responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also monitors compliance with legal and regulatory requirements. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance practices, including whether they are successful in preventing illegal or improper liability-creating conduct. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee.

Audit Committee

Our audit committee consists of , , and . Our board of directors has determined that each of the members of this committee satisfies the NASDAQ Stock Market independence requirements. Each member of our audit committee can read and understand fundamental financial statements in accordance with NASDAQ audit committee requirements. In arriving at this determination, the board has examined each audit committee member's scope of experience and the nature of their prior and/or current employment.

serves as the chair of our audit committee. Our board of directors has determined that qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the NASDAQ Listing Rules. In making this determination, our board has considered 's formal education and previous and current experience in financial roles. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;
- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters and other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related-person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management is implemented;

- reviewing on a periodic basis our investment policy; and
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter.

We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee

Our compensation committee consists of , , and . serves as the chair of our compensation committee. Our board of directors has determined that each of the members of our compensation committee is a non-employee director, as defined in Rule 16b-3 promulgated under the Securities Exchange Act of 1934, or the Exchange Act, is an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, and satisfies the NASDAQ Stock Market independence requirements. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and making recommendations to the full board of directors regarding performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;
- evaluating risks associated with our compensation policies and practices and assessing whether risks arising from our compensation policies and practices for our employees are reasonably likely to have a material adverse effect on us;
- reviewing and making recommendations to the full board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- establishing policies with respect to votes by our stockholders to approve executive compensation to the extent required by Section 14A of the Exchange Act and, if applicable, determining our recommendations regarding the frequency of advisory votes on executive compensation;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans;
- establishing policies with respect to equity compensation arrangements;
- reviewing the competitiveness of our executive compensation programs and evaluating the effectiveness of our compensation policy and strategy in achieving expected benefits to us;
- reviewing and making recommendations to the full board of directors regarding the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption “Compensation Discussion and Analysis” in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;
- preparing the report that the SEC requires in our annual proxy statement; and
- reviewing and evaluating on an annual basis the performance of the compensation committee and the compensation committee charter.

We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of , , and . Our board of directors has determined that each of the members of this committee satisfies the NASDAQ Stock Market independence requirements. serves as the chair of our nominating and corporate governance committee. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors;
- determining the minimum qualifications for service on our board of directors;
- evaluating director performance on the board and applicable committees of the board and determining whether continued service on our board is appropriate;
- evaluating, nominating and recommending individuals for membership on our board of directors;
- evaluating nominations by stockholders of candidates for election to our board of directors;
- considering and assessing the independence of members of our board of directors;
- developing a set of corporate governance policies and principles and recommending to our board of directors any changes to such policies and principles;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and evaluating on an annual basis the performance of the nominating and corporate governance committee and the nominating and corporate governance committee charter.

We believe that the composition and functioning of our nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been an executive officer or employee of ours. None of our executive officers currently serves, or has served during the last completed fiscal year, on the compensation committee or board of directors of any other entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Limitation on Liability and Indemnification of Directors and Officers

Our amended and restated certificate of incorporation, which will be effective immediately prior to consummation of this offering, limit our directors' liability to the fullest extent permitted under Delaware corporate law. Delaware corporate law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law (unlawful payment of dividends or redemption of shares); or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Delaware law and our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to payment or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

In addition, we have entered, and intend to continue to enter, into separate indemnification agreements with our directors and officers. These agreements, among other things, require us to indemnify our directors and officers for

certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as one of our directors or officers or any other company or enterprise to which the person provides services at our request.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our amended and restated certificate of incorporation and amended bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for the year ended December 31, 2013, which consist of our principal executive officer and our two other most highly compensated executive officers, are:

- Thomas J. Farrell, our President and Chief Executive Officer
- Annemarie Moseley, Ph.D., M.D., our Chief Operating Officer
- Kevin M. Slawin, M.D., our Chief Medical Officer and Chief Technology Officer

Summary Compensation Table

NAME AND PRINCIPAL POSITION	YEAR	SALARY ($)	OPTION AWARDS ($) (1)	NON-EQUITY INCENTIVE PLAN COMPENSATION ($) (2)	ALL OTHER COMPENSATION ($) (3)	TOTAL ($)
Thomas J. Farrell *President and Chief Executive Officer*	2013	350,000	—	84,000	4,006	438,006
Annemarie Moseley, Ph.D., M.D. *Chief Operating Officer*	2013	320,000	120,000	76,800	11,429	528,229
Kevin M. Slawin, M.D. (4) *Chief Medical Officer and Chief Technology Officer*	2013	250,000	666,200	60,000	2,100	978,300

(1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2013 computed in accordance with Financial Accounting Standard Board Accounting Standards Codification Topic 718 for stock-based compensation transactions (ASC 718). Assumptions used in the calculation of these amounts are included in Note 9 to our audited financial statements included elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.

(2) Amounts shown represent annual performance-based bonuses earned for 2013. For more information, see "—Annual Bonus Opportunity" below.

(3) Amounts in this column reflect the following for 2013: For Mr. Farrell, $2,563 for reimbursement of costs related to commuting, $1,200 in parking subsidies and $243 in reimbursements for life, disability and accidental death and dismemberment insurance premiums; for Dr. Moseley, $9,793 for reimbursement of costs related to commuting, $1,200 in parking subsidies and $436 in reimbursements for life, disability and accidental death and dismemberment insurance premiums; for Dr. Slawin, $2,100 in parking subsidies.

(4) All of Dr. Slawin's compensation was paid pursuant to a consulting agreement entered into in November 2011.

Annual Base Salary

The compensation of our named executive officers is generally determined and approved by our board of directors. The 2013 base salaries effective as of February 1, 2013 were as follows:

NAME	2013 BASE SALARY ($)
Thomas J. Farrell	350,000
Annemarie Moseley, Ph.D., M.D.	320,000
Kevin M. Slawin, M.D	250,000

In January 2014, our board of directors approved a 4% increase to the base salaries of each of our named executive officers, effective February 1, 2014.

Annual Bonus Opportunity

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual corporate goals and to reward our executives for individual achievement towards these goals. The annual performance-based bonus each named executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our board of directors establishes each year. At the end of the year, our board of directors reviews our performance against each corporate goal and approves the extent to which we achieved each of our corporate goals.

Our board of directors will generally consider each named executive officer's individual contributions towards reaching our annual corporate goals but does not typically establish specific individual goals for our named executive officers. There is no minimum bonus percentage or amount established for the named executive officers and, as a result, the bonus amounts vary from year to year based on corporate and individual performance. For 2013, the target bonus for Mr. Farrell and Dr. Moseley was 30% of base salary and the target bonus for Dr. Slawin was 30% of base salary (including consulting fees).

Our corporate goals for 2013, established by our board of directors, were to initiate clinical trials of BPX-201 and BPX-501 and to complete the closing of the second tranche of our Series B convertible preferred stock financing (which transaction is described below under "Certain Relationships and Related Party Transactions." No specific individual goals were established for any of our named executive officers for 2013.

In January 2014, our board of directors reviewed our corporate goals and determined that on an overall basis, we had substantially achieved our goals and that each of the named executive officers should receive a bonus equivalent to 80% of their target bonuses. Specifically, we initiated our clinical trials of BPX-201 and BPX-501 and completed the closing of the second tranche of our Series B convertible preferred stock financing.

Equity-Based Incentive Awards

Our equity-based incentive awards are designed to align our interests with those of our employees and consultants, including our named executive officers. Our board of directors is responsible for approving equity grants. Vesting of equity awards is generally tied to continuous service with us and serves as an additional retention measure. Our executives generally are awarded an initial new hire grant upon commencement of employment. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to this offering, we have granted all equity awards pursuant to the 2011 Plan and the 2006 Plan, the terms of which are described below under "—Equity Benefit Plans." All options are granted with a per share exercise price equal to no less than the fair market value of a share of our common stock on the date of the grant of such award, as determined by our board of directors. Generally our stock option awards vest over a four-year period subject to the holder's continuous service to us.

On August 14, 2013 our board of directors granted an option to purchase 600,000 shares of our common stock to Dr. Slawin at a per share exercise price of $1.50. Under this grant, 34% of shares vested on July 31, 2013 and an additional 33% vest on each anniversary thereafter until the shares are fully vested, subject to Dr. Slawin's continued service with us.

On August 14, 2013, our board of directors granted an option to purchase 100,000 shares of our common stock to Dr. Moseley at a per share exercise price of $1.50. The option grant vests as of November 26, 2012 over a four-year period subject to Dr. Moseley's continued service with us.

Agreements with our Named Executive Officers

Below are descriptions of our employment agreements and offer letter agreements with our named executive officers. For a discussion of the severance pay and other benefits to be provided in connection with a termination of employment and/or a change in control under the arrangements with our named executive officers, please see "—Potential Payments Upon Termination or Change in Control" below.

Thomas Farrell. We entered into a Second Amended & Restated Employment Agreement with Mr. Farrell in November 2011 which governs the current terms of his employment with us. Pursuant to the agreement, Mr. Farrell is entitled to an annual base salary of $350,000, is eligible to receive an annual performance bonus of up to 30% of his base salary, as determined by our board of directors and options to purchase 440,000 shares of our common stock which were granted in November 2011. Mr. Farrell is additionally entitled to certain severance benefits, the terms of which are described below under "—Potential Payments Upon Termination or Change of Control." Mr. Farrell's Employment Agreement provides of an initial term of one year that will automatically renew for successive one year terms unless either party terminates the agreement.

Annemarie Moseley, Ph.D., M.D. We entered into an Employment Agreement with Dr. Moseley in October 2011, as amended in November 2012, which governs the current terms of her employment with us. Pursuant to the agreement, Dr. Moseley is entitled to an annual base salary of $320,000, is eligible to receive an annual target performance bonus of up to 25% of her base salary, as determined by our board of directors and an option to purchase 150,000 shares of our common stock pursuant to the October 2011 employment agreement and an additional 100,000 shares of our common stock pursuant to the November 2012 amendment, which was granted in November 2011. Dr. Moseley is additionally entitled to certain severance benefits, the terms of which are described below under "—Potential Payments Upon Termination or Change of Control." Dr. Moseley's Employment Agreement provides of an initial term of one year that will automatically renew for successive one year terms unless either party terminates the agreement.

Kevin M. Slawin, M.D. We entered into a Third Amended Consulting Agreement with Dr. Slawin in November 2011 which governs the current terms of his consulting relationship with us. Pursuant to the agreement, Dr. Slawin is entitled to an annual base consulting fee of $250,000, is eligible to receive an annual performance bonus, of up to 30% of his base consulting fee, as determined by our board of directors, an option to purchase 440,000 shares of our common stock, which was granted in November 2011 and an additional option to purchase 600,000 shares of our common stock, which was granted in July 2013 upon the closing of the second tranche of our Series B convertible preferred stock financing (which transaction is described below under "Certain Relationships and Related Party Transactions"). Dr. Slawin is additionally entitled to certain severance benefits, the terms of which are described below under "—Potential Payments Upon Termination or Change of Control." Dr. Slawin's Third Amended Consulting Agreement provides of an initial term of three years that will automatically renew for two successive one year terms unless either party terminates the agreement.

Potential Payments Upon Termination or Change of Control

Regardless of the manner in which a named executive officer's service terminates, the named executive officer is entitled to receive amounts earned during his or her term of service, including salary and unused vacation pay. In addition, each of our named executive officers is eligible to receive certain benefits pursuant to his or her employment or consulting agreement with us described above under "—Agreements with our Named Executive Officers."

Upon a termination without "cause" or resignation for "good reason" (each as defined below), each of Mr. Farrell, Dr. Moseley and Dr. Slawin is eligible to receive payments equal to his or her base salary or consulting fee, as applicable, then in effect for 12 months, and, other than for Dr. Slawin, a pro rated annual performance bonus and reimbursement for continuation of healthcare benefits for 12 months.

In each of our named executive officers agreements, "cause" generally means the occurrence of any of the following events, conditions or actions with respect to the executive: (i) willful misconduct that is demonstrably and materially injurious to our reputation, financial condition, or business relationships; (ii) failure to attempt in good faith to follow the legal written direction of our board of directors; (iii) failure to attempt in good faith to perform his or her duties (other than any such failure resulting from incapacity due to physical or mental illness) after receiving a written demand for substantial performance from our board of directors; (iv) conviction of, indictment for, or a plea of guilty

or nolo contendere to, a felony or any crime involving dishonesty, fraud or moral turpitude; (v) dishonesty with regard to us or in the performance of his or her duties hereunder, which in either case has a material adverse effect; or (vi) material breach of his or her agreement unless corrected within ten days of written notification of such breach from us. For purposes of Mr. Farrell and Dr. Moseley's employment agreements, "cause" also includes the failure to comply in any material respect with our policies and/or procedures, unless corrected within ten days of written notification to the executive of such breach.

In addition, "good reason" generally means the following events, conditions or actions taken by us with respect to the executive without cause and without the executive's express written consent: (i) any reduction in base compensation; (ii) a material adverse change in any of the terms of his or her agreement, including title, status, authority, duties and responsibilities; (iii) our failure to obtain a satisfactory agreement from any successor of the company requiring such successor to assume and agree to perform our obligations under his or her employment or consulting agreement; or (iv) our failure to comply with any material provision of his or her employment or consulting agreement.

Each of our named executive officers holds stock options under our equity incentive plans that were granted subject to our form of stock option agreements. A description of the termination and change of control provisions in such equity incentive plans and stock options granted thereunder is provided below under "—Equity Benefit Plans" and the specific vesting terms of each named executive officer's stock options are described below under "—Outstanding Equity Awards at Fiscal Year-End."

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth certain information regarding equity awards granted to our named executive officers that remain outstanding as of December 31, 2013.

	OPTION AWARDS [1]				
	GRANT DATE	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS EXERCISABLE (#)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS UNEXERCISABLE (#)	OPTION EXERCISE PRICE PER SHARE ($) [2]	OPTION EXPIRATION DATE
Thomas Farrell	12/6/2010 [3]	152,000	16,500	$ 0.30	12/7/2020
	11/9/2011 [4]	200,000	0	$ 1.50	11/8/2021
	11/9/2011 [4]	240,000	0	$ 1.50	11/8/2021
Annemarie Moseley, Ph.D., M.D.	11/9/2011	150,000	71,875	$ 1.50	11/8/2020
	8/14/2013	100,000	27,083	$ 1.50	11/26/2022
Kevin M. Slawin, M.D.	12/6/2010	82,000	20,500	$ 0.30	12/7/2020
	11/9/2011 [4]	440,000	0	$ 1.50	11/8/2021
	8/14/2013 [5]	600,000	204,000	$ 1.50	7/31/2023

(1) All of the option awards were granted under the 2006 Plan, the terms of which plans are described below under "—Equity Benefit Plans."

(2) All of the option awards were granted with a per share exercise price equal to the fair market value of one share of our common stock on the date of grant, as determined in good faith by our board of directors. Unless otherwise noted, all options granted provide for the following vesting schedule: 25% of the shares subject to the option vest on the 12-month anniversary of the vesting commencement date and 1/36th of the remaining shares subject to the option vest in equal monthly installments over the next three years.

(3) 86,000 shares subject to the option vest on the vesting commencement date, 16,500 shares subject to the option vest on the 12-month anniversary of the vesting commencement date, and 1,375 shares subject to the option vest in equal monthly installments over the remaining three years.

(4) 25% of the shares subject to the option vest on the vesting commencement date and 25% of the remaining shares subject to the option vest in equal annual installments over the next three years.

(5) 34% of the shares subject to the option vest on the vesting commencement date and 33% of the remaining shares subject to the option vest in equal annual installments over the next two years.

Perquisites Health, Welfare and Retirement Benefits

All of our current named executive officers, other than Dr. Slawin, are eligible to participate in our employee benefit plans, including our medical, dental, vision, life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. We pay the premiums for the life, disability, accidental death and dismemberment insurance for all of our employees, including our named executive officers. In addition, we provide a 401(k) plan to our employees, including our named executive officers, as discussed in the section below entitled "—401(k) Plan." We do not provide perquisites or personal benefits to our named executive officers.

401(k) Plan

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our named executive officers, other than Dr. Slawin, are also eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code. The plan provides that each participant may contribute 100% of his or her eligible compensation or the statutory limit, which is $17,500 for calendar year 2013. Participants that are 50 years or older can also make "catch-up" contributions, which in calendar year 2013 may be up to an additional $5,500 above the statutory limit. We may also elect to provide for discretionary profit sharing contributions, but we did not provide any such contributions in 2013. In general, eligible compensation for purposes of the 401(k) plan includes an employee's earnings reportable on IRS Form W-2 subject to certain adjustments and exclusions required under the Code. The 401(k) plan currently does not offer the ability to invest in our securities.

Nonqualified Deferred Compensation

None of our named executive officers participate in or have account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us. Our board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Equity Benefit Plans

2014 Equity Incentive Plan

Our board of directors adopted the 2014 plan in , 2014 and our stockholders approved the 2014 plan in , 2014, which will become effective upon the execution and delivery of the underwriting agreement related to this offering. Once the 2014 plan is effective, no further grants will be made under the 2011 plan.

Stock Awards. The 2014 plan provides for the grant of incentive stock options, or ISOs, nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation, or collectively, stock awards, all of which may be granted to employees, including officers, non-employee directors and consultants of us and our affiliates. Additionally, the 2014 plan provides for the grant of performance cash awards. ISOs may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

Share Reserve. Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under the 2014 plan after the 2014 plan becomes effective is the sum of (1) shares, plus (2) the number of shares (not to exceed shares) (i) reserved for issuance under our 2011 plan at the time our 2014 plan becomes effective, and (ii) any shares subject to outstanding stock options or other stock awards that were granted under our 2011 plan that are forfeited, terminate, expire or are otherwise not issued. Additionally, the number of shares of our common stock reserved for issuance under our 2014 plan will automatically increase on January 1 of each year, beginning on January 1, 2015 (assuming the 2014 plan becomes effective before such date) and continuing through and including January 1, 2024, by % of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued upon the exercise of ISOs under our 2014 plan is shares.

No person may be granted stock awards covering more than shares of our common stock under our 2014 plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise or strike price of at least 100% of the fair market value on the date the stock award is granted. Additionally, no person may be granted in a calendar year a performance stock award covering more than shares of our common stock or a performance cash award having a maximum value in excess of $. Such limitations are designed to help assure that any deductions to which we would otherwise be entitled with respect to such awards will not be subject to the $1,000,000 limitation on the income tax deductibility of compensation paid to any covered executive officer imposed by Section 162(m) of the Code.

If a stock award granted under the 2014 plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2014 plan. In addition, the following types of shares of our common stock under the 2014 plan may become available for the grant of new stock awards under the 2014 plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award. Shares issued under the 2014 plan may be previously unissued shares or reacquired shares bought by us on the open market. As of the date hereof, no awards have been granted and no shares of our common stock have been issued under the 2014 plan.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2014 plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2014 plan, our board of directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the authority to modify outstanding awards under our 2014 plan. Subject to the terms of our 2014 plan, the plan administrator has the authority to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2014 plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2014 plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2014 plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, and (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Tax Limitations On Incentive Stock Options. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) cash, check, bank draft or money order, (2) services rendered to us or our affiliates, or (3) any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the plan administrator. A restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock awards that have not vested may be forfeited or repurchased by us upon the participant's cessation of continuous service for any reason.

Restricted Stock Unit Awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock Appreciation Rights. Stock appreciation rights are granted pursuant to stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2014 plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2014 plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation right agreement provides otherwise, if a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. The 2014 plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the $1,000,000 limitation on the income tax deductibility of compensation paid to a covered executive officer imposed by Section 162(m) of the Code. To help assure that the compensation attributable to performance-based awards will so qualify, our compensation committee can structure such awards so that stock or cash will be issued or paid pursuant to such award only after the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (1) earnings (including earnings per share and net earnings); (2) earnings before interest, taxes and depreciation; (3) earnings before interest, taxes, depreciation and amortization; (4) earnings before interest, taxes, depreciation, amortization and legal settlements; (5) earnings before interest, taxes, depreciation, amortization, legal settlements and other income (expense); (6) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense) and stock-based compensation; (7) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation and changes in deferred revenue; (8) total stockholder return; (9) return on equity or average stockholder's equity; (10) return on assets, investment, or capital employed; (11) stock price; (12) margin (including gross margin); (13) income (before or after taxes); (14) operating income; (15) operating income after taxes; (16) pre-tax profit; (17) operating cash flow; (18) sales or revenue targets; (19) increases in revenue or product revenue; (20) expenses and cost reduction goals; (21) improvement in or attainment of working capital levels; (22) economic value added (or an equivalent metric); (23) market share; (24) cash flow; (25) cash flow per share; (26) share price performance; (27) debt reduction; (28) implementation or completion of projects or processes (including, without limitation, clinical trial initiation, clinical trial enrollment, clinical trial results, new and supplemental indications for existing products, regulatory filing submissions, regulatory filing acceptances, regulatory or advisory committee interactions, regulatory approvals, and product supply); (29) stockholders' equity; (30) capital expenditures; (31) debt levels; (32) operating profit or net operating profit; (33) workforce diversity; (34) growth of net income or operating income; (35) billings; (36) bookings; (37) employee retention; (38) initiation of phases of clinical trials and/or studies by specific dates; (39) patient enrollment rates; (40) budget management; (41) submission to, or approval by, a regulatory body (including, but not limited to the U.S. Food and Drug Administration) of an applicable filing or a product candidate; (42) regulatory milestones; (43) progress of internal research or clinical programs; (44) progress of partnered programs; (45) partner satisfaction; (46) timely completion of clinical trials; (47) submission of INDs and new drug applications and other regulatory achievements; (48) research progress, including the development of programs; (49) strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; and (50) to the extent that an award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by our board of directors.

The performance goals may be based on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of any "extraordinary items" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock-based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; (12) to exclude the effect of any other unusual, non-recurring gain or loss or other extraordinary item; and (13) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any other regulatory body. In addition, we retain

the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the performance goals and to define the manner of calculating the performance criteria we select to use for such performance period. The performance goals may differ from participant to participant and from award to award.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2014 plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued upon the exercise of ISOs, (4) the class and maximum number of shares subject to stock awards that can be granted in a calendar year (as established under the 2014 plan pursuant to Section 162(m) of the Code) and (5) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. In the event of certain specified significant corporate transactions, the plan administrator has the discretion to take any of the following actions with respect to stock awards:

- arrange for the assumption, continuation or substitution of a stock award by a surviving or acquiring entity or parent company;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse of any reacquisition or repurchase right held by us;
- cancel or arrange for the cancellation of the stock award in exchange for such cash consideration, if any, as our board of directors may deem appropriate; or
- make a payment equal to the excess of (1) the value of the property the participant would have received upon exercise of the stock award over (2) the exercise price otherwise payable in connection with the stock award.

Our plan administrator is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2014 plan, a corporate transaction is generally the consummation of (1) a sale or other disposition of all or substantially all of our assets, (2) a sale or other disposition of at least 90% of our outstanding securities, (3) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (4) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

Change of Control. The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. For example, certain of our employees may receive an award agreement that provides for vesting acceleration upon the individual's termination without cause or resignation for good reason (including a material reduction in the individual's base salary, duties, responsibilities or authority, or a material relocation of the individual's principal place of employment with us) in connection with a change of control. Under the 2014 plan, a change of control is generally (1) the acquisition by a person or entity of more than 50% of our combined voting power other than by merger, consolidation or similar transaction; (2) a consummated merger, consolidation or similar transaction immediately after which our stockholders cease to own more than 50% of the combined voting power of the surviving entity; or (3) a consummated sale, lease or exclusive license or other disposition of all or substantially of our assets.

Amendment and Termination. Our board of directors has the authority to amend, suspend, or terminate our 2014 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2014 plan.

2006 Stock Option Plan

Our board of directors and our stockholders approved our 2006 plan, which became effective in February 2006, and was further amended by our board of directors and stockholders most recently in November 2011. As of June 30, 2014, there were 10,000 shares remaining available for the grant of stock awards under our 2006 plan and there were outstanding stock awards covering a total of 284,000 shares that were granted under our 2006 plan.

After the effective date of the 2014 plan, no additional awards will be granted under the 2006 plan, and all awards granted under the 2006 plan that are repurchased, forfeited, expire or are cancelled will become available for grant under the 2014 plan in accordance with its terms.

Stock Awards. The 2006 plan provides for the grant of ISO, NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards and other forms of stock awards, or collectively, stock awards, all of which may be granted to employees, including officers, non-employee directors and consultants of us and our affiliates. ISOs may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

Share Reserve. The aggregate number of shares of our common stock reserved for issuance pursuant to stock awards under the 2006 plan is 301,500 shares. The initial number of shares we reserved for issuance pursuant to stock awards under the 2006 plan was 120,000 shares, which was increased in November 2006 to 301,500 shares. The maximum number of shares that may be issued upon the exercise of ISOs under our 2006 plan is 301,500 shares.

If a stock award granted under the 2006 plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2006 plan. In addition, the following types of shares under the 2006 plan may become available for the grant of new stock awards under the 2006 plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2006 plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2006 plan, our board of directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the authority to modify outstanding awards under our 2006 plan. Subject to the terms of our 2006 plan, the plan administrator has the authority to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2006 plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2006 plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2006 plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, voluntary termination, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. If an optionholder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability or death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and included in the option agreement and may include cash or cashier's check, check, bank draft or money order, or a cashless exercise.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Tax Limitations On Incentive Stock Options. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the option is not exercisable after the expiration of five years from the date of grant.

Changes to Capital Structure. In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to the number and kind of shares subject to the plan, and the option prices, so as to maintain the proportionate number of shares without changing the aggregate option price.

Corporate Transactions. In the event of certain significant corporate transactions, including a recapitalization or other change in capital structure, merger, consolidation, sale of all assets, or dissolution other than a change in control (as defined below), any holder of options under the 2006 plan may be entitled to purchase the number and class of shares resulting from such corporate transactions equivalent to the number and class of shares to which the optionholder would have been entitled prior to the occurrence of such transactions.

Change of Control. The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. Under the 2006 plan, a change of control is generally defined as (1) a merger in which we are not the surviving entity and the members of our board of directors do not constitute a majority of the board of directors of the successor entity, (2) a dissolution or liquidation or (3) a consummated sale, lease or exchange of all or substantially all of our assets.

In November 2011 our board of directors amended the 2006 plan to include, among other things, a restated definition of a change in control. Under the amendment to the 2006 plan, a change of control is generally defined as (1) a merger or other reorganization in which we are not the surviving entity, (2) a sale, lease or exclusive license or exchange of all or substantially all of our assets, (3) a dissolution or liquidation, or (4) if any person or entity, including a "group" as contemplated by Section 13(d)(3) of the 1934 Act, acquires or gains ownership or control of more than 50% of our outstanding shares of voting stock, (5) as a result or in connection with a contested election of directors, if the members of our board of directors before such election do not constitute a majority of the board of directors after such election.

Amendment and Termination. The 2006 plan will terminate on February 28, 2016. However, our board of directors has the authority to amend, suspend, or terminate our 2006 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent.

2011 Equity Incentive Plan

Our board of directors and our stockholders approved our 2011 plan, which became effective in November 2011, and was further amended by our board of directors and stockholders most recently in February 2014. As of June 30, 2014, there were 338,500 shares remaining available for the grant of stock awards under our 2011 plan and there were outstanding stock awards covering a total of 2,460,000 shares that were granted under our 2011 plan.

After the effective date of the 2014 plan, no additional awards will be granted under the 2011 plan, and all awards granted under the 2011 plan that are repurchased, forfeited, expire or are cancelled will become available for grant under the 2014 plan in accordance with its terms.

Stock Awards. The 2011 plan provides for the grant of ISO, NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards and other forms of stock awards, or collectively, stock awards, all of which may be granted to employees, including officers, non-employee directors and consultants of us and our affiliates. ISOs may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

Share Reserve. The aggregate number of shares of our common stock reserved for issuance pursuant to stock awards under the 2011 plan is 2,798,500 shares. The initial number of shares we reserved for issuance pursuant to stock awards under the 2011 plan was 1,698,500 shares, which was increased in February 2014 to 2,798,500 shares. The maximum number of shares that may be issued upon the exercise of ISOs under our 2011 plan is 2,798,500 shares.

If a stock award granted under the 2011 plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2011 plan. In addition, the following types of shares under the 2011 plan may become available for the grant of new stock awards under the 2011 plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award. Shares issued under the 2011 plan may be previously unissued shares or reacquired shares bought by us on the open market.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2011 plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2011 plan, our board of directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the authority to modify outstanding awards under our 2011 plan. Subject to the terms of our 2011 plan, the plan administrator has the authority to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2011 plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2011 plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2011 plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us, or any of our affiliates, ceases for any reason other than disability or death, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. If an optionholder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability or death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and included in the option agreement and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, (5) a deferred payment or similar arrangement subject to certain conditions and (6) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Tax Limitations On Incentive Stock Options. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the option is not exercisable after the expiration of five years from the date of grant.

Changes to Capital Structure. In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to the number and kind of shares subject to the plan, and the exercise prices, so as to maintain the proportionate number of shares without changing the aggregate exercise price.

Corporate Transactions. In the event of certain significant corporate transactions, including a merger, consolidation, sale of all assets, or dissolution, any holder of options under the 2006 plan may be entitled to purchase the number and class of shares resulting from such corporate transactions equivalent to the number and class of shares to which the optionholder would have been entitled prior to the occurrence of such transactions.

Change of Control. The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. Under the 2011 plan, a change of control is generally defined as (1) a merger or other reorganization in which we are not the surviving entity, (2) a sale, lease or exclusive license or exchange of all or substantially all of our assets, (3) a dissolution or liquidation, or (4) if any person or entity, including a "group" as contemplated by Section 13(d)(3) of the 1934 Act, acquires or gains ownership or control of more than 50% of our outstanding shares of voting stock, (5) as a result or in connection with a contested election of directors, if the members of our board of directors before such election do not constitute a majority of the board of directors after such election.

Amendment and Termination. The 2011 plan will terminate on November 9, 2021. However, our board of directors has the authority to amend, suspend, or terminate our 2011 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent.

2014 Employee Stock Purchase Plan

Our board of directors adopted the ESPP in and our stockholders approved the ESPP in . The ESPP will become effective immediately upon the execution and delivery of the underwriting agreement related to this offering. The purpose of the ESPP is to retain the services of new employees and secure the services of new and existing employees while providing incentives for such individuals to exert maximum efforts toward our success and that of our affiliates.

Share Reserve. Following this offering, the ESPP authorizes the issuance of shares of our common stock pursuant to purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, from January 1, 2015 through January 1, 2024 by the least of (1) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, (2) shares, or (3) a number determined by our board of directors that is less than (1) and (2). The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code. As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors has delegated its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. An offering may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to % of their earnings for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (1) % of the fair market value of a share of our common stock on the first date of an offering or (2) % of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors: (1) customarily employed for more than 20 hours per week, (2) customarily employed for more than five months per calendar year, or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value pursuant to Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares or change in corporate structure or similar transaction, the board of directors will make appropriate adjustments to (1) the number of shares reserved under the ESPP, (2) the maximum number of shares by which the share reserve may increase automatically each year, and (3) the number of shares and purchase price of all outstanding purchase rights.

Corporate Transactions. In the event of certain significant corporate transactions, including the consummation of: (1) a sale of all our assets, (2) the sale or disposition of 90% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, and (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company).

If the surviving or acquiring entity (or its parent company) elects not to assume, continue or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within ten business days prior to such corporate transaction, and such purchase rights will terminate immediately.

Plan Amendments, Termination. Our board of directors has the authority to amend or terminate the ESPP, provided that except in certain circumstances any such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to the ESPP as required by applicable law or listing requirements.

Non-Employee Director Compensation

With the exception of Dr. Slawin, who is compensated under a consulting agreement as described above, we have not historically paid cash or equity compensation to directors who are also our employees for their service on our board of directors, nor have we paid cash or equity compensation to our non-employee directors who are associated with our principal stockholders for service on our board of directors. We have reimbursed and will continue to reimburse all of our non-employee directors for their travel, lodging and other reasonable expenses incurred in attending meetings of our board of directors and committees of our board of directors. In 2013, we did not pay cash or equity compensation to any of our non-employee directors.

Our board of directors adopted a new compensation policy in January 2014 that will become effective upon the execution and delivery of the underwriting agreement related to this offering and will be applicable to all of our non-employee directors. This compensation policy provides that each such non-employee director will receive the following compensation for service on our board of directors:

- an annual cash retainer of $;
- an additional annual cash retainer of $, $ and $ for service as a member of the audit committee, compensation committee and the nominating and corporate governance committee, respectively;
- an additional annual cash retainer of $, $ and $ for service as chairman of the audit committee, compensation committee and the nominating and corporate governance committee, respectively;
- an initial option grant to purchase shares of our common stock on the date of each such non-employee director's appointment to our board of directors; and
- an annual option grant to purchase shares of our common stock on the date of each of our annual stockholder meetings.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2011 to which we have been a party, in which the amount involved in the transaction exceeded $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change of control and other arrangements, which are described under “Executive and Director Compensation.”

Note and Convertible Preferred Stock Financings

Note Financing

In February 2013, we issued and sold to investors, including beneficial owners of more than 5% of our capital stock, promissory notes, or the 2013 notes, in the aggregate principal amount of $3.5 million. The 2013 notes carried an interest rate of 0.21% per annum. In connection with the second closing of our Series B convertible preferred stock financing (discussed below), all of the outstanding principal and accrued and unpaid interest of the 2013 notes were cancelled in exchange for shares of Series B convertible preferred stock. The aggregate of $3.5 million representing the outstanding principal and accrued and unpaid interest on the notes was exchanged for 757,497 shares of Series B convertible preferred stock at a price of $4.625 per share

The participants in this note financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table presents the aggregate principal amount of promissory notes issued to these related parties for more than $120,000:

PARTICIPANTS	AGGREGATE PRINCIPAL AMOUNT OF NOTES
Greater than 5% stockholders	
McGuyer Investments Ltd.	$ 1,196,580
Remeditex Ventures LLC	$ 1,435,896
AVG Ventures, LP	$ 717,949

Certain of our directors have affiliations with the investors that participated in the note financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
James Brown	AVG Ventures, LP
Dennis Stone, M.D.	Remeditex Ventures LLC

Exchange of Notes for Series A Convertible Preferred Stock

In October 2009 and March 2010, we issued and sold to investors promissory notes in the aggregate principal amount of $2.9 million. In November 2011, all of the outstanding principal and accrued and unpaid interest due under these notes were cancelled in exchange for shares of Series A convertible preferred stock in connection with our Series B convertible preferred stock financing (discussed below). The aggregate of $2.9 million representing the outstanding principal and accrued and unpaid interest on these notes was exchanged for 957,961 shares of Series A convertible preferred stock at a price of $3.00 per share.

The participants in this convertible preferred stock issuance included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series A convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES A CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
McGuyer Investments Ltd.	76,369
Greater than 5% stockholder, Director and Executive Officer	
Kevin M. Slawin, M.D. (1)	28,737

(1) Consists of 28,737 shares issued to the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the exchange transaction described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.

Series B Convertible Preferred Stock Financing

In November 2011 we entered into a Series B convertible preferred stock purchase agreement, or the first Series B purchase agreement, pursuant to which we issued and sold to investors an aggregate of 2,174,824 shares of our Series B convertible preferred stock in two issuances. We received proceeds of approximately $6.8 million for which we issued an initial 1,475,144 shares of Series B convertible preferred stock, at a purchase price of $4.625 per share. In addition, the aggregate of approximately $3.2 million of accrued and unpaid interest on convertible notes issued in September 2010 and December 2010 automatically converted into 699,680 shares of Series B convertible preferred stock at a conversion price equal to $4.625 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series B convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
McGuyer Investments Ltd.	680,720
AVG Ventures, LP	324,325
Greater than 5% stockholder, Director and Executive Officer	
Thomas J. Farrell	10,811
Kevin M. Slawin, M.D. (1)	42,946

(1) Consists of 13,514 shares purchased by the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
James Brown	AVG Ventures, LP

In March 2012, we entered into a second Series B stock purchase agreement, or the second Series B stock purchase agreement, with certain new Series B investors, pursuant to which we received proceeds of approximately $3.1 million for which we issued 675,105 shares of Series B convertible preferred stock, at a purchase price of $4.625 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series B convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
Remeditex Ventures LLC	648,649

(1) Consists of 13,514 shares purchased by the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Dennis Stone, M.D.	Remeditex Ventures LLC

In July 2013, we entered into a second closing of our Series B financing. Pursuant to our first Series B stock purchase agreement, we received proceeds of approximately $6.6 million for which we issued 1,431,000 shares of Series B convertible preferred stock at a purchase price of $4.625 per share. Pursuant to our second Series B stock purchase agreement, we received proceeds of approximately $3.1 million for which we issued 666,319 shares of Series B convertible preferred stock at a purchase price of $4.625 per share. In addition, the aggregate of approximately $3.5 million of accrued and unpaid interest on promissory notes issued in February 2013 were paid with 757,495 shares of Series B convertible preferred stock at a conversion price equal to $4.625 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series B convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
McGuyer Investments Ltd.	540,541
AVG Ventures, LP	324,325
Remeditex Ventures LLC	648,649
Greater than 5% stockholder, Director and Executive Officer	
Thomas J. Farrell	10,811
Kevin M. Slawin, M.D. (1)	13,514

(1) Consists of 13,514 shares purchased by the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
James Brown	AVG Ventures, LP
Dennis Stone, M.D.	Remeditex Ventures LLC

In November 2013, we entered into our first over-allotment closing of our Series B financing pursuant to amendments to our first Series B stock purchase agreement and second Series B stock purchase agreement. We received proceeds of approximately $7.5 million for which we issued 1,615,135 shares of Series B convertible preferred stock at a purchase price of $4.625 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series B convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
McGuyer Investments Ltd.	432,432
AVG Ventures, LP	253,378
Remeditex Ventures LLC	506,754
Greater than 5% stockholder, Director and Executive Officer	
Kevin M. Slawin, M.D. (1)	43,243

(1) Consists of 43,243 shares purchased by the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
James Brown	AVG Ventures, LP
Dennis Stone, M.D.	Remeditex Ventures LLC

In January 2014, we entered into a second over-allotment closing of our Series B financing pursuant to amendments to our first Series B stock purchase agreement and second Series B stock purchase agreement, in which we received proceeds of approximately $7.3 million for which we issued 1,582,705 shares of Series B convertible preferred stock at a purchase price of $4.625 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series B convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
McGuyer Investments Ltd.	432,432
AVG Ventures, LP	253,377
Remeditex Ventures LLC	506,754
Greater than 5% stockholder, Director and Executive Officer	
Kevin M. Slawin, M.D. (1)	10,811

(1) Consists of 10,811 shares purchased by the 2009 Slawin Family Partnership

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
James Brown	AVG Ventures, LP
Dennis Stone, M.D.	Remeditex Ventures LLC

Series C Convertible Preferred Stock Financing

In August 2014, we entered into a Series C convertible preferred stock purchase agreement, or the Series C purchase agreement, pursuant to which we received proceeds of approximately $55 million for which we issued 10,091,743 shares of Series C convertible preferred stock, at a purchase price of $5.45 per share.

The participants in this convertible preferred stock financing included the following members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of Series C convertible preferred stock issued to these related parties in this convertible preferred stock financing:

PARTICIPANTS	SHARES OF SERIES C CONVERTIBLE PREFERRED STOCK
Greater than 5% stockholders	
Baker Biotech Capital, L.P. (1)	3,302,752
McGuyer Investments Ltd.	513,133
Remeditex Ventures, LLC	417,009
AVG Ventures, LP	208,508
RA Capital Healthcare Fund, LP	825,688
Greater than 5% stockholder, Director and Executive Officer	
Kevin M. Slawin, M.D. (2)	270,133

(1) Consists of 283,820 shares held by 667, L.P., 2,946,332 shares held by Baker Brothers Life Sciences, L.P., and 72,600 shares held by 14159, L.P.
(2) Consists of 38,889 shares held by Kevin M. Slawin, M.D., 109,328 shares held by the Jordana Slawin 2012 Family Trust, 95,283 shares held by the Kevin Slawin 2009 Family Trust, and 26,633 shares held by the 2009 Slawin Family Partnership.

Certain of our directors have affiliations with the investors that participated in the convertible preferred stock financing described above, as indicated in the table below:

DIRECTORS	PRINCIPAL STOCKHOLDER
Frank B. McGuyer	McGuyer Investments Ltd.
Dennis Stone, M.D.	Remeditex Ventures, LLC
James Brown	AVG Ventures, LP

Consulting Agreements

In November 2011, we entered into a consulting agreement with Kevin M. Slawin, M.D. to expand Dr. Slawin's role to serve as our Executive Chairman and Chief Medical Officer. While this agreement is still in effect, Dr. Slawin currently serves as a member of our board of directors and holds the titles of Chief Medical Officer and Chief Technology Officer. Per that agreement, Dr. Slawin's annual base compensation was 250,000.

Investor Agreements

In connection with our convertible preferred stock financings, we entered into an investors' rights agreement containing voting rights, information rights, rights of first refusal and co-sale and registration rights, among other things, with certain holders of our convertible preferred stock and certain holders of our common stock, including all of the holders of more than 5% of our capital stock or entities affiliated with them. In August 2014, this agreement was amended to provide for similar rights to the purchasers of the Series C convertible preferred stock. These rights will terminate upon the closing of this offering, except for the registration rights as more fully described below in "Description of Capital Stock—Registration Rights."

Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. For more information regarding these indemnification arrangements, see "Management—Limitation on Liability and Indemnification of Directors and Officers." We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Policies and Procedures for Transactions with Related Persons

We have adopted a written related-person transactions policy that sets forth our policies and procedures regarding the identification, review, consideration and oversight of "related-person transactions." For purposes of our policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any "related person" are participants involving an amount that exceeds $120,000.

Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A related person is any executive officer, director, nominee to become a director or a holder of more than 5% of our common stock, including any of their immediate family members and affiliates, including entities owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to our audit committee (or, where review by our audit committee would be inappropriate, to another independent body of our board of directors) for review. The presentation must include a description of, among other things, all of the parties, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-person transactions in advance, we rely on information supplied by our executive officers, directors and certain significant stockholders. In considering related-person transactions, our audit committee or another independent body of our board of directors takes into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock
- each of our directors
- each of our named executive officers
- all of our current executive officers and directors as a group

The percentage ownership information under the column entitled “Before Offering” is based on 24,387,958 shares of common stock outstanding as of September 30, 2014, assuming conversion of all outstanding shares of our convertible preferred stock into 20,782,270 shares of common stock. The percentage ownership information under the column entitled “After Offering” is based on the sale of shares of common stock in this offering, assuming an initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) and assuming(1) no exercise of the underwriters’ option to purchase additional shares, (2) no exercise of outstanding options or warrants and (3) no election by the holders of Series B convertible preferred stock to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of our common stock issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable within 60 days of November 29, 2014. As noted in the applicable footnotes to the table, some of the options are not vested but are exercisable at any time and, if exercised, subject to a lapsing right of repurchase until the options are fully vested. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Bellicum Pharmaceuticals, Inc., 2130 W. Holcombe Blvd., Ste. 850, Houston, TX 77030.

NAME AND ADDRESS OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENTAGE OF SHARES BENEFICIALLY OWNED	
		BEFORE OFFERING	AFTER OFFERING
Greater than 5% stockholders			
Baker Biotech Capital, L.P. (1) 667 Madison Avenue, 21st Floor New York, NY 10065	5,449,539	20.5%	%
McGuyer Investments Ltd. (2) 11007 Wickwood Dr. Houston, TX 77024	3,690,133	14.9%	%
Remeditex Ventures LLC (3) 2101 Cedar Springs Road, Suite 601 Dallas, TX 75201	2,998,870	12.2%	%
Kevin Slawin, M.D. (4)	2,864,923	11.2%	%
AVG Ventures, LP (5) 500 Ygnacio Valley Rd., # 360 Walnut Creek, CA 94596	1,499,438	6.1%	%
RA Capital Healthcare Fund, LP (6) 20 Park Plaza, Suite 1200 Boston, MA 02116	1,362,385	5.5%	%
Directors and Named Executive Officers			
Thomas J. Farrell (7)	709,815	2.8%	%
Kevin M. Slawin, M.D. (4)	2,864,923	11.2%	%
Annemarie Moseley, Ph.D., M.D. (8)	208,333	*	*
Frank B. McGuyer (2)	3,690,133	14.9%	%
Dennis Stone, M.D. (3)	2,998,870	12.2%	%
James Brown (5)	1,499,438	6.1%	%
Reid M. Huber, Ph.D.	0	*	*
All current executive officers and directors as a group (10 persons) (9)	12,566,530	45.9%	%

* Represents beneficial ownership of less than one percent

(1) Consists of (a) 283,820 shares of common stock and 184,482 shares of common stock issuable upon the exercise of the warrants held by 667, L.P., (b) 2,946,332 shares of common stock and 1,915,115 shares of common stock issuable upon the exercise of the warrants held by Baker Brothers Life Sciences, L.P., and (c) 72,600 shares of common stock and 47,190 shares of common stock issuable upon the exercise of the warrants held by 14159, L.P. Baker Biotech Capital, L.P. is a general partner of each of the funds listed above.

(2) Consists of 3,316,597 shares of common stock and 373,536 shares of common stock issuable upon the exercise of warrants. Frank B. McGuyer, one of our directors, has voting and investment power held by McGuyer Investments Ltd. Mr. McGuyer disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

(3) Consists of 2,727,815 shares of common stock and 271,055 shares of common stock issuable upon the exercise of warrants. Dennis Stone, M.D., one of our directors, shares voting and investment power with respect to the shares held by Remeditex Ventures, LLC. Dr. Stone disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

(4) Consists of (a) 254,389 shares of common stock and 25,277 shares of common stock issuable upon the exercise of warrants, (b) 715,158 shares of common stock and 71,063 shares of common stock issuable upon the exercise of warrants beneficially owned by the Jordana Slawin 2012 Family Trust, for which Dr. Slawin's wife is a trustee, (c) 623,283 shares of common stock and 61,933 shares of common stock issuable upon the exercise of warrants beneficially owned by the Kevin Slawin 2009 Family Trust, for which Dr. Slawin is a trustee and as such has the dispositive power and control over the securities held by such trust, (d) 165,884 shares of common stock and 25,644 shares of common stock issuable upon the exercise of the warrants held by the 2009 Slawin Family Partnership, for which Dr. Slawin is the managing partner and as such has the dispositive power and control over the securities held by such trust, and (e) 922,292 shares of common stock subject to options exercisable as of November 29, 2014.

(5) Consists of 1,363,910 shares of common stock and 135,528 shares of common stock issuable upon the exercise of warrants by AVG Ventures, LP. and is managed by its general partner, AVG Ventures GP, LLC. Mr. Brown, one of our directors, is the manager of AVG Ventures GP, LLC and as such, shares voting and investment power with respect to shares held by AVG Ventures, LP. Mr. Brown disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

(6) Consists of 824,688 shares of common stock and 536,697 shares of common stock issuable upon the exercise of warrants.

(7) Consists of (a) 116,209 shares of common stock, (b) 590,625 shares of common stock subject to options exercisable as of November 29, 2014 and (c) 2,981 shares of common stock issuable upon the exercise of warrants.

(8) Consists of 45,833 shares of common stock subject to options exercisable as of November 29, 2014 by Ken Moseley and 162,500 shares of common stock subject to options exercisable as of November 29, 2014 by Annemarie Moseley. Mr. Moseley and Dr. Moseley are spouses.

(9) Consists of shares identified in footnotes (1) through (8) and includes the following: 305,684 shares of common stock owned by David Spencer, Ph.D., 26,834 shares of common stock issuable upon the exercise of warrants by Dr. Spencer, and 187,500 shares of common stock subject to options exercisable as of November 29, 2014 by Dr. Spencer; 45,833 shares of common stock subject to options exercisable as of November 29, 2014 by Ken Moseley; 162,500 shares of common stock subject to options exercisable as of November 29, 2014 by Annemarie Moseley; and 75,000 shares of common stock subject to options exercisable as of November 29, 2014 by Joseph Senesac.

DESCRIPTION OF CAPITAL STOCK

The following is a summary of the rights of our common and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the closing of this offering, and of the Delaware General Corporation Law. This summary is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

General

Upon closing of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of 200,000,000 shares of common stock, par value $0.01 per share and 10,000,000 shares of preferred stock, par value $0.01 per share. All of our authorized preferred stock upon the closing of this offering will be undesignated.

Common Stock

Outstanding Shares

On June 30, 2014, there were 3,603,188 shares of common stock outstanding, held of record by 19 stockholders. Based on such number of shares of common stock outstanding as of June 30, 2014, and assuming (1) the conversion of all outstanding shares of our preferred stock into shares of common stock in connection with the closing of this offering, and (2) the issuance by us of shares of common stock in this offering, there will be shares of common stock outstanding upon closing of this offering.

As of June 30, 2014, there were 2,744,000 shares of common stock subject to outstanding options under our equity incentive plans.

Voting

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Convertible Preferred Stock

As of June 30, 2014, we had outstanding an aggregate of 10,690,528 shares of convertible preferred stock held of record by 68 stockholders.

Upon closing of this offering, all outstanding shares of preferred stock will convert into shares of our common stock.

Immediately prior to closing of this offering, our certificate of incorporation will be amended and restated to delete all references to such shares of convertible preferred stock. Under the amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Stock Options

As of June 30, 2014, 2,744,000 shares of common stock were issuable upon the exercise of outstanding stock options, at a weighted-average exercise price of $1.38 per share.

Warrants

As of June 30, 2014, 804,169 shares of common stock were issuable upon exercise of outstanding warrants to purchase common stock with a weighted-average exercise price of $0.08 per share. The warrants provide for the adjustment of the number of shares issuable upon the exercise of the warrants in the event of stock splits, recapitalizations, reclassifications and consolidations. Upon closing of this offering, the warrants will be automatically cancelled if not previously exercised.

Registration Rights

Following the closing of this offering, certain holders of our common stock, or their transferees, will be entitled to the registration rights set forth below with respect to registration of the resale of such shares under the Securities Act pursuant to the investors' rights agreement by and among us and certain of our stockholders.

Demand Registration Rights

At any time beginning six months after the public offering date set forth on the cover page of this prospectus, upon the written request of a holder of our preferred stock or at least 30% of the holders of the registrable securities then outstanding that we file a registration statement under the Securities Act covering the registration of the registrable securities having an aggregate offering price to the public of not less than $10.0 million, we will be obligated to notify all holders of registrable securities of such request and to use our reasonable best efforts to register the sale of all registrable securities that holders may request to be registered. Holders of our preferred stock may not request more than two registration statements which are declared or ordered effective, except that one preferred stockholder may demand one registration if it does not participate in either of the two demand registrations. We may postpone the filing or effectiveness of a registration statement if (1) we are engaged in or plan to engage in a firm commitment underwritten public offering during the period starting with the date 60 days prior to our good faith estimate of, and ending on a date 180 days following the effective date of, the date of filing a registration statement, or (2) for up to 90 days once in any 12-month period our board of directors reasonably determines that such registration and offering would be materially detrimental to us and our stockholders, and we are not required to effect the filing of a registration statement during the period starting with the date of the filing of, and ending on a date 180 days following the effective date of the registration statement for this offering. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement.

"Piggyback" Registration Rights

If we register any securities for public sale, holders of registration rights will have the right to include their shares in the registration statement. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement, but not below 25% of the total number of shares included in the registration statement, except this offering, in which the holders may be entirely excluded.

In addition, pursuant to a Common Stock Purchase Warrant with the State of Texas, the State of Texas, acting by and through the Office of Governor Economic Development and Tourism, is entitled to standard piggyback registration rights granted by us to any shareholder on terms no less favorable than granted to any such shareholder with respect to the securities covered by that warrant.

Form S-3 Registration Rights

If we are eligible to file a registration statement on Form S-3, holders of registrable securities will have the right to demand that we file a registration statement on Form S-3 so long as the aggregate price to the public of the securities to be sold under the registration statement on Form S-3 is at least $3.0 million, subject to specified exceptions, conditions and limitations. We are not required to effect more than two registrations on Form S-3 in any 12-month period.

Expenses of Registration

Generally, we are required to bear all registration and selling expenses incurred in connection with the demand, piggyback and Form S-3 registrations described above, other than underwriting discounts and commissions, in an amount not to exceed $50,000 per registration.

Expiration of Registration Rights

The demand, piggyback and Form S-3 registration rights discussed above will terminate as to a given holder of registrable securities upon the earlier of (i) three years following the closing of this offering, (ii) as to any holder of registrable securities, the first date after our initial public offering on which such holder is able to dispose of all of its registrable securities without restriction under Rule 144 of the Securities Act, or (iii) after the consummation of a liquidation event.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Bylaws and Delaware Law

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding upon consummation of the transaction, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the consummation of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the closing of this offering, may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;
- provide that the authorized number of directors may be changed only by resolution adopted by a majority of the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least 66 2/3% of the voting power of all of our then outstanding common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law or subject to the rights of holders of preferred stock as designated from time to time, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide our board of directors into three classes;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent or electronic transmission;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our Chief Executive Officer or by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exists any vacancies); and
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to us or our stockholders, (iii) any action asserting a claim against the us arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of our then outstanding common stock.

NASDAQ Global Market Listing

We have applied to list our common stock on The NASDAQ Global Market under the symbol “BLCM.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent and registrar’s address is and the telephone number is .

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of common stock in the public market could adversely affect prevailing market prices. Furthermore, since only a limited number of shares will be available for sale shortly after this offering because of contractual and legal restrictions on resale described below, sales of substantial amounts of common stock in the public market after the restrictions lapse could adversely affect the prevailing market price for our common stock as well as our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of June 30, 2014, upon the closing of this offering, shares of common stock will be outstanding, assuming (1) no exercise of the underwriters' option to purchase additional shares, (2) no exercise of outstanding options or warrants and (3) no election by the holders of Series B convertible preferred stock to have their accrued dividends converted into common stock at the time of conversion of their shares of Series B convertible preferred stock into shares of common stock. All of the shares sold in this offering will be freely tradable unless purchased by our "affiliates" as that term is defined in Rule 144 under the Securities Act or purchased by existing stockholders and their affiliated entities who are subject to lock-up agreements. The remaining shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements. These remaining shares will generally become available for sale in the public market as follows:

- No restricted shares will be eligible for immediate sale upon the closing of this offering;
- Up to restricted shares will be eligible for sale under Rule 144 or Rule 701, subject to the volume limitations, manner of sale and notice provisions described below under "Rule 144," upon expiration of lock-up agreements at least 180 days after the date of this offering; and
- The remainder of the restricted shares will be eligible for sale from time to time thereafter upon expiration of their respective holding periods under Rule 144, but could be sold earlier if the holders exercise any available registration rights.

Rule 144

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, any person who is not an affiliate of ours and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, provided current public information about us is available. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the closing of this offering without regard to whether current public information about us is available.

Beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of restricted shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume of our common stock on The NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales of restricted shares under Rule 144 held by our affiliates are also subject to requirements regarding the manner of sale, notice and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted shares have entered into lock-up agreements as described below and their restricted shares will become eligible for sale at the expiration of the restrictions set forth in those agreements.

Rule 701

Under Rule 701, shares of our common stock acquired upon the exercise of currently outstanding options or pursuant to other rights granted under our stock plans may be resold by:

- persons other than affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject only to the manner-of-sale provisions of Rule 144; and
- our affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the manner-of-sale and volume limitations, current public information and filing requirements of Rule 144, in each case, without compliance with the six-month holding period requirement of Rule 144.

As of June 30, 2014, options to purchase a total of 2,744,000 shares of common stock were outstanding, of which 1,777,829 were vested. Of the total number of shares of our common stock issuable under these options, substantially all are subject to contractual lock-up agreements with us or the underwriters described below under “Underwriting” and will become eligible for sale in accordance with Rule 701 at the expiration of those agreements.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our other stockholders, optionholders, convertible noteholders and warrantholders, have agreed with the underwriters that for a period of 180 days (the restricted period), after the date of this prospectus, subject to specified exceptions, we or they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock. Upon expiration of the “restricted” period, certain of our stockholders and warrantholders will have the right to require us to register their shares under the Securities Act. See “—Registration Rights” below and “Description of Capital Stock—Registration Rights.”

After this offering, certain of our employees, including our executive officers and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Registration Rights

Upon closing of this offering, the holders of shares of our common stock will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described under “—Lock-Up Agreements” above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates, immediately upon the effectiveness of the registration statement of which this prospectus is a part. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. See “Description of Capital Stock—Registration Rights.”

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the shares of common stock reserved for issuance under the EIP and the ESPP. The registration statement is expected to be filed and become effective as soon as practicable after the closing of this offering. Accordingly, shares registered under the registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following discussion describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income taxes that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address any U.S. federal estate or gift tax, any state, local or non-U.S. tax consequences or U.S. federal tax consequences other than income taxes. Rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code such as financial institutions, insurance companies, tax-exempt organizations, tax-qualified retirement plans, broker-dealers and traders in securities, commodities or currencies, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a "straddle," "conversion transaction," or other risk reduction strategy, holders deemed to sell our common stock under the constructive sale provisions of the Code, holders who hold or receive our common stock pursuant to the exercise of employee stock options or otherwise as compensation, holders who are subject to the alternative minimum tax or Medicare contribution tax, partnerships and other pass-through entities, and investors in such pass-through entities or entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their places of organization or formation). Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, published administrative pronouncements, rulings and judicial decisions thereunder as of the date hereof. Such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

The following discussion is for general information only and is not tax advice for any Non-U.S. Holders under their particular circumstances. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local and non-U.S. tax consequences and any U.S. federal non-income tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is not a U.S. Holder. A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (a) an individual who is a citizen or resident of the United States, (b) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person. Also, partnerships, or other entities that are treated as partnerships for U.S. federal income tax purposes (regardless of their place of organization or formation) and entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their place of organization or formation) are not addressed by this discussion and are, therefore, not considered to be Non-U.S. Holders for the purposes of this discussion.

Distributions on Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock generally will constitute dividends for U.S. tax purposes to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S.

Holder generally will be required to provide us with a properly executed IRS Form W-8BEN or W-8BEN-E, or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. In the case of a Non-U.S. Holder that is an entity, Treasury regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to the applicable agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates, unless a specific treaty exemption applies. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce your adjusted basis in our common stock as a non-taxable return of capital, but not below zero, and then any excess will be treated as gain and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation," or a USRPHC, within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, unless a specific treaty exemption applies, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (b) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States). With respect to (c) above, in general, we would be a USRPHC if interests in U.S. real estate constituted (by fair market value) at least half of our assets. We believe that we are not, and do not anticipate becoming a USRPHC, however, there can be no assurance that we will not become a USRPHC in the future. Even if we are treated as a USRPHC, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (a) the five-year period preceding the disposition or (b) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market.

Information Reporting Requirements and Backup Withholding

Generally, we or certain financial middlemen must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN or W-8BEN-E, or otherwise establishes an exemption.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or non-U.S., unless the holder provides a properly executed IRS Form W-8BEN or W-8BEN-E, or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

If backup withholding is applied to you, you should consult with your own tax advisor to determine if you are able to obtain a tax refund or credit with respect to the amount withheld.

Foreign Accounts

A U.S. federal withholding tax of 30% may apply to dividends and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by applicable rules), including when the foreign financial institution holds our common stock on behalf of a Non-U.S. Holder, unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which may include certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing these withholding and reporting requirements may be subject to different rules. This U.S. federal withholding tax of 30% will also apply to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. Holders are encouraged to consult with their own tax advisors regarding the possible implications of the legislation on their investment in our common stock.

The withholding provisions described above will generally apply to payments of dividends made on or after July 1, 2014 and to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2017.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 20 , between us and Jefferies LLC, as the representative of the underwriters named below and the sole book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

UNDERWRITER	NUMBER OF SHARES
Jefferies LLC	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per share of common stock to certain brokers and dealers. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE		TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	$	$	$	$
Underwriting discounts and commissions paid by us	$	$	$	$
Proceeds to us, before expenses	$	$	$	$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $. We have agreed to reimburse the underwriters for up to $ for their FINRA counsel fee. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

Listing

We have applied to list our common stock listed on The NASDAQ Global Market under the trading symbol "BLCM."

Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, our officers, directors and holders of all or substantially all our outstanding capital stock and other securities have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Securities Exchange Act of 1934, as amended, or

- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of Jefferies LLC.

This restriction terminates after the close of trading of the common stock on and including the 180th day after the date of this prospectus.

Jefferies LLC may, in its sole discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter’s purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on The NASDAQ Global Select Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security.

However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

NOTICE TO INVESTORS

Australia

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; or
- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the shares issued to you pursuant to this prospectus for resale in Australia within 12 months of those shares being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive, each referred to herein as a Relevant Member State, with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, referred to herein as the Relevant Implementation Date, no offer of any securities which are the subject of the offering contemplated by this prospectus has been or will be made to the public in that Relevant Member State other than any offer where a prospectus has been or will be published in relation to such securities that has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the relevant competent authority in that Relevant Member State in accordance with the Prospectus Directive, except that with effect from and including the Relevant Implementation Date, an offer of such securities may be made to the public in that Relevant Member State:

- to any legal entity which is a "qualified investor" as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives of the underwriters for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of securities shall require the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32) of Hong Kong. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the Initial Purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means, unless otherwise provided herein, any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or registered with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or the invitation for subscription or purchase of the securities may not be issued, circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person as defined under Section 275(2), or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor as defined under Section 4A of the SFA) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the Offer Shares under Section 275 of the SFA except:

- to an institutional investor under Section 274 of the SFA or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and

units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions, specified in Section 275 of the SFA;

- where no consideration is given for the transfer; or
- where the transfer is by operation of law.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, or FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, referred to herein as the Order, and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated. Each such person is referred to herein as a Relevant Person.

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a Relevant Person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, San Diego, California. Covington & Burling LLP, New York, New York is counsel for the underwriters in connection with this offering.

EXPERTS

The financial statements of Bellicum Pharmaceuticals, Inc. at June 30,2014, December 31, 2013 and 2012, and for the six month period ended June 30, 2014 and for each of the two years in the period ended December 31, 2013, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street, NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 2130 W. Holcombe Blvd., Ste. 850, Houston, TX 77030.

Upon the closing of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934 and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.bellicum.com, at which, following the closing of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INDEX TO FINANCIAL STATEMENTS

Bellicum Pharmaceuticals, Inc.

Six Month Period Ended June 30, 2014 and 2013

Report of Independent Registered Public Accounting Firm	F-2
Balance Sheets as of June 30, 2014 and June 30, 2013 (unaudited)	F-3
Statements of Operations for the six months ended June 30, 2014 and 2013 (unaudited)	F-4
Statements of Redeemable and Convertible Preferred Stock and Stockholders' Deficit from January 1, 2014 through June 30, 2014	F-5
Statements of Cash Flows for the six months ended June 30, 2014 and 2013 (unaudited)	F-6
Notes to Financial Statements	F-7

Year Ended December 31, 2013 and 2012

Report of Independent Registered Public Accounting Firm	F-24
Balance Sheets	F-25
Statements of Operations	F-26
Statements of Redeemable and Convertible Preferred Stock and Stockholders' Deficit	F-27
Statements of Cash Flows	F-28
Notes to Financial Statements	F-29

Report of Independent Registered Public Accounting Firm

The Board of Directors of Bellicum Pharmaceuticals, Inc.

We have audited the accompanying balance sheet of Bellicum Pharmaceuticals, Inc. as of June 30, 2014, and the related statement of operations, statements of redeemable and convertible preferred stock and stockholders' deficit and cash flows for the six month period ended June 30, 2014. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Bellicum Pharmaceuticals, Inc. at June 30, 2014, and the results of its operations and its cash flows for the six month period ended June 30, 2014, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Houston, Texas
October 17, 2014

BELLICUM PHARMACEUTICALS, INC.

Balance Sheets

	JUNE 30	
	2014	2013 (Unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,156,629	$ 2,031,876
Accounts receivable—grants	1,763,070	26,072
Prepaid expenses and other current assets	294,040	396,346
Total current assets	14,213,739	2,454,294
Property and equipment, net of accumulated depreciation	2,091,369	2,455,822
Other assets	150,856	236,675
TOTAL ASSETS	$ 16,455,964	$ 5,146,791
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 537,175	$ 124,457
Accrued payroll	—	320,475
Accrued liabilities	511,030	94,788
Deferred revenue	—	664,464
Note payable	—	3,500,000
Current portion of line of credit	400,000	400,000
Current portion of deferred rent	99,145	95,500
Current portion of deferred manufacturing costs	164,486	6,800
Total current liabilities	1,711,836	5,206,484
Long-term liabilities:		
Line of credit	200,000	600,000
Deferred rent	248,774	336,646
Deferred manufacturing costs	413,743	166,600
Total liabilities	2,574,353	6,309,730
Commitments and contingencies		
Preferred stock whose redemption is outside the control of the issuer:		
Series A convertible, redeemable preferred stock: $0.01 par value; 2,800,000 shares authorized; 2,544,539 shares issued and outstanding as of June 30, 2014 and 2013; redemption value of $7,633,617 at June 30, 2014 and 2013	7,633,617	7,633,617
Series B convertible, redeemable preferred stock: $0.01 par value; 8,900,000 shares authorized; 8,145,989 and 2,849,929 shares issued and outstanding as of June 30, 2014 and 2013, respectively; redemption value of $40,716,415 and $14,416,538 at June 30, 2014 and 2013, respectively	40,716,415	14,416,538
Stockholders' deficit:		
Common stock: $0.01 par value; 19,200,000 shares authorized; 3,603,188 and 2,934,188 shares issued and outstanding as of June 30, 2014 and 2013, respectively	36,032	29,342
Additional paid-in capital	44,895	1,334,364
Accumulated deficit	(34,549,348)	(24,576,800)
Total stockholders' deficit	(34,468,421)	(23,213,094)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 16,455,964	$ 5,146,791

The accompanying notes are an integral part of these financial statements

BELLICUM PHARMACEUTICALS, INC.

Statements of Operations

	SIX MONTHS ENDED JUNE 30	
	2014	2013 (Unaudited)
REVENUES		
Grants	$ 1,105,521	$ 400,371
OPERATING EXPENSES		
Research and development	4,745,064	2,610,696
General and administrative	1,910,393	1,333,473
Total operating expenses	6,655,457	3,944,169
LOSS FROM OPERATIONS	(5,549,936)	(3,543,798)
OTHER INCOME (EXPENSE)		
Interest income	5,718	1,328
Interest expense	(26,306)	(24,257)
Total other income (expense)	(20,588)	(22,929)
NET LOSS	$(5,570,524)	$(3,566,727)
Preferred stock dividends	(1,104,131)	(392,182)
Net loss attributable to common stockholders	$(6,674,655)	$(3,958,909)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.97)	$ (1.35)
Weighted average number of common shares outstanding—basic and diluted	3,382,950	2,934,188
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	$	
Weighted average common shares used to compute pro forma net loss per share attributable to common shareholders, basic and diluted (unaudited)		

The accompanying notes are an integral part of these financial statements

BELLICUM PHARMACEUTICALS, INC.

Statements of Redeemable and Convertible Preferred Stock and Stockholders' Deficit

	SERIES A PREFERRED STOCK		SERIES B PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	TOTAL STOCKHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT			
Balance, January 1, 2014	2,544,539	$7,633,617	6,563,283	$32,292,269	2,934,188	$29,342	$ 797,585	$ (28,978,824)	$ (28,151,897)
Stock-based compensation	—	—	—	—	—	—	157,431	—	157,431
Issuance of Series B preferred stock for cash, net	—	—	1,582,706	7,320,015	—	—	—	—	—
Exercise of warrants for cash consideration	—	—	—	—	669,000	6,690	194,010	—	200,700
Accretion of Series B preferred stock to redemption value	—	—	—	1,104,131	—	—	(1,104,131)	—	(1,104,131)
Net loss	—	—	—	—	—	—		(5,570,524)	(5,570,524)
Balance, June 30, 2014	2,544,539	$7,633,617	8,145,989	$40,716,415	3,603,188	$36,032	$ 44,895	$ (34,549,348)	$ (34,468,421)

The accompanying notes are an integral part of these financial statements

BELLICUM PHARMACEUTICALS, INC.

Statements of Cash Flows
Six Months Ended June, 2014 and 2013

	SIX MONTHS ENDED JUNE 30,	
	2014	2013 (Unaudited)
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (5,570,524)	$ (3,566,727)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	320,616	286,134
Stock-based compensation	157,431	220,053
Amortization of lease liability	(47,750)	(47,750)
Changes in operating assets and liabilities:		
Accounts receivable—grants	(1,017,529)	(26,072)
Prepaid expenses and other current assets	(39,972)	449,232
Other assets	333,669	(38,937)
Accounts payable	(12,419)	(426,390)
Accrued payroll	(470,961)	(1,487)
Accrued liabilities	(153,143)	(20,700)
Deferred revenue—grants	—	(374,299)
Deferred rent	4,015	6,372
Deferred manufacturing costs	286,962	121,267
NET CASH USED IN OPERATING ACTIVITIES	(6,209,605)	(3,419,304)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property and equipment	(122,066)	(231,127)
CASH USED IN INVESTING ACTIVITIES	(122,066)	(231,127)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of preferred stock	7,320,015	—
Proceeds from issuance of common stock	200,700	—
Proceeds from notes payable	—	3,500,000
Proceeds from line of credit	—	550,223
Payments on line of credit	(200,000)	—
CASH PROVIDED BY FINANCING ACTIVITIES	7,320,715	4,050,223
NET CHANGE IN CASH AND CASH EQUIVALENTS	989,044	399,792
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	11,167,585	1,632,084
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 12,156,629	$ 2,031,876
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid during the period for:		
Interest	$ 21,739	$ 20,273
NON-CASH INVESTING AND FINANCING ACTIVITIES		
Dividends accreted on preferred stock	$ 1,104,131	$ 392,182

The accompanying notes are an integral part of these financial statements.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements
June 30, 2014 and 2013

NOTE 1—ORGANIZATION AND BUSINESS DESCRIPTION

Bellicum Pharmaceuticals, Inc. (the Company or Bellicum), was incorporated in Delaware in July 2004 and is based in Houston, Texas. The Company is a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. The Company is devoting substantially all of its present efforts to developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including, hematopoietic stem cell transplantation, CAR T cell therapy and dendritic cell vaccines. The Company has not generated any revenue from product sales to date and does not anticipate generating revenues from product sales in the foreseeable future. The Company's success is dependent on, among other things, its ability to successfully complete the development of, and obtain regulatory approval for, its product candidates, managing the growth of the organization, obtaining additional financing necessary in order launch and commercialize its products candidates, and competing successfully with other companies in its industry.

The future success of the Company is dependent on its ability to develop its product candidates and ultimately upon its ability to attain profitable operations. The Company is subject to a number of risks similar to other life science companies, including, but not limited to, successful discovery and development of its technology, raising additional capital, development by its competitors of new technological innovations, protection of proprietary technology, and market acceptance of the Company's products. As a result of the aforementioned factors and the related uncertainties, there can be no assurance of the Company's future success.

NOTE 2—SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. generally accepted accounting principles (GAAP) as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB).

Basis of Presentation – Unaudited June 30, 2013

The accompanying unaudited financial statements as of June 30, 2013 and for the six months then ended have been prepared in accordance with generally accepted accounting principles for interim financial information. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Operating results for the six-month period ended June 30, 2013 are not necessarily indicative of the results that may be expected for the year ended December 31, 2013.

Revenue Recognition

The Company has not yet generated any revenue from product sales. The Company's sole source of revenue is grant revenue related to a $5.7 million research grant received from the Cancer Prevention and Research Institute of Texas (CPRIT), covering a three-year period from July 1, 2011 through June 30, 2014, and a $361,644 research grant from the National Institutes of Health (NIH). Grant payments received prior to the Company's performance of work required by the terms of the research grant are recorded as deferred revenue and recognized as grant revenue once work is performed and qualifying costs are incurred. (See Note 10)

Cash and Cash Equivalents

The Company considers all short-term, highly liquid investments with maturity of three months or less to be cash equivalents.

Property and Equipment

Leasehold improvements, furniture, equipment and software are recorded at cost and are depreciated using the straight-line method over the estimated useful lives of the related assets, which range from three to five years.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment when events or changes in business conditions indicate that their carrying value may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. There were no impairment charges related to long-lived assets for the six months ended June 30, 2014 and 2013.

Deferred Rent

The Company recognizes rent expense for leases with increasing annual rents on a straight-line basis over the term of the lease. The amount of rent expense in excess of cash payments is classified as deferred rent. Any lease incentives received are deferred and amortized over the term of the lease.

Clinical Trials

The Company estimates its clinical trial expense accrual for a given period based on the number of patients enrolled at each site and the length of time each patient has been in the trial, less amounts previously billed.

Fair Value of Financial Instruments.

Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The three-tier hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market.

Fair value measurements are classified and disclosed in one of the following three categories:

- Level 1—Quoted unadjusted prices for identical instruments in active markets.
- Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations in which all observable inputs and significant value-drivers are observable in active markets.
- Level 3—Model derived valuations in which one or more significant inputs or significant value-drivers are unobservable, including assumptions developed by the Company.

The Company believes the recorded values of their financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values due to the short-term nature of these instruments. The carrying amount of the line of credit approximates fair value as it bears interest at variable rates.

Financial Instruments and Credit Risks

Financial instruments that potentially subject the Company to credit risk include cash and cash equivalents and accounts receivable. Cash is deposited in demand accounts in federally insured domestic institutions to minimize risk. Insurance is provided through the Federal Deposit Insurance Corporation (FDIC) and Security Investor Protection Corporation (SIPC). Although the balances in these accounts exceed the federally insured limit from time to time, the Company has not incurred losses related to these deposits.

Debt

The Company records proceeds from debt issuances at their face value, less any discounts or the value of any beneficial conversion features or detachable warrants. Interest is accrued over the term of the debt, at the stated interest rate. Discounts are amortized to interest expense through the effective interest method over the term of the debt. Unamortized discounts are immediately recognized as interest expense upon conversion or repayment of the debt.

Equity Issuance Costs

Equity issuance costs represent costs paid to third parties in order to obtain equity financing. These costs have been netted against the proceeds of the equity issuances.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Licenses and Patents

Licenses and patent costs are expensed as incurred. Costs related to the license of patents from third parties and internally developed patents are classified as research and development expenses. Legal costs related to patent applications and maintenance are classified as general and administrative expenses.

Research and Development

Research and development expenses include salaries, related payroll expenses, consulting fees, laboratory costs, manufacturing costs for clinical trials, licenses and clinical trial expenses. All costs for research and development are expensed as incurred.

Contract Manufacturing Services

Contract manufacturing services are expensed as incurred. Prepaid costs are capitalized and amortized as services are performed.

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with ASC 718, *Compensation—Stock Compensation*, which requires the measurement and recognition of compensation expense for all stock-based payment awards made to employees and directors to be recognized in the financial statements, based on their fair value. The Company measures stock-based compensation to consultants in accordance with ASC 505-50, *Equity-Based Payments to Non-Employees*, and recognizes the fair value of the award over the period the services are rendered or goods are provided.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock option awards. The fair value is recognized as expense, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award on a straight-line basis. The Company believes that the fair value of stock options granted to non-employee consultants is more reliably measured than the fair value of the services received. The determination of the grant date fair value of options using the Black-Scholes option-pricing model is affected by the Company's estimated common stock fair value, as well as assumptions regarding a number of other complex and subjective variables.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits such as net operating loss and tax credit carry forwards, to the extent that realization of such benefits is more likely than not. A valuation allowance is recorded when the realization of future tax benefits is uncertain. The Company records a valuation allowance for the full amount of deferred tax assets, which would otherwise be recorded for tax benefits relating to the operating loss and tax credit carryforwards, as realization of such deferred tax assets cannot be determined to be more likely than not.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of operations in the period that includes the enactment date.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740, *Income Taxes*. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. As of June 30, 2014 and 2013, the Company had no uncertain tax positions and no interest or penalties have been charged to the Company for the six months ended June 30, 2014 and 2013. If incurred, the Company will classify any interest and penalties as a component of interest expense and operating expense,

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

respectively. The Company is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The tax years 2004 through 2013 remain open to examination by the Internal Revenue Service.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period, from transactions, and other events and circumstances from non-owner sources. For the six months ended June 30, 2014 and 2013, net loss equaled comprehensive loss.

Use of Estimates

The preparation of the financial statements in accordance with GAAP requires management to make certain estimates and judgments that affect the reported amounts of assets, liabilities, and expenses. Actual results could differ from those estimates.

Historically, the fair values of the shares of common stock underlying the Company's share-based awards were estimated on each grant date by its Board of Directors. Given the absence of a public trading market for the Company's common stock, its Board of Directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of its common stock, including the following:

- its stage of development;
- its operational and financial performance;
- the nature of its services and its competitive position in the marketplace;
- the value of companies that it considers peers based on a number of factors, including similarity to the Company with respect to industry and business model;
- the likelihood of achieving a liquidity event, such as an initial public offering and the nature and history of its business;
- issuances of preferred stock and the rights, preferences, and privileges of its preferred stock relative to those of its common stock;
- business conditions and projections;
- the history of the Company and progress of its research and development efforts and clinical trials; and
- the lack of marketability of its common stock.

Net Loss and Unaudited Pro Forma Net Loss per Share of Common Stock Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period without consideration for common stock equivalents. Diluted net loss per share of common stock is the same as basic net loss per share of common stock, since the effects of potentially dilutive securities are antidilutive. The net loss per share of common stock attributable to common stockholders is computed using the two-class method required for participating securities. All series of the Company's convertible preferred stock are considered to be participating securities as they are entitled to participate in undistributed earnings with shares of common stock. Due to the Company's net loss, there is no impact on the earnings per share calculation in applying the two-class method since the participating securities have no legal requirement to share in any losses.

The unaudited pro forma loss per share attributable to common stockholders for the six months ended June 30, 2014 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all then-outstanding shares of redeemable convertible preferred stock into shares of common stock and the effect of the exercise of certain then-outstanding warrants that will terminate if not exercised upon the IPO. For the purpose of the pro forma presentation, the Company has assumed the net exercise of warrants that will terminate if not exercised.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

The following outstanding shares of common stock equivalents were excluded from the computations of diluted net loss per shares of common stock attributable to common stockholders for the periods presented as the effect of including such securities would be anti-dilutive:

	JUNE 30,	
	2014	2013
Series A Convertible preferred stock—as converted to common stock	2,544,539	2,544,539
Series B Convertible preferred stock—as converted to common stock	8,145,989	2,849,929
Warrants to purchase common stock	804,169	1,473,169
Options to purchase common stock	2,744,000	2,051,500
	14,238,697	8,919,137

The following table sets forth the computation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders:

	SIX MONTHS ENDED JUNE 30, 2014
Net loss used in computing net loss per share attributable to common stockholders, basic and diluted	$ (5,570,524)
Preferred stock dividend	(1,104,131)
Pro forma net loss used in computing net loss per share attributable to common stockholders, basic and diluted	$ (6,674,655)
Weighted-average common shares used to compute net loss per share attributable to common stockholders, basic and diluted	3,382,950
Pro forma adjustment to reflect assumed conversion of convertible preferred stock	
Pro forma adjustment to reflect assumed conversion of warrants	
Weighted-average common shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted	
Pro forma net loss per share of common stock, basic and diluted	

Recently Issued Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-10 (ASU No. 2014-10), which eliminated the definition of a Development Stage Entity and the related reporting requirements. ASU No. 2014-10 is effective for annual reporting periods beginning after December 15, 2014, with early adoption allowed. The Company early adopted ASU No. 2014-10, effective in its financial statements for the six months ended June 30, 2014 and 2013.

The Company has evaluated other recent accounting pronouncements and believes that none of them will have a material effect on the Company's financial statements.

NOTE 3—CASH AND CASH EQUIVALENTS

As of June 30, 2014 and 2013, the Company invested approximately $12.1 million and $2.0 million, respectively.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

NOTE 4—FAIR VALUE OF FINANCIAL INSTRUMENTS

ASC 820, *Fair Value Measurement*, provides a comprehensive framework for measuring the fair value of assets and liabilities, which provides for consistency in how fair value determinations are made under various existing accounting standards that permit, or in some cases require, estimates of fair market value.

Financial assets and liabilities that have recurring fair value measurements are shown below:

	BALANCE AT JUNE 30, 2014	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
Assets:				
Money market funds	$12,144,876	$ 12,144,876	$ —	$ —
Total	$12,144,876	$ 12,144,876	$ —	$ —

	BALANCE AT JUNE 30, 2013	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
Assets:				
Money market funds	$ 1,995,192	$ 1,995,192	$ —	$ —
Total	$ 1,995,192	$ 1,995,192	$ —	$ —

NOTE 5—PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

DESCRIPTION	ESTIMATED USEFUL LIVES	JUNE 30 2014	JUNE 30 2013
Lab equipment	5 years	$ 1,216,880	$ 998,916
Office furniture	5 years	329,182	326,595
Software	3 years	53,105	56,482
Computer equipment	3 to 5 years	178,163	149,027
Leasehold improvements	5 years	1,378,710	1,367,743
Total		3,156,040	2,898,763
Less: accumulated depreciation		(1,064,671)	(442,941)
		$ 2,091,369	$ 2,455,822

During the six months ended June 30, 2014 and 2013, the Company recorded $320,616 and $286,134 of depreciation expense, respectively.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

NOTE 6—ACCRUED LIABILITIES

Accrued liabilities consist of the following:

	JUNE 30	
	2014	2013
Manufacturing costs	$ 66,500	$ —
Patient treatment costs	45,134	21,648
License costs	100,000	25,000
Other	299,396	48,140
Total accrued liabilities	$511,030	$94,788

NOTE 7—DEBT

Promissory Notes—2013

On February 12, 2013, the Company received $3,500,000 of cash proceeds through the issuance of promissory notes, bearing interest at 0.21% per annum from February 12, 2013 through July 31, 2013. On July 31, 2013, in connection with the issuance of Series B Preferred Stock, the Company repaid the notes with 757,497 shares of Series B preferred convertible redeemable stock at a conversion price of $4.625 per share. The repaid balance consisted of $3,500,000 of principal and $3,426 of outstanding interest payable.

Line of Credit

In December 2012, the Company entered into a line of credit agreement with Comerica Bank for up to $1 million. The annual interest rate is equal to the prime rate plus 2.75%. At June 30, 2014, the interest rate was 6%. Interest accrues from the date of each advance and is due and payable on the first business day of each month. Any principal advances that are outstanding on the line of credit are payable in 30 equal monthly installments of principal beginning on July 1, 2013. Substantially all of the Company's assets, excluding intellectual property, have been pledged to secure the note. In March of 2014, the line of credit was amended for an additional amount of $500,000 with the following terms: 6-month interest only draw-down period, followed by a 30-month straight-line amortization of principal and interest at the prime rate plus 2.75%. The balance drawn on the line of credit was $600,000 and $1,000,000 at June 30, 2014 and 2013, respectively.

The future principal payments are as follows:

YEAR:	
2014	$200,000
2015	400,000
Total principal payments	$600,000

NOTE 8—DEFERRED MANUFACTURING COSTS

On December 5, 2011, the Company entered into a service agreement with a third party to perform manufacturing processes for the Company's products. The agreement contained the following terms: (i) an initial non-refundable commitment fee of $973,330; (ii) a monthly fee of $91,200 which will be deducted from the initial commitment fee until it is fully depleted; (iii) a minimum of 110 batches at a cost of $3,400 per batch plus the cost of materials to be manufactured over a minimum of 18 months, commencing October 2012.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

The Company recorded the commitment fee as prepaid manufacturing costs and expensed the monthly fee as research and development costs to offset against the prepaid manufacturing costs. As of June 30, 2014 and 2013, the prepaid manufacturing costs were $0 and $152,530, respectively.

The minimum 110 batches represent the minimum quantity that the Company has to procure. If the Company elects to terminate the agreement before 110 batches are produced, the Company must pay $3,400 per batch for the production shortfall. The Company initially expected to fulfill this requirement in 18 months, commencing October 2012. Accordingly, the Company accrued the value of the 110 batches ratably over the 18 months as deferred manufacturing costs. As of June 30, 2014 and 2013, the deferred manufacturing costs were $578,229 and $173,399, respectively. Subsequently in 2014, the Company revised its estimate of the expected term of the agreement to extend an additional 21 months.

Additionally, the third party manufacturer agreed to credit Bellicum $270,000 against its monthly fees beginning April 1, 2014. This credit would be forfeited if the agreement were terminated prior to April 1, 2014. This credit was applied to the monthly fee beginning April 1, 2014 at a rate of $3,000 per day. The Company is recognizing the credit ratably over the remaining expected term of the agreement as a reduction of research and development expenses commencing April 2014.

NOTE 9—EQUITY

As of June 30, 2014 and 2013, the Company had 19,200,000 authorized shares of common stock with a par value of $0.01 per share and 11,700,000 authorized shares of convertible redeemable preferred stock with a par value of $0.01 per share.

Common Stock

On March 25, 2014, the Company issued 669,000 shares of common stock for $200,700, or $0.30 per share in conjunction with the exercise of warrants expiring in March of 2014.

As of June 30, 2014 and 2013, the Company had 3,603,188 and 2,934,188 common shares issued and outstanding, respectively.

Preferred Stock

The Company has shares of two classes of convertible redeemable preferred stock issued and outstanding as of June 30, 2014 and 2013: Series A convertible redeemable preferred stock (Series A) and Series B convertible redeemable preferred stock (Series B) (collectively, Preferred Stock), each with a par value of $0.01. The shares of Series A were issued between March 2009 and November 2011 at a price of $3.00 per share. The shares of Series B were issued between November 2011 and January 15, 2014 at a price of $4.625 per share.

On January 15, 2014, the Company issued 1,582,706 shares of Series B for cash proceeds of $7,320,015, or $4.625 per share.

As of June 30, 2014, the Company's total outstanding Preferred Stock was as follows:

	PREFERRED SHARES ISSUED AND OUTSTANDING	INITIAL VALUE	REDEMPTION VALUE AT JUNE 30, 2014	REDEMPTION VALUE AT JUNE 30, 2013
Series A	2,544,539	$ 7,633,617	$ 7,633,617	$ 7,633,617
Series B	8,145,989	$ 37,675,199	$ 40,716,415	$ 14,416,538

The rights, preferences and privileges of the Preferred Stock, as of June 30, 2014 and 2013, are as follows:

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Optional Conversion

Each share of Series A and Series B is convertible, at the option of the holder at any time and without additional consideration, into one shares of common stock. The Series A conversion price is $3.00 and the Series B conversion price is $4.625. The rate at which shares of Preferred Stock may be converted into shares of common stock, is subject to anti-dilution protection in the event of certain dilutive issuances of capital stock.

Mandatory Conversion

Upon the closing of the sale of shares the Company's common stock in an IPO resulting in at least $25.0 million of gross proceeds to the Company, all of the outstanding shares of Preferred Stock will automatically convert into shares of the Company's common stock, at the then-applicable conversion rate, and such shares may not be reissued by the Company.

Dividends

At June 30, 2014 and 2013, the holders of Series B were entitled to receive an annual dividend, payable quarterly, if, as and when declared, and if not paid, accrued, equal to 6% of the Series B original issue price, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to Series B. This dividend is cumulative, but not compounded. No dividends or other distributions can be declared or paid with respect to the Series A or common stock, other than dividends payable solely in common stock, unless and until all dividends due on Series B have been paid or declared and set apart for payment. No dividends have been declared or paid since inception. Cumulative dividends are $3,041,216 and $1,235,619 at June 30, 2014 and 2013, respectively.

Liquidation

At June 30, 2014 and 2013, in the event of any deemed liquidation event or any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of Series B then outstanding were entitled to be paid out of the assets of the Company available for distribution to its stockholders, before any payment shall be made to the holders of Series A or common stock, an amount per share equal to the original issue price of the Series B, plus any dividends accrued or declared but unpaid thereon (Liquidation Amount).

After payment to the holders of Series B of the full amounts due them, the holders of Series A were entitled to be paid out of the remaining assets of the Company available for distribution to its stockholders, before any payment shall be made to the holders of common stock, in an amount per share equal to the original issue price of the Series A, plus any dividends declared but unpaid thereon.

After payment of the preferential amounts discussed above, the holders of shares of Series A and Series B, the remaining assets of the Company available for distribution to its stockholders shall be distributed among the holders of the shares of common stock and Preferred Stock, pro rata on an as-converted basis based on the number of shares held by each holder.

Redemption

At June 30, 2014 and 2013, at any time following the seventh anniversary of the original issue date of the Series B, the Company was obligated to redeem all of the outstanding shares of Series B, if requested in writing to do by the holders of not less than 51% of the outstanding shares of Series B. At any time following the seventh anniversary of the original issue date of the Series A, the Company was obligated to redeem all of the outstanding shares of Series A, if requested in writing to do so by the holders of not less than 51% of the outstanding shares of Series A. No redemption of any of the shares of Series A could occur until such a time as no shares of Series B were outstanding. The Company evaluated the redemption feature of the Preferred Stock under ASC 480, *Distinguishing Liabilities from Equity*, and determined that Series A and Series B were contingently redeemable and hence are classified as temporary equity. For the six months ended June 30, 2014 and 2013, the Company accreted $1,104,131 and $392,182, respectively, to the redemption value. The redemption value is based on the original issue price plus cumulative dividends at each reporting period.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Voting
At June 30, 2014 and 2013, on any matter presented to the stockholders of the Company, each holder of outstanding shares of Preferred Stock was entitled to cast the number of votes equal to the number of whole shares of common stock into which the shares of Preferred Stock held by the holder were convertible. Except as provided by law or by the other provisions of the Company's Certificate of Incorporation, holders of Preferred Stock vote together with the holders of common stock as a single class.

Stock Option Plans
The Company has two stock-based compensation plans, which authorize the granting of shares of common stock to employees and directors of the Company, as well as non-employee consultants, and allows the holder of the option to purchase common stock at a stated exercise price. Options vest according to the terms of the grant, which may be immediately or based on the passage of time, generally over four years, and have a term of up to 10 years. Unexercised stock options terminate on the expiration date of the grant. The Company recognizes the share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period.

2011 Stock Option Plan
Under the 2011 Stock Option Plan, 2,798,500 shares of the Company's authorized but unissued common stock were reserved for issuance to employees, consultants, or to non-employee members of the Board of Directors. The 2011 Stock Option Plan replaced the Company's previous stock option plan (the 2006 Stock Option Plan).

2006 Stock Option Plan
Under the 2006 Stock Option Plan, as amended, 301,500 shares of the Company's authorized but unissued common stock were reserved for issuance to optionees, including officers, employees, and other individuals performing services for the Company. As of June 30, 2014, there were no additional shares available for grant under the 2006 Stock Option Plan. A total of 284,000 options were outstanding under this plan as of June 30, 2014 and 2013.

The valuation of the stock-based compensation awards is a significant accounting estimate that requires the use of judgment and assumptions that are likely to have a material impact on the financial statements. The fair value of option grants is determined using the Black-Scholes option-pricing model. Expected volatilities utilized in the model are based on implied volatilities from traded stocks of peer companies. Similarly, the dividend yield is based on historical experience and the estimate of future dividend yields. The risk-free interest rate is derived from the U.S. Treasury yield curve in effect at the time of grant. The expected term of the options is based on the average period the stock options are expected to remain outstanding. As the Company does not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior, the expected term is calculated as the midpoint between the weighted-average vesting term and the contractual expiration period also known as the simplified method. The Company assumed no awards would be forfeited during the vesting period, as actual forfeitures have been minimal through June 30, 2014. The fair value of the option grants have been estimated, with the following weighted-average assumptions:

	SIX MONTHS ENDED JUNE 30	
	2014	2013
Volatility	95%	91%
Risk-free interest rate	1.68%	1.29%
Expected dividend yield	0%	0%
Expected life	6.25 years	6.25 years

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

A summary of the status of the Company's stock option plans as of June 30, 2014, and changes from January 1, 2014 through June 30, 2014 is as follows:

	OPTIONS	WEIGHTED-AVERAGE EXERCISE PRICE	WEIGHTED-AVERAGE REMAINING CONTRACTUAL TERM
Options outstanding, January 1, 2014	2,676,500	$ 1.37	8.26
Options granted	67,500	$ 1.50	
Options outstanding, June 30, 2014	2,744,000	$ 1.38	7.80
Exercisable at June 30, 2014	1,597,625	$ 1.30	7.43

The weighted average grant date fair value of options granted in the six months ended June 30, 2014 was $0.95.

The Company calculates the intrinsic value of its options by multiplying the number of options by the difference between the estimated fair value per share for its common stock and the options' exercise price. The aggregate intrinsic value of options exercisable and options outstanding at June 30, 2014 was $4,327,639 and $7,229,240, respectively. The Company will issue new shares of common stock upon the exercise of vested options.

The following table outlines the options outstanding and exercisable as of June 30, 2014:

INSTRUMENT TYPE	EXERCISE PRICE	OUTSTANDING	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	2.25
Option	$ 0.30	274,000	6.38
Option	$ 1.50	2,460,000	7.98
Total	$ 1.38	2,744,000	7.80

INSTRUMENT TYPE	EXERCISE PRICE	EXERCISABLE	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	2.25
Option	$ 0.30	253,833	6.38
Option	$ 1.50	1,333,792	7.67
Total	$ 1.30	1,597,625	7.43

Stock-based compensation expense for the six months ended June 30, 2014 and 2013 was $157,431 and $220,053, respectively. At June 30, 2014, total compensation cost not yet recognized was $424,439, and the weighted average period over which this amount is expected to be recognized is 1.95 years.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Warrants to Purchase Common Stock—2009 and 2010 Notes Payable

The following table outlines the warrants outstanding and exercisable as of June 30, 2014:

ISSUANCE DATE	EXERCISE PRICE	OUTSTANDING	EXERCISABLE	EXPIRATION DATE
September 2010	$ 0.30	78,333	78,333	September 30, 2015
December 2010	$ 0.30	121,669	121,669	December 16, 2015

Warrant to Purchase Common Stock—Texas Emerging Technology Fund (TETF)

The Texas Emerging Technology Fund holds a warrant to purchase up to 604,167 shares of the Company's common stock at an exercise price of $0.001 per share. This warrant was issued in conjunction with a research grant by TETF to the Company in 2007. This warrant remains outstanding and exercisable indefinitely.

NOTE 10—GRANT REVENUE

CPRIT Grant

On July 27, 2011, the Company entered into a Cancer Research Grant Contract (Grant Contract) with CPRIT under which CPRIT awarded a grant not to exceed approximately $5.7 million to be used by the Company for the execution of defined clinical development of BPX-501. In addition, CPRIT could award supplemental funding not to exceed 10% of the total grant amount based upon the Company's progress. The terms of the Grant Contract require the Company to pay tiered royalties on revenues from sales and licenses of intellectual property facilitated by the Grant Contract.

During the six months ended June 30, 2014 and 2013, Bellicum incurred $894,713 and $374,299 of expenses under the Grant Contract, respectively. As of June 30, 2014 and 2013, Bellicum had an outstanding grant receivable of $1,614,334 and $0, respectively, for grant expenditures that were paid but have not been reimbursed.

NIH Grant

On March 25, 2013, the Company was awarded $361,644 under a grant from NIH. The award covers the period from April 2013 through March 2014. The award was made pursuant to the authority of 42 USC 241 42 CFR 52, and is subject to the requirements of the statute. Funds spent on the grant are reimbursed through monthly reimbursement requests. In May of 2014, the NIH awarded an additional $332,608 for the grant year from April 2014 through March 2015.

During the six months ended June 30, 2014 and 2013, Bellicum incurred $207,793 and $27,440 of expenses under the grant, respectively. As of June 30, 2014 and 2013, Bellicum had an outstanding grant receivable of $148,736 and $26,072, respectively, for grant expenditures that were paid but have not been reimbursed.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

NOTE 11—COMMITMENTS AND CONTINGENCIES

Leases

The Company has entered into various short-term leases for office space. The Company incurred rent expense during the six months ended June 30, 2014 and 2013 of $161,184 and $105,952, respectively.

In December 2012, the Company entered into a five-year office lease agreement. During 2013, the lease was amended to include additional space. The leased premises totals 14,255 square feet. The lease includes escalating base rent payments, which initially increased on November 1, 2013, and then increased again on December 1, 2013. Subsequently, an increase in the base rent payment will occur during the first month of each year, and remain constant for the next 11 months. During the last month of each year, the monthly base rent payment will increase yet again. This escalating base rent payment structure will continue through the expiration of the lease on December 16, 2017. The future minimum payments under the lease are as follows:

	OPERATING LEASES
Year ended December 31:	
2014	$ 205,203
2015	417,246
2016	424,374
2017	413,825
Total minimum lease payments	$ 1,460,648

Litigation

The Company, from time to time, may be involved in litigation relating to claims arising out of its ordinary course of business. Management believes that there are no material claims or actions pending or threatened against the Company.

License Agreement with ARIAD Pharmaceuticals, Inc.

On March 7, 2011, the Company entered into an amended and restated exclusive license agreement with ARIAD (Amended ARIAD License) which restated a license agreement entered into by the parties in 2006. Under the Amended ARIAD License, ARIAD granted to the Company an exclusive (even as to the ARIAD) license, with the right to grant sublicenses, under ARIAD's patent rights relating to dimerizers, genetic constructs coding for dimerizer binding domains, vectors containing said constructs, cells containing said constructs and methods of inducing biological processes in cells containing said constructs. These licensed patent rights were initially limited to the fields of cell transplantation and certain types of cancer.

In connection with the initial license, in 2006, the Company issued 206,111 shares of its common stock to ARIAD which were subject to anti-dilution protection that ultimately resulted in additional issuances to ARIAD by the Company of 945,577 shares of the Company's common stock, such that ARIAD received a total of 1,151,688 shares of common stock under the license agreement. In addition, the Company paid ARIAD a license fee of $250,000 in connection with the restatement in 2011. The Amended ARIAD license also provided for certain royalty and milestone payments, which were subsequently terminated pursuant to an omnibus amendment agreement with ARIAD (see Note 14). The issuance of the shares in connection with the initial license and the shares issued in connection with the anti-dilution provision were recorded as research and development expense in the period issued based on the fair value of the common stock on that date.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Under the Amended ARIAD License, the Company is required to diligently proceed with the development, manufacture and sale of licensed products. The Amended ARIAD License is subject at all times to restrictions and obligations under a license agreement by and between ARIAD Gene Therapeutics, Inc. (one of ARIAD's affiliates which merged into ARIAD) and the academic institution from with ARIAD obtained its license to the underlying technology. While the Company is not required to pay royalties or fees to such academic institution, no sublicensee of the Company's may enter into a sublicense with respect to any intellectual property owned by the academic institution without its consent, which terms must be consistent with those included in the agreement between ARIAD and such academic institution.

The Amended ARIAD License will expire upon expiration of the last license term of a licensed product covered by the agreement, which is either the later of (i) 12 years from the date of the first commercial sale of the licensed product, or (ii) expiration of a valid claim on the licensed product. Either party to the license may terminate or modify the Amended ARIAD License upon a material breach by the other party that remains uncured following the date that is 30 days after written notice of a payment breach and 90 days for any other breach, and effective immediately upon bankruptcy of the other party. The Company may terminate the restated ARIAD license in its sole discretion at any time if the Company determines not to develop or commercialize any licensed product. In addition, upon termination of the restated ARIAD license prior to expiration, the Company must transfer any ownership and any beneficial ownership in any orphan drug designation or any similar designation in any jurisdiction of orphan drug status of the ARIAD dimerizer to ARIAD.

License Agreements with Baylor College of Medicine

2008 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor College of Medicine (Baylor), dated March 20, 2008 (2008 Baylor License), the Company obtained an exclusive, worldwide and fully paid up license to certain intellectual property, including intellectual property related to methods for activating antigen presenting cells and to genetic constructs coding for membrane bound inducible cytoplasmic CD40.

As consideration for the 2008 Baylor License, the Company issued to Baylor 40,000 shares of its common stock and assumed responsibility for all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the patents subject to the 2008 Baylor License.

The 2008 Baylor License is subject to certain restrictions and is non-exclusive with respect to (i) the making or use of the licensed intellectual property for use in non-commercial research, patient care, teaching, and other educational purposes; (ii) any non-exclusive license covering the licensed intellectual property that Baylor grants to other academic or research institutions for non-commercial research purposes; and (iii) any non-exclusive licenses that Baylor is required to grant to the U.S. or foreign state pursuant to an existing or future treaty with the U.S., and (iv) a non-exclusive license granted to ARIAD under the terms of a materials transfer agreement between Baylor and ARIAD.

Baylor may terminate or modify the 2008 Baylor License in the event of a material breach that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. The Company may terminate the 2008 Baylor License, or any portion thereof, at its sole discretion at any time upon 30 days' written notice to Baylor. Upon termination of the 2008 Baylor License, all rights to the intellectual property immediately revert to Baylor.

2010 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor, dated June 27, 2010 (2010 Baylor License), the Company obtained an exclusive, worldwide license to certain intellectual property, including intellectual property related to methods for treating prostate cancer, methods of administering T cells to a patient, and methods of activating antigen presenting cells with constructs comprising MyD88 and CD40.

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

Pursuant to the terms of the 2010 Baylor License, the Company paid Baylor a license execution fee of $30,000. In addition, the Company is required to pay a low annual maintenance fee on beginning on the second anniversary of the agreement date.

The terms of the 2010 Baylor License also require the Company to make royalty payments of less than 1%, subject to certain annual minimums, on net sales of products covered by the license. In addition, to the extent the Company enters into a sublicensing agreement relating to a licensed product, the Company is required to pay Baylor a percentage in the mid-single digits on all non-royalty income received from sublicensing revenue. The Company is required to make milestone payments, of up to $735,000 in aggregate, upon successful completion of clinical and regulatory milestones regarding the first two product covered by this license.

The 2010 Baylor License will expire upon expiration of the last patent contained in the licensed patent rights, on a country-by-country basis, upon which the Company will have a perpetual, paid-in-full license in such country. Baylor may terminate or modify the 2010 Baylor License in the event of a material breach by the Company that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. The Company may terminate the 2010 Baylor License, or any portion thereof, at the Company's sole discretion at any time upon 60 days' written notice to Baylor. Upon termination of the 2010 Baylor License for any reason prior to expiration, the Company must assign to Baylor each authorized sublicense agreement that is currently in effect on the date of termination.

NOTE 12—RELATED PARTY TRANSACTIONS

Related Party Licensing Arrangements

During 2010, the Company entered into a license agreement with Baylor, granting the Company the rights to patents and technology derived from invention disclosure BLG 06-028. The license included $30,000 of upfront payments during 2010 and 2011, and additional annual fees of $7,500 beginning on the second anniversary of the license agreement.

During 2008, Bellicum entered into a license agreement with Baylor, granting the Company the rights to patents and technology derived from invention disclosures OTA 01-085 and BLG 08-024. Consideration for the license included issuance in 2009 of 23,000 common shares to Baylor and 17,000 common shares to the inventors (including board members Dr. David Spencer and Dr. Kevin Slawin).

On March 1, 2006, the Company issued 105,000 common shares to Dr. David Spencer, Dr. Brent Hanks and Dr. Kevin Slawin, valued at $0.20 per share, as consideration for the use of certain patents. During 2006, the Company issued 206,111 common shares to ARIAD as consideration for the licensed rights to use certain patents held by ARIAD. The stock purchase agreement included certain anti-dilutive features which resulted in the issuance of the following additional shares:

	ANTI-DILUTIVE SHARES ISSUED
Year:	
2009	319,416
2012	626,161

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

NOTE 13—INCOME TAXES

The Company did not recognize tax expense during the six months ended June 30, 2014. The reconciliation between federal income taxes at the statutory rate and the Company's income tax expense for the six months ended June 30, 2014 is as follows:

	JUNE 30, 2014
U.S. tax benefit at statutory rate	$ (1,893,978)
Meals and entertainment	2,925
Incentive stock option	44,636
Research and development credit	(157,277)
Deferred tax valuation allowances	2,003,694
Income tax expense	$ —

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes, and the amounts used for income tax purposes. Significant components of the Company's deferred taxes as of June 30, 2014 are as follows:

	JUNE 30, 2014
Deferred tax liabilities:	
Depreciation	$ (144,286)
Prepaid costs	(90,903)
Tenant improvement allowance	(97,345)
Total deferred tax liabilities	(332,534)
Deferred tax assets:	
Net operating loss carry forward	10,799,474
Nonqualified stock options	80,652
Tenant improvement liability	112,293
Deferred contract manufacturing costs	196,598
Research and development credit	983,438
Other	5,927
Total deferred tax assets	12,178,382
Valuation allowance	(11,845,848)
Total deferred tax	$ —
Net current deferred tax liability	$ (63,000)
Net non-current deferred tax asset	63,000
Total deferred tax	$ —

As of June 30, 2014, the Company had gross federal income tax net operating loss carryforwards of $31,763,158 and federal research tax credits of $983,438. The net operating loss carry forwards will expire beginning in 2024, if not utilized. In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets

BELLICUM PHARMACEUTICALS, INC.

Notes to Financial Statements—(Continued)
June 30, 2014 and 2013

is dependent upon the Company attaining future taxable income during periods in which those temporary differences become deductible. Due to the uncertainty surrounding the realization of the benefits of its deferred assets, including net operating loss carry forwards, the Company has provided a 100% valuation allowance on its deferred tax assets at June 30, 2014. The Internal Revenue Code Section 382 limits net operating loss and tax credit carry forwards when an ownership change of more than 50% of the value of the stock in a loss corporation occurs. Accordingly, the ability to utilize remaining net operating loss and tax credit carry forwards may be significantly restricted.

NOTE 14—SUBSEQUENT EVENTS

The Company evaluated subsequent events through the date the accompanying financial statements were available to be issued, which was October 17, 2014.

On July 3, 2014, the line of credit was amended to allow draw-downs through March 1, 2015, followed by a 24-month straight-line amortization of principal and interest at the prime rate plus 2.75% beginning April 1, 2015.

On August 22, 2014, the Company issued 10,091,743 shares of Series C convertible preferred stock (Series C) at a purchase price of $5.45 per share and warrants to purchase up to 6,559,598 shares of Series C with an exercise price of $6.00 per share. The warrants have a five year term, but are subject to earlier termination in the event of a Qualified IPO (defined in the warrants) or upon a merger or sale of the Company. The Company received gross proceeds from the transaction of approximately $55.0 million.

The holders of Series C have rights that are senior to the rights of the holders of all other classes of shares in the event of a liquidation of the Company. In connection with the issuance of Series C, the redemption rights of the holders of Series A and Series B were terminated, the liquidation preferences of Series A and Series B were subordinated to Series C, and accruing dividends on the shares of Series B stopped accruing.

On October 3, 2014, the Company entered into an omnibus amendment agreement with ARIAD, which amended the Amended ARIAD License to expand the license to cover a broader scope of dimerizers and licensed products for use and exploitation in any field of use other than in vivo administration of genetic material directly into a human being using viral vectors for the purpose of producing proteins or other macromolecules that are expressed or secreted for therapeutic or prophylactic purposes.

In connection with the amendment, the Company issued a promissory note to ARIAD for a principal amount of $50,000,000 in return for the termination of all obligations to make milestone and royalty payments to ARIAD in the future. The principal does not accrue interest unless the Company is in default, in which case it accrues at a rate of 10% per annum. The Company made an initial payment of $15,000,000 in connection with the execution of the amendment. The Company is required to pay $20,000,000 in a second lump sum installment on or before June 30, 2015 and $15,000,000 in a third lump sum installment on or before June 30, 2016. Additionally, in connection with the second installment, ARIAD agreed to return to the Company all shares of common stock of the Company that ARIAD currently holds.

Report of Independent Registered Public Accounting Firm

The Board of Directors of Bellicum Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of Bellicum Pharmaceuticals, Inc. as of December 31, 2013 and December 31, 2012, and the related statements of operations, statements of redeemable and convertible preferred stock and stockholders' deficit and cash flows for each of the two years in the period ended December 31, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Bellicum Pharmaceuticals, Inc. at December 31, 2013 and December 31, 2012, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Houston, Texas
October 17, 2014

BELLICUM PHARMACEUTICALS, INC.

Balance Sheets

	DECEMBER 31,	
	2013	2012
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,167,585	$ 1,632,084
Accounts receivable—grants	745,541	—
Prepaid expenses and other current assets	254,068	845,578
Total current assets	12,167,194	2,477,662
Property and equipment, net of accumulated depreciation	2,289,919	2,510,829
Other assets	484,525	197,738
TOTAL ASSETS	$ 14,941,638	$ 5,186,229
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 549,594	$ 550,847
Accrued payroll	470,961	321,962
Accrued liabilities	664,173	114,690
Deferred revenue	—	1,038,763
Current portion of line of credit	400,000	89,955
Current portion of deferred rent	102,713	95,501
Current portion of deferred manufacturing costs	17,000	10,200
Total current liabilities	2,204,441	2,221,918
Long-term liabilities:		
Line of credit	400,000	359,822
Deferred rent	288,941	378,023
Deferred manufacturing costs	274,267	41,933
Total liabilities	3,167,649	3,001,696
Commitments and contingencies		
Preferred stock whose redemption is outside the control of the issuer:		
Series A convertible, redeemable preferred stock: $0.01 par value; 2,800,000 shares authorized; 2,544,539 shares issued and outstanding as of December 31, 2013 and 2012; redemption value of $7,633,617 at December 31, 2013 and 2012	7,633,617	7,633,617
Series B convertible, redeemable preferred stock: $0.01 par value; 8,900,000 shares authorized; 6,563,283 and 2,849,929 shares issued and outstanding as of December 31, 2013 and 2012, respectively; redemption value of $32,292,269 and $14,024,356 at December 31, 2013 and 2012, respectively	32,292,269	14,024,356
Stockholders' deficit:		
Common stock: $0.01 par value; 19,200,000 shares authorized; 2,934,188 shares issued and outstanding as of December 31, 2013 and 2012	29,342	29,342
Additional paid-in capital	797,585	1,507,291
Accumulated deficit	(28,978,824)	(21,010,073)
Total stockholders' deficit	(28,151,897)	(19,473,440)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 14,941,638	$ 5,186,229

The accompanying notes are an integral part of these financial statements.

BELLICUM PHARMACEUTICALS, INC.

Statements of Operations

	YEAR ENDED DECEMBER 31,	
	2013	2012
REVENUES		
Grants	$ 1,940,657	$ 1,470,330
Total revenues	1,940,657	1,470,330
OPERATING EXPENSES		
Research and development	7,049,420	5,796,233
General and administrative	2,813,190	1,943,206
Total operating expenses	9,862,610	7,739,439
LOSS FROM OPERATIONS	(7,921,953)	(6,269,109)
OTHER INCOME (EXPENSE)		
Interest income	3,921	7,545
Interest expense	(50,719)	(1,405)
Total other income (expense)	(46,798)	6,140
NET LOSS	$(7,968,751)	$(6,262,969)
Preferred stock dividends	(1,093,648)	(757,492)
Net loss attributable to common stockholders	$(9,062,399)	$(7,020,461)
Net loss per share attributable to common stockholders, basic and diluted	$ (3.09)	$ (2.51)
Weighted-average number of common shares outstanding—basic and diluted	2,934,188	2,801,938
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		
Weighted-average common shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		

The accompanying notes are an integral part of these financial statements.

BELLICUM PHARMACEUTICALS, INC.

Statements of Redeemable and Convertible Preferred Stock and Stockholders' Deficit

	SERIES A PREFERRED STOCK		SERIES B PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	TOTAL STOCKHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT			
Balance, January 1, 2012	2,544,539	$7,633,617	2,174,824	$10,144,504	2,308,027	$23,080	$ 1,974,756	$ (14,747,104)	(12,749,268)
Stock-based compensation	—	—	—	—	—	—	91,503	—	91,503
Issuance of Series B preferred stock for cash, net	—	—	675,105	3,122,360	—	—	(56,358)	—	(56,358)
Anti-dilutive feature for license agreement	—	—	—	—	626,161	6,262	254,882	—	261,144
Accretion of Series B preferred stock to redemption value	—	—	—	757,492	—	—	(757,492)	—	(757,492)
Stock issued for R&D expense	—	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(6,262,969)	(6,262,969)
Balance, December 31, 2012	2,544,539	$7,633,617	2,849,929	$14,024,356	2,934,188	$29,342	1,507,291	$ (21,010,073)	$ (19,473,440)
Stock-based compensation	—	—	—	—	—	—	390,595	—	390,595
Conversion of debt and interest into Series B preferred stock	—	—	757,497	3,503,426	—	—	—	—	—
Issuance of Series B preferred stock for cash, net	—	—	2,955,857	13,670,839	—	—	(6,653)	—	(6,653)
Accretion of Series B preferred stock to redemption value	—	—	—	1,093,648	—	—	(1,093,648)	—	(1,093,648)
Net loss	—	—	—	—	—	—	—	(7,968,751)	(7,968,751)
Balance, December 31, 2013	2,544,539	$7,633,617	6,563,283	$32,292,269	2,934,188	$29,342	$ 797,585	$ (28,978,824)	$ (28,151,897)

The accompanying notes are an integral part of these financial statements

BELLICUM PHARMACEUTICALS, INC.

Statements of Cash Flows

	Year Ended December 31	
	2013	2012
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (7,968,751)	$ (6,262,969)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	587,248	115,282
Stock-based compensation	390,595	91,503
Stock issued for license agreement	—	261,144
Loss on disposal of property and equipment	—	3,274
Amortization of lease liability	(95,500)	(3,979)
Interest expense converted into preferred stock	3,426	—
Changes in operating assets and liabilities:		
Accounts receivable—grants	(745,541)	—
Prepaid expenses and other current assets	591,510	(817,597)
Other assets	(286,787)	58,862
Accounts payable	(1,253)	59,016
Accrued payroll	148,999	321,962
Accrued liabilities	549,483	(215,488)
Deferred revenue—grants	(1,038,763)	(1,470,329)
Deferred rent	13,630	63,563
Deferred manufacturing costs	239,134	52,133
NET CASH USED IN OPERATING ACTIVITIES	(7,612,570)	(7,743,623)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property and equipment	(366,338)	(2,047,483)
CASH USED IN INVESTING ACTIVITIES	(366,338)	(2,047,483)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of preferred stock	13,670,839	3,122,360
Payment of issuance costs on preferred stock	(6,653)	(56,358)
Proceeds from notes payable	3,500,000	—
Proceeds from line of credit	550,223	449,777
Payments on line of credit	(200,000)	—
CASH PROVIDED BY FINANCING ACTIVITIES	17,514,409	3,515,779
NET CHANGE IN CASH AND CASH EQUIVALENTS	9,535,501	(6,275,327)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	1,632,084	7,907,411
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 11,167,585	$ 1,632,084
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid during the period for:		
Interest	$ 47,296	$ 788
NON-CASH INVESTING AND FINANCING ACTIVITIES		
Dividends accrued on preferred stock	$ 1,093,648	$ 757,492
Conversion of notes payable into preferred stock	$ 3,500,000	$ —
Landlord funded leasehold improvements	$ —	$ 413,940

The accompanying notes are an integral part of these financial statements.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

NOTE 1—ORGANIZATION AND BUSINESS DESCRIPTION

Bellicum Pharmaceuticals, Inc. (the Company or Bellicum), was incorporated in Delaware in July 2004 and is based in Houston, Texas. The Company is a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. The Company is devoting substantially all of its present efforts to developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including, hematopoietic stem cell transplantation, CAR T cell therapy and dendritic cell vaccines. The Company has not generated any revenue from product sales to date and does not anticipate generating revenues from product sales in the foreseeable future. The Company's success is dependent on, among other things, its ability to successfully complete the development of, and obtain regulatory approval for, its product candidates, managing the growth of the organization, obtaining additional financing necessary in order launch and commercialize its products candidates, and competing successfully with other companies in its industry.

The future success of the Company is dependent on its ability to develop its product candidates and ultimately upon its ability to attain profitable operations. The Company is subject to a number of risks similar to other life science companies, including, but not limited to, successful discovery and development of its technology, raising additional capital, development by its competitors of new technological innovations, protection of proprietary technology, and market acceptance of the Company's products. As a result of the aforementioned factors and the related uncertainties, there can be no assurance of the Company's future success.

NOTE 2—SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America. Any reference in these footnotes to applicable guidance is meant to refer to the authoritative U.S. generally accepted accounting principles (GAAP) as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB).

Revenue Recognition

The Company has not yet generated any revenue from product sales. The Company's sole source of revenue is grant revenue related to a $5.7 million research grant received from the Cancer Prevention and Research Institute of Texas (CPRIT), covering a three-year period from July 1, 2011 through June 30, 2014, and a $361,644 research grant from the National Institutes of Health (NIH). Grant payments received prior to the Company's performance of work required by the terms of the research grant are recorded as deferred revenue and recognized as grant revenue once work is performed and qualifying costs are incurred. (See Note 10)

Cash and Cash Equivalents

The Company considers all short-term, highly liquid investments with maturity of three months or less to be cash equivalents.

Property and Equipment

Leasehold improvements, furniture, equipment and software are recorded at cost and are depreciated using the straight-line method over the estimated useful lives of the related assets, which range from three to five years.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment when events or changes in business conditions indicate that their carrying value may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. There were no impairment charges related to long-lived assets for the years ended December 31, 2013 and 2012.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Deferred Rent

The Company recognizes rent expense for leases with increasing annual rents on a straight-line basis over the term of the lease. The amount of rent expense in excess of cash payments is classified as deferred rent. Any lease incentives received are deferred and amortized over the term of the lease.

Clinical Trials

The Company estimates its clinical trial expense accrual for a given period based on the number of patients enrolled at each site and the length of time each patient has been in the trial, less amounts previously billed.

Fair Value of Financial Instruments

Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The three-tier hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market.

Fair value measurements are classified and disclosed in one of the following three categories:

- Level 1—Quoted unadjusted prices for identical instruments in active markets.
- Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations in which all observable inputs and significant value-drivers are observable in active markets.
- Level 3—Model derived valuations in which one or more significant inputs or significant value-drivers are unobservable, including assumptions developed by the Company.

The Company believes the recorded values of their financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values due to the short-term nature of these instruments. The carrying amount of the line of credit approximates fair value as it bears interest at variable rates.

Financial Instruments and Credit Risks

Financial instruments that potentially subject the Company to credit risk include cash and cash equivalents and accounts receivable. Cash is deposited in demand accounts in federally insured domestic institutions to minimize risk. Insurance is provided through the Federal Deposit Insurance Corporation (FDIC) and Security Investor Protection Corporation (SIPC). Although the balances in these accounts exceed the federally insured limit from time to time, the Company has not incurred losses related to these deposits.

Debt

The Company records proceeds from debt issuances at their face value, less any discounts or the value of any beneficial conversion features or detachable warrants. Interest is accrued over the term of the debt, at the stated interest rate. Discounts are amortized to interest expense through the effective interest method over the term of the debt. Unamortized discounts are immediately recognized as interest expense upon conversion or repayment of the debt.

Equity Issuance Costs

Equity issuance costs represent costs paid to third parties in order to obtain equity financing. These costs have been netted against the proceeds of the equity issuances.

Licenses and Patents

Licenses and patent costs are expensed as incurred. Costs related to the license of patents from third parties and internally developed patents are classified as research and development expenses. Legal costs related to patent applications and maintenance are classified as general and administrative expenses.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Research and Development

Research and development expenses include salaries, related payroll expenses, consulting fees, laboratory costs, manufacturing costs for clinical trials, licenses and clinical trial expenses. All costs for research and development are expensed as incurred.

Contract Manufacturing Services

Contract manufacturing services are expensed as incurred. Prepaid costs are capitalized and amortized as services are performed.

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with ASC 718, *Compensation—Stock Compensation*, which requires the measurement and recognition of compensation expense for all stock-based payment awards made to employees and directors to be recognized in the financial statements, based on their fair value. The Company measures stock-based compensation to consultants in accordance with ASC 505-50, *Equity-Based Payments to Non-Employees*, and recognizes the fair value of the award over the period the services are rendered or goods are provided.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock option awards. The fair value is recognized as expense, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award on a straight-line basis. The Company believes that the fair value of stock options granted to non-employee consultants is more reliably measured than the fair value of the services received. The determination of the grant date fair value of options using the Black-Scholes option-pricing model is affected by the Company's estimated common stock fair value, as well as assumptions regarding a number of other complex and subjective variables.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits such as net operating loss and tax credit carry forwards, to the extent that realization of such benefits is more likely than not. A valuation allowance is recorded when the realization of future tax benefits is uncertain. The Company records a valuation allowance for the full amount of deferred tax assets, which would otherwise be recorded for tax benefits relating to the operating loss and tax credit carryforwards, as realization of such deferred tax assets cannot be determined to be more likely than not.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of operations in the period that includes the enactment date.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740, *Income Taxes*. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. As of December 31, 2013 and 2012, the Company had no uncertain tax positions and no interest or penalties have been charged to the Company for the years ended December 31, 2013 and 2012. If incurred, the Company will classify any interest and penalties as a component of interest expense and operating expense, respectively. The Company is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The tax years 2004 through 2013 remain open to examination by the Internal Revenue Service.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period, from transactions, and other events and circumstances from non-owner sources. For the years ended December 31, 2013 and 2012, net loss equaled comprehensive loss.

Use of Estimates

The preparation of the financial statements in accordance with GAAP requires management to make certain estimates and judgments that affect the reported amounts of assets, liabilities, and expenses. Actual results could differ from those estimates.

Historically, the fair values of the shares of common stock underlying the Company's share-based awards were estimated on each grant date by its Board of Directors. Given the absence of a public trading market for the Company's common stock, its Board of Directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of its common stock, including the following:

- its stage of development;
- its operational and financial performance;
- the nature of its services and its competitive position in the marketplace;
- the value of companies that it considers peers based on a number of factors, including similarity to the Company with respect to industry and business model;
- the likelihood of achieving a liquidity event, such as an initial public offering and the nature and history of its business;
- issuances of preferred stock and the rights, preferences, and privileges of its preferred stock relative to those of its common stock;
- business conditions and projections;
- the history of the Company and progress of its research and development efforts and clinical trials; and
- the lack of marketability of its common stock.

Net Loss and Unaudited Pro Forma Net Loss per Share of Common Stock Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period without consideration for common stock equivalents. Diluted net loss per share of common stock is the same as basic net loss per share of common stock, since the effects of potentially dilutive securities are antidilutive. The net loss per share of common stock attributable to common stockholders is computed using the two-class method required for participating securities. All series of the Company's convertible preferred stock are considered to be participating securities as they are entitled to participate in undistributed earnings with shares of common stock. Due to the Company's net loss, there is no impact on the earnings per share calculation in applying the two-class method since the participating securities have no legal requirement to share in any losses.

The unaudited pro forma loss per share attributable to common stockholders for the years ended December 31, 2013 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all then-outstanding shares of redeemable convertible preferred stock into shares of common stock and the effect of the exercise of certain then-outstanding warrants that will terminate if not exercised upon the IPO. For the purpose of the pro forma presentation, the Company has assumed the net exercise of warrants that will terminate if not exercised.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

The following outstanding shares of common stock equivalents were excluded from the computations of diluted net loss per shares of common stock attributable to common stockholders for the periods presented as the effect of including such securities would be anti-dilutive:

	2013	2012
Series A Convertible preferred stock—as converted to common stock	2,544,539	2,544,539
Series B Convertible preferred stock—as converted to common stock	6,563,283	2,849,929
Warrants to purchase common stock	1,473,169	1,473,169
Options to purchase common stock	2,676,500	1,814,000
	13,257,491	8,681,637

The following table sets forth the computation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders:

	YEAR ENDED DECEMBER 31, 2013
Net loss used in computing net loss per share attributable to common stockholders, basic and diluted	$ (7,968,751)
Preferred stock dividend	(1,093,648)
Pro forma net loss used in computing net loss per share attributable to common stockholders, basic and diluted	$ (9,062,399)
Weighted-average common shares used to compute net loss per share attributable to common stockholders, basic and diluted	2,934,188
Pro forma adjustment to reflect assumed conversion of convertible preferred stock	
Pro forma adjustment to reflect assumed conversion of warrants	
Weighted-average common shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted	
Pro forma net loss per share of common stock, basic and diluted	

Recently Issued Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-10 (ASU No. 2014-10), which eliminated the definition of a Development Stage Entity and the related reporting requirements. ASU No. 2014-10 is effective for annual reporting periods beginning after December 15, 2014, with early adoption allowed. The Company early adopted ASU No. 2014-10, effective in its financial statements for the years ended December 31, 2013 and 2012.

The Company has evaluated other recent accounting pronouncements and believes that none of them will have a material effect on the Company's financial statements.

NOTE 3—CASH AND CASH EQUIVALENTS

As of December 31, 2013 and 2012, the Company invested approximately $10.9 million and $1.6 million, respectively.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

NOTE 4—FAIR VALUE OF FINANCIAL INSTRUMENTS

ASC 820, *Fair Value Measurement,* provides a comprehensive framework for measuring the fair value of assets and liabilities, which provides for consistency in how fair value determinations are made under various existing accounting standards that permit, or in some cases require, estimates of fair market value.

Financial assets and liabilities that have recurring fair value measurements are shown below:

	BALANCE AT DECEMBER 31, 2013	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
Assets:				
Money market funds	$ 10,879,656	$ 10,879,656	$ —	$ —
Total	$ 10,879,656	$ 10,879,656	$ —	$ —

	BALANCE AT DECEMBER 31, 2012	QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1)	SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2)	SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)
Assets:				
Money market funds	$ 1,632,084	$ 1,632,084	$ —	$ —
Total	$ 1,632,084	$ 1,632,084	$ —	$ —

NOTE 5—PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

DESCRIPTION	ESTIMATED USEFUL LIVES	DECEMBER 31, 2013	DECEMBER 31, 2012
Lab equipment	5 years	$ 1,133,305	$ 802,136
Office furniture	5 years	326,595	326,595
Software	3 years	47,890	43,678
Computer equipment	3 to 5 years	151,182	142,056
Leasehold improvements	5 years	1,375,001	1,353,170
Total		3,033,973	2,667,635
Less: accumulated depreciation		(744,054)	(156,806)
		$ 2,289,919	$ 2,510,829

During the years ended December 31, 2013 and 2012, the Company recorded $587,248 and $115,282 of depreciation expense, respectively.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

NOTE 6—ACCRUED LIABILITIES

Accrued liabilities consist of the following:

	DECEMBER 31,	
	2013	2012
Medical facility fees	$224,166	$ —
Patient treatment costs	197,713	—
License costs	175,000	17,500
Other	67,294	97,190
Total accrued liabilities	$664,173	$114,690

NOTE 7—DEBT

Promissory Notes—2013

On February 12, 2013, the Company received $3,500,000 of cash proceeds through the issuance of promissory notes, bearing interest at 0.21% per annum from February 12, 2013 through July 31, 2013. On July 31, 2013, in connection with the issuance of Series B Preferred Stock, the Company repaid the notes with 757,497 shares of Series B preferred convertible redeemable stock at a conversion price of $4.625 per share. The repaid balance consisted of $3,500,000 of principal and $3,426 of outstanding interest payable.

Line of Credit

In December 2012, the Company entered into a line of credit agreement with Comerica Bank for up to $1 million. The annual interest rate is equal to the prime rate plus 2.75%. At December 31, 2013, the interest rate was 6%. Interest accrues from the date of each advance and is due and payable on the first business day of each month. Any principal advances that are outstanding on the line of credit are payable in 30 equal monthly installments of principal beginning on July 1, 2013. Substantially all of the Company's assets, excluding intellectual property, have been pledged to secure the note. The balance drawn on the line of credit was $800,000 and $449,777 at December 31, 2013 and 2012, respectively.

The future principal payments are as follows:

Year:	
2014	$400,000
2015	400,000
Total principal payments	$800,000

NOTE 8—DEFERRED MANUFACTURING COSTS

On December 5, 2011, the Company entered into a service agreement with a third party to perform manufacturing processes for the Company's products. The agreement contained the following terms: (i) an initial non-refundable commitment fee of $973,330; (ii) a monthly fee of $91,200 which will be deducted from the initial commitment fee until it is fully depleted; (iii) a minimum of 110 batches at a cost of $3,400 per batch plus the cost of materials to be manufactured over a minimum of 18 months, commencing October 2012.

The Company recorded the commitment fee as prepaid manufacturing costs and expensed the monthly fee as research and development costs to offset against the prepaid manufacturing costs. As of December 31, 2013 and 2012, the prepaid manufacturing costs were $- and $699,730, respectively.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

The minimum 110 batches represent the minimum quantity that the Company has to procure. If the Company elects to terminate the agreement before 110 batches are produced, the Company must pay $3,400 per batch for the production shortfall. The Company initially expected to fulfill this requirement in 18 months, commencing October 2012. Accordingly, the Company accrued the value of the 110 batches ratably over the 18 months as deferred manufacturing costs. As of December 31, 2013 and 2012, the deferred manufacturing costs were $291,267 and $52,133, respectively. Subsequently in 2014, the Company revised its estimate of the expected term of the agreement to extend an additional 21 months.

Additionally, the third party manufacturer agreed to credit Bellicum $270,000 against its monthly fees beginning April 1, 2014. This credit would be forfeited if the agreement were terminated prior to April 1, 2014. This credit was applied to the monthly fee beginning April 1, 2014 at a rate of $3,000 per day. The Company is recognizing the credit ratably over the remaining expected term of the agreement as a reduction of research and development expenses commencing April 2014.

NOTE 9—EQUITY

As of December 31, 2013 and 2012, the Company had 19,200,000 authorized shares of common stock with a par value of $0.01 per share and 11,700,000 authorized shares of convertible redeemable preferred stock with a par value of $0.01 per share.

Common Stock

In 2012, the Company issued ARIAD Pharmaceuticals, Inc. (ARIAD) an aggregate of 626,161 shares of the Company's common stock for a total purchase price of $1.00, concurrently with the issuances by the Company to investors of Series B preferred stock. This common stock issued to ARIAD was valued at $261,144. The issuance fully satisfied the rights of ARIAD to receive additional shares of the Company's common stock pursuant to its anti-dilution rights (see Note 11).

Preferred Stock

The Company had shares of two classes of convertible redeemable preferred stock issued and outstanding as of December 31, 2013 and 2012: Series A convertible redeemable preferred stock (Series A) and Series B convertible redeemable preferred stock (Series B) (collectively, Preferred Stock), each with a par value of $0.01. The shares of Series A were issued between March 2009 and November 2011 at a price of $3.00 per share. The shares of Series B were issued between November 2011 and November 2013 at a price of $4.625 per share.

On March 7, 2012, the Company issued 675,105 shares of Series B for cash proceeds of $3,066,002, or $4.625 per share, net of issuance costs.

On July 31, 2013, the Company issued 2,098,219 shares of Series B for aggregate gross proceeds of approximately $9.7 million, or $4.625 per share, comprised of 757,497 shares issued upon the cancellation of $3,500,000 of principal and $3,426 accrued and unpaid interest on promissory notes, and 1,340,722 shares issued for cash proceeds of approximately $6.2 million.

On November 15, 2013, the Company issued 1,615,135 shares of Series B for net cash proceeds of approximately $7.5 million, or $4.625 per share.

As of December 31, 2013, the Company's total outstanding convertible preferred stock was as follows:

	PREFERRED SHARES ISSUED AND OUTSTANDING	INITIAL VALUE	REDEMPTION VALUE AT DECEMBER, 31, 2013	REDEMPTION VALUE AT DECEMBER 31, 2012
Series A	2,544,539	$ 7,633,617	$ 7,633,617	$ 7,633,617
Series B	6,563,283	$ 30,355,184	$ 32,292,269	$ 14,024,356

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

The rights, preferences and privileges of the Preferred Stock, as of December 31, 2013 and 2012, are as follows:

Optional Conversion

Each share of Series A and Series B is convertible, at the option of the holder at any time and without additional consideration, into one shares of common stock. The Series A conversion price is $3.00 and the Series B conversion price is $4.625. The rate at which shares of Preferred Stock may be converted into shares of common stock, is subject to anti-dilution protection in the event of certain dilutive issuances of capital stock.

Mandatory Conversion

Upon the closing of the sale of shares the Company's common stock in an IPO resulting in at least $25.0 million of gross proceeds to the Company, all of the outstanding shares of Preferred Stock will automatically convert into shares of the Company's common stock, at the then-applicable conversion rate, and such shares may not be reissued by the Company.

Dividends

At December 31, 2013 and 2012, the holders of Series B were entitled to receive an annual dividend, payable quarterly, if, as and when declared, and if not paid, accrued, equal to 6% of the Series B original issue price, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to Series B. This dividend is cumulative, but not compounded. No dividends or other distributions can be declared or paid with respect to the Series A or common stock, other than dividends payable solely in common stock, unless and until all dividends due on Series B have been paid or declared and set apart for payment. No dividends have been declared or paid since inception. Cumulative dividends are $1,937,085 and $843,437 at December 31, 2013 and 2012, respectively.

Liquidation

At December 31, 2013 and 2012, in the event of any deemed liquidation event or any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of Series B then outstanding were entitled to be paid out of the assets of the Company available for distribution to its stockholders, before any payment shall be made to the holders of Series A or common stock, an amount per share equal to the original issue price of the Series B, plus any dividends accrued or declared but unpaid thereon (Liquidation Amount).

After payment to the holders of Series B of the full amounts due them, the holders of Series A were entitled to be paid out of the remaining assets of the Company available for distribution to its stockholders, before any payment shall be made to the holders of common stock, in an amount per share equal to the original issue price of the Series A, plus any dividends declared but unpaid thereon.

After payment of the preferential amounts discussed above, the holders of shares of Series A and Series B, the remaining assets of the Company available for distribution to its stockholders shall be distributed among the holders of the shares of common stock and Preferred Stock, pro rata on an as-converted basis based on the number of shares held by each holder.

Redemption

At December 31, 2013 and 2012, at any time following the seventh anniversary of the original issue date of the Series B, the Company was obligated to redeem all of the outstanding shares of Series B, if requested in writing to do by the holders of not less than 51% of the outstanding shares of Series B. At any time following the seventh anniversary of the original issue date of the Series A, the Company was obligated to redeem all of the outstanding shares of Series A, if requested in writing to do so by the holders of not less than 51% of the outstanding shares of Series A. No redemption of any of the shares of Series A could occur until such a time as no shares of Series B were outstanding. The Company evaluated the redemption feature of the Preferred Stock under ASC 480, *Distinguishing Liabilities from Equity*, and determined that Series A and Series B were contingently redeemable and hence are classified as temporary equity. For the years ended December 31, 2013 and 2012, the Company accreted $1,093,648 and $757,492, respectively, to the redemption value. The redemption value is based on the original issue price plus cumulative dividends at each reporting date.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Voting

At December 31, 2013 and 2012, on any matter presented to the stockholders of the Company, each holder of outstanding shares of Preferred Stock was entitled to cast the number of votes equal to the number of whole shares of common stock into which the shares of Preferred Stock held by the holder were convertible. Except as provided by law or by the other provisions of the Company's Certificate of Incorporation, holders of Preferred Stock vote together with the holders of common stock as a single class.

Stock Option Plans

The Company has two stock-based compensation plans, which authorize the granting of shares of common stock to employees and directors of the Company, as well as non-employee consultants, and allows the holder of the option to purchase common stock at a stated exercise price. Options vest according to the terms of the grant, which may be immediately or based on the passage of time, generally over four years, and have a term of up to 10 years. Unexercised stock options terminate on the expiration date of the grant. The Company recognizes the share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period.

2011 Stock Option Plan

Under the 2011 Stock Option Plan, 2,798,500 shares of the Company's authorized but unissued common stock were reserved for issuance to employees, consultants, or to non-employee members of the Board of Directors. The 2011 Stock Option Plan replaced the Company's previous stock option plan (the 2006 Stock Option Plan).

2006 Stock Option Plan

Under the 2006 Stock Option Plan, as amended, 301,500 shares of the Company's authorized but unissued common stock were reserved for issuance to optionees, including officers, employees, and other individuals performing services for the Company. As of December 31, 2013, there were no additional shares available for grant under the 2006 Stock Option Plan. A total of 284,000 options were outstanding under this plan as of December 31, 2013 and 2012.

The valuation of the stock-based compensation awards is a significant accounting estimate that requires the use of judgment and assumptions that are likely to have a material impact on the financial statements. The fair value of option grants is determined using the Black-Scholes option-pricing model. Expected volatilities utilized in the model are based on implied volatilities from traded stocks of peer companies. Similarly, the dividend yield is based on historical experience and the estimate of future dividend yields. The risk-free interest rate is derived from the U.S. Treasury yield curve in effect at the time of grant. The expected term of the options is based on the average period the stock options are expected to remain outstanding. As the Company does not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior, the expected term is calculated as the midpoint between the weighted-average vesting term and the contractual expiration period also known as the simplified method. The Company assumed no awards would be forfeited during the vesting period, as actual forfeitures have been minimal through December 31, 2013. The fair value of the option grants have been estimated, with the following weighted-average assumptions:

	YEAR ENDED DECEMBER 31	
	2013	2012
Volatility	90%	75%
Risk-free interest rate	1.58%	1.97%
Expected dividend yield	0%	0%
Expected life	6.25 years	6.25 years

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

A summary of the status of the Company's stock option plans as of December 31, 2013 and changes from December 31, 2011 through December 31, 2013 is as follows:

	OPTIONS	WEIGHTED-AVERAGE EXERCISE PRICE	WEIGHTED-AVERAGE REMAINING CONTRACTUAL TERM
Options outstanding, December 31, 2011	**1,726,500**	**$ 1.30**	**9.69**
Options granted	102,500	$ 1.50	
Options exercised	—	—	
Options forfeited	(15,000)	$ 1.50	
Options outstanding, December 31, 2012	**1,814,000**	**$ 1.31**	**8.71**
Options granted	877,500	$ 1.50	
Options exercised	—	—	
Options forfeited	(15,000)	$ 1.50	
Options outstanding, December 31, 2013	2,676,500	$ 1.37	8.26
Exercisable at December 31, 2013	**1,391,757**	**$ 1.29**	**7.98**

The weighted average grant date fair value of options granted in each of the years ended December 31, 2013 and 2012 was $0.81 and $0.18, respectively.

The Company calculates the intrinsic value of its options by multiplying the number of options by the difference between the estimated fair value per share for its common stock and the options' exercise price. The aggregate intrinsic value of options exercisable and options outstanding at December 31, 2013 was $234,530 and $273,640, respectively. The Company will issue new shares of common stock upon the exercise of vested options.

The following table outlines the options outstanding and exercisable as of December 31, 2013:

INSTRUMENT TYPE	EXERCISE PRICE	OUTSTANDING	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	2.76
Option	$ 0.30	274,000	6.89
Option	$ 1.50	2,392,500	8.44
Total	$ 1.37	2,676,500	8.26

INSTRUMENT TYPE	EXERCISE PRICE	EXERCISABLE	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	2.76
Option	$ 0.30	233,260	6.89
Option	$ 1.50	1,148,497	8.25
Total	$ 1.29	1,391,757	7.98

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Stock-based compensation expense for the year ended December 31, 2013 was $390,595. At December 31, 2013, total compensation cost not yet recognized was $517,746 and the weighted average period over which this amount is expected to be recognized is 2.16 years.

The following table outlines the options outstanding and exercisable as of December 31, 2012:

INSTRUMENT TYPE	EXERCISE PRICE	OUTSTANDING	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	3.76
Option	$ 0.30	274,000	7.89
Option	$ 1.50	1,530,000	8.89
Total	$ 1.31	1,814,000	8.71

INSTRUMENT TYPE	EXERCISE PRICE	EXERCISABLE	REMAINING CONTRACTUAL LIFE IN YEARS
Option	$ 0.20	10,000	3.76
Option	$ 0.30	186,260	7.90
Option	$ 1.50	647,740	8.88
Total	$ 1.22	844,000	8.60

Stock-based compensation expense for the year ended December 31, 2012 was $91,503.

Warrants to Purchase Common Stock—2009 and 2010 Notes Payable

The following table outlines the warrants outstanding and exercisable as of December 31, 2013 and 2012:

ISSUANCE DATE	EXERCISE PRICE	OUTSTANDING	EXERCISABLE	EXPIRATION DATE
March 2009	$0.30	669,000	669,000	March 25, 2014
September 2010	$0.30	78,333	78,333	September 30, 2015
December 2010	$0.30	121,669	121,669	December 16, 2015

The Company determined that the fair value of warrants granted in connection with certain prior debt agreements was approximately $418,782, and allocated that portion of the total proceeds of the debt as issuance debt discount at issuance date.

Warrant to Purchase Common Stock—Texas Emerging Technology Fund

The Texas Emerging Technology Fund (TETF) holds a warrant to purchase up to 604,167 shares of the Company's common stock at an exercise price of $0.001 per share. The warrant was issued in conjunction with a research grant to the Company by TETF in 2007. This warrant remains outstanding and exercisable indefinitely.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

NOTE 10—GRANT REVENUE

CPRIT Grant

On July 27, 2011, the Company entered into a Cancer Research Grant Contract (Grant Contract) with CPRIT under which CPRIT awarded a grant not to exceed approximately $5.7 million to be used by the Company for the execution of defined clinical development of BPX-501. In addition, CPRIT could award supplemental funding not to exceed 10% of the total grant amount based upon the Company's progress. The Grant Contract terminated on June 30, 2014. The terms of the Grant Contract require the Company to pay tiered royalties on revenues from sales and licenses of intellectual property facilitated by the Grant Contract.

During 2013 and 2012, the Company incurred $1.8 million and $1.5 million of expenses under the Grant Contract, respectively. As of December 31, 2012, the Company had an outstanding deferred liability of $1,038,763 as a result of funds being received in advance of the related grant expenditure being paid. However, during 2013, the remaining deferred liability was fully recognized and at December 31, 2013, the Company had an outstanding grant receivable of $716,606 for grant expenditures that were paid but have not been reimbursed.

NIH Grant

On March 25, 2013, the Company was awarded $361,644 under a grant from NIH. The award covers the period from April 2013 through March 2014. The award was made pursuant to the authority of 42 USC 241 42 CFR 52, and is subject to the requirements of the statute. Funds spent on the grant are reimbursed through monthly reimbursement requests.

As of December 31, 2013, $185,289 of such funds have been spent under the grant, of which, $156,354 in funds have been received and $28,935 are held as receivables due under the grant.

NOTE 11—COMMITMENTS AND CONTINGENCIES

Leases

The Company has entered into various short-term leases for office space. The Company incurred rent expense during the years ended December 31, 2013 and 2012 of $226,779 and $217,171, respectively.

In December 2012, the Company entered into a five-year office lease agreement. During 2013, the lease was amended to include additional space. The leased premises totals 14,255 square feet. The lease includes escalating base rent payments, which initially increased on November 1, 2013, and then increased again on December 1, 2013. Subsequently, an increase in the base rent payment will occur during the first month of each year, and remain constant for the next 11 months. During the last month of each year, the monthly base rent payment will increase yet again. This escalating base rent payment structure will continue through the expiration of the lease on December 16, 2017. The future minimum payments under the lease are as follows:

Year:	
2014	$ 410,119
2015	417,246
2016	424,374
2017	413,825
Total minimum lease payments	$ 1,665,564

Litigation

The Company, from time to time, may be involved in litigation relating to claims arising out of its ordinary course of business. Management believes that there are no material claims or actions pending or threatened against the Company.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

License Agreement with ARIAD Pharmaceuticals, Inc.

On March 7, 2011, the Company entered into an amended and restated exclusive license agreement with ARIAD (Amended ARIAD License) which amended a license agreement entered into by the parties in 2006. Under the Amended ARIAD License, ARIAD granted to the Company an exclusive (even as to the ARIAD) license, with the right to grant sublicenses, under ARIAD's patent rights relating to dimerizers, genetic constructs coding for dimerizer binding domains, vectors containing said constructs, cells containing said constructs and methods of inducing biological processes in cells containing said constructs. These licensed patent rights were initially limited to the fields of cell transplantation and certain types of cancer.

In connection with the initial license, in 2006, the Company issued 206,111 shares of its common stock to ARIAD which were subject to anti-dilution protection that ultimately resulted in additional issuances to ARIAD by the Company of 945,577 shares of the Company's common stock, such that ARIAD received a total of 1,151,688 shares of common stock under the license agreement. In addition, the Company paid ARIAD a license fee of $250,000 in connection with the amendment in 2011. The Amended ARIAD license also provided for certain royalty and milestone payments, which were subsequently terminated pursuant to an omnibus amendment agreement with ARIAD (see Note 14). The issuance of the shares in connection with the initial license and the shares issued in connection with the anti-dilution provision were recorded as research and development expense in the period issued based on the fair value of the common stock on that date.

Under the Amended ARIAD License, the Company is required to diligently proceed with the development, manufacture and sale of licensed products. The Amended ARIAD License is subject at all times to restrictions and obligations under a license agreement by and between ARIAD Gene Therapeutics, Inc. (one of ARIAD's affiliates which merged into ARIAD) and the academic institution from which ARIAD obtained its license to the underlying technology. While the Company is not required to pay royalties or fees to such academic institution, no sublicensee of the Company's may enter into a sublicense with respect to any intellectual property owned by the academic institution without its consent, which terms must be consistent with those included in the agreement between ARIAD and such academic institution.

The Amended ARIAD License will expire upon expiration of the last license term of a licensed product covered by the agreement, which is either the later of (i) 12 years from the date of the first commercial sale of the licensed product, or (ii) expiration of a valid claim on the licensed product. Either party to the license may terminate or modify the Amended ARIAD License upon a material breach by the other party that remains uncured following the date that is 30 days after written notice of a payment breach and 90 days for any other breach, and effective immediately upon bankruptcy of the other party. The Company may terminate the amended ARIAD license in its sole discretion at any time if the Company determines not to develop or commercialize any licensed product. In addition, upon termination of the amended ARIAD license prior to expiration, the Company must transfer any ownership and any beneficial ownership in any orphan drug designation or any similar designation in any jurisdiction of orphan drug status of the ARIAD dimerizer to ARIAD.

License Agreements with Baylor College of Medicine

2008 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor College of Medicine (Baylor), dated March 20, 2008 (2008 Baylor License), the Company obtained an exclusive, worldwide and fully paid up license to certain intellectual property, including intellectual property related to methods for activating antigen presenting cells and to genetic constructs coding for membrane bound inducible cytoplasmic CD40.

As consideration for the 2008 Baylor License, the Company issued to Baylor 40,000 shares of its common stock and assumed responsibility for all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the patents subject to the 2008 Baylor License.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

The 2008 Baylor License is subject to certain restrictions and is non-exclusive with respect to (i) the making or use of the licensed intellectual property for use in non-commercial research, patient care, teaching, and other educational purposes; (ii) any non-exclusive license covering the licensed intellectual property that Baylor grants to other academic or research institutions for non-commercial research purposes; (iii) any non-exclusive licenses that Baylor is required to grant to the U.S. or foreign state pursuant to an existing or future treaty with the U.S., and (iv) a non-exclusive license granted to ARIAD under the terms of a materials transfer agreement between Baylor and ARIAD.

Baylor may terminate or modify the 2008 Baylor License in the event of a material breach that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. The Company may terminate the 2008 Baylor License, or any portion thereof, at its sole discretion at any time upon 30 days' written notice to Baylor. Upon termination of the 2008 Baylor License, all rights to the intellectual property immediately revert to Baylor.

2010 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor, dated June 27, 2010 (2010 Baylor License), the Company obtained an exclusive, worldwide license to certain intellectual property, including intellectual property related to methods for treating prostate cancer, methods of administering T cells to a patient, and methods of activating antigen presenting cells with constructs comprising MyD88 and CD40.

Pursuant to the terms of the 2010 Baylor License, the Company paid Baylor a license execution fee of $30,000. In addition, the Company is required to pay a low annual maintenance fee on beginning on the second anniversary of the agreement date.

The terms of the 2010 Baylor License also require the Company to make royalty payments of less than 1%, subject to certain annual minimums, on net sales of products covered by the license. In addition, to the extent the Company enters into a sublicensing agreement relating to a licensed product, the Company is required to pay Baylor a percentage in the mid-single digits on all non-royalty income received from sublicensing revenue. The Company is required to make milestone payments, of up to $735,000 in aggregate, upon successful completion of clinical and regulatory milestones regarding the first two product covered by this license.

The 2010 Baylor License will expire upon expiration of the last patent contained in the licensed patent rights, on a country-by-country basis, upon which the Company will have a perpetual, paid-in-full license in such country. Baylor may terminate or modify the 2010 Baylor License in the event of a material breach by the Company that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. The Company may terminate the 2010 Baylor License, or any portion thereof, at the Company's sole discretion at any time upon 60 days' written notice to Baylor. Upon termination of the 2010 Baylor License for any reason prior to expiration, the Company must assign to Baylor each authorized sublicense agreement that is currently in effect on the date of termination.

NOTE 12—RELATED PARTY TRANSACTIONS

Related Party Licensing Arrangements

During 2010, the Company entered into a license agreement with Baylor, granting the Company the rights to patents and technology derived from invention disclosure BLG 06-028. The license included $30,000 of upfront payments during 2010 and 2011, and additional annual fees of $7,500 beginning on the second anniversary of the license agreement.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

During 2008, Bellicum entered into a license agreement with Baylor, granting the Company the rights to patents and technology derived from invention disclosures OTA 01-085 and BLG 08-024. Consideration for the license included issuance in 2009 of 23,000 common shares to Baylor and 17,000 common shares to the inventors (including board members Dr. David Spencer and Dr. Kevin Slawin).

On March 1, 2006, the Company issued 105,000 common shares to Dr. David Spencer, Dr. Brent Hanks and Dr. Kevin Slawin, valued at $0.20 per share, as consideration for the use of certain patents. During 2006, the Company issued 206,111 common shares to ARIAD as consideration for the licensed rights to use certain patents held by ARIAD. The stock purchase agreement included certain anti-dilutive features which resulted in the issuance of the following additional shares:

	ANTI-DILUTIVE SHARES ISSUED
Year:	
2009	319,416
2012	626,161

NOTE 13—INCOME TAXES

The Company did not recognize tax expense during 2013 or 2012. The reconciliation between federal income taxes at the statutory rate and the Company's income tax expense for the year is as follows:

	YEAR ENDED DECEMBER 31	
	2013	2012
U.S. tax benefit at statutory rate	$(2,709,375)	$(2,129,409)
Meals and entertainment	3,721	3,711
Incentive stock option	115,020	13,329
Research and development credit	(436,879)	—
Deferred tax valuation allowances	3,027,513	2,112,369
Income tax expense	$ —	$ —

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes, and the amounts used for income tax purposes. Significant components of the Company's deferred taxes as of December 31, 2013 and 2012 are as follows:

	2013	2012
Deferred tax liabilities:		
Depreciation	$ (194,887)	$ (229,075)
Prepaid costs	(123,486)	(331,408)
Tenant improvement allowance	(111,419)	(139,567)
Deferred rent	—	(4,095)
Total deferred tax liabilities	(429,792)	(704,145)
Deferred tax assets:		
Net operating loss carry forward	9,141,814	6,896,802
Non-qualified stock options	71,761	53,979
Tenant improvement liability	128,528	160,998
Deferred contract manufacturing costs	99,030	17,725
Research and development credit	826,161	389,282
Other	4,652	—
Total deferred tax assets	10,271,946	7,518,786
Valuation allowance	(9,842,154)	(6,814,641)
Total deferred tax	$ —	$ —
Net current deferred tax liability	$ (64,000)	$ (273,000)
Net non-current deferred tax asset	64,000	273,000
Total deferred tax	$ —	$ —

As of December 31, 2013, the Company had gross federal income tax net operating loss carry forwards of $26,887,686 and federal research tax credits of $826,161. The net operating loss carry forwards will expire beginning in 2024, if not utilized. In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the Company attaining future taxable income during periods in which those temporary differences become deductible. Due to the uncertainty surrounding the realization of the benefits of its deferred assets, including net operating loss carry forwards, the Company has provided a 100% valuation allowance on its deferred tax assets at December 31, 2013 and 2012. The Internal Revenue Code Section 382 limits net operating loss and tax credit carry forwards when an ownership change of more than 50% of the value of the stock in a loss corporation occurs. Accordingly, the ability to utilize remaining net operating loss and tax credit carry forwards may be significantly restricted.

NOTE 14—SUBSEQUENT EVENTS

The Company evaluated subsequent events through the date the accompanying financial statements were available to be issued, which was October 17, 2014.

On January 15, 2014, the Company issued 1,582,706 shares of Series B for cash proceeds of approximately $7.3 million, or $4.625 per share.

In March and July of 2014, the line of credit was amended to allow for additional advances up to $500,000 with the following terms: 12-month interest only draw-down period, followed by a 24-month straight-line amortization of principal and interest at the prime rate plus 2.75%. In August of 2014, $81,548 was drawn on the line of credit.

BELLICUM PHARMACEUTICALS, INC.

Notes to the Financial Statements
December 31, 2013 and 2012

On March 25, 2014, the Company issued 669,000 shares of common stock for $200,700, or $0.30 per share, in conjunction with the exercise of warrants which were set to expire in March of 2014.

In May of 2014, the NIH awarded the Company an additional $332,608 for the grant year from April 2014 through March 2015.

On August 22, 2014, the Company issued 10,091,743 shares of Series C convertible preferred stock (Series C) at a purchase price of $5.45 per share and warrants to purchase up to 6,559,598 shares of Series C with an exercise price of $6.00 per share. The warrants have a five year term, but are subject to earlier termination in the event of a Qualified IPO (defined in the warrants) or upon a merger or sale of the Company. The Company received gross proceeds from the transaction of approximately $55.0 million.

The holders of Series C have rights that are senior to the rights of the holders of all other classes of shares in the event of a liquidation of the Company. In connection with the issuance of Series C, the redemption rights of the holders of Series A and Series B were terminated, the liquidation preferences of Series A and Series B were subordinated to Series C, and accruing dividends on the shares of Series B stopped accruing.

On October 3, 2014, the Company entered into an omnibus amendment agreement with ARIAD, which amended the Amended ARIAD License to expand the license to cover a broader scope of dimerizers and licensed products for use and exploitation in any field of use other than in vivo administration of genetic material directly into a human being using viral vectors for the purpose of producing proteins or other macromolecules that are expressed or secreted for therapeutic or prophylactic purposes.

In connection with the amendment, the Company issued a promissory note to ARIAD for a principal amount of $50,000,000 in return for the termination of all obligations to make milestone and royalty payments to ARIAD in the future. The principal does not accrue interest unless the Company is in default, in which case it accrues at a rate of 10% per annum. The Company made an initial principal payment of $15,000,000 in connection with the execution of the amendment. The Company is required to pay $20,000,000 in a second lump sum installment on or before June 30, 2015 and $15,000,000 in a third lump sum installment on or before June 30, 2016. Additionally, in connection with the second installment, ARIAD agreed to return to the Company all shares of common stock of the Company that ARIAD currently holds.

Shares

Common Stock

PRELIMINARY PROSPECTUS

Jefferies

, 2014

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by Bellicum Pharmaceuticals, Inc. (the "Registrant") in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission ("SEC") registration fee, the Financial Industry Regulatory Authority, Inc. ("FINRA") filing fee and The NASDAQ Global Market listing fee.

	AMOUNT TO BE PAID
SEC registration fee	$ *
FINRA filing fee	*
NASDAQ Global Market filing fee	125,000
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous expenses	*
Total	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

The Registrant is incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who were, are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who were, are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) actually and reasonably incurred.

The Registrant's amended and restated certificate of incorporation provides for the indemnification of its directors to the fullest extent permitted under the Delaware General Corporation Law. The Registrant's amended and restated bylaws provide for the indemnification of its directors and officers to the fullest extent permitted under the Delaware General Corporation Law. Each of the Registrant's amended and restated certificate of incorporation and amended and restated bylaws will become effective upon the closing of this offering.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

The Registrant's amended and restated certificate of incorporation includes such a provision. Under the Registrant's amended and restated bylaws, expenses incurred by any director or officers in defending any such action, suit or proceeding in advance of its final disposition shall be paid by the Registrant upon delivery to it of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by the Registrant, as long as such undertaking remains required by the Delaware General Corporation Law.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the Registrant has entered into indemnity agreements with each of its directors and officers, which require the Registrant to indemnify such persons against any and all costs and expenses (including attorneys', witness or other professional fees) actually and reasonably incurred by such persons in connection with any action, suit or proceeding (including derivative actions), whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director or officer or is or was acting or serving as an officer, director, employee or agent of the Registrant or any of its affiliated enterprises. Under these agreements, the Registrant is not required to provide indemnification for certain matters, including:

- indemnification beyond that permitted by the Delaware General Corporation Law;
- indemnification for any proceeding with respect to the unlawful payment of remuneration to the director or officer;
- indemnification for certain proceedings involving a final judgment that the director or officer is required to disgorge profits from the purchase or sale of the Registrant's stock;
- indemnification for proceedings involving a final judgment that the director's or officer's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct (but only to the extent of such specific determination) or a breach of his or her duty of loyalty or resulting in any personal profit or advantage to which the director or officer is not legally entitled;
- indemnification for proceedings or claims brought by an officer or director against the Registrant or any of the Registrant's directors, officers, employees or agents, except for (i) claims to establish or enforce a right of indemnification, (ii) claims approved by the Registrant's board of directors, or (iii) claims required by law;
- indemnification for settlements the director or officer enters into without the Registrant's consent; or
- indemnification in violation of any undertaking required by the Securities Act of 1933, as amended (the "Securities Act") or in any registration statement filed by the Registrant.

The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

There is at present no pending litigation or proceeding involving any of the Registrant's directors or executive officers as to which indemnification is required or permitted, and the Registrant is not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

The Registrant has an insurance policy in place that covers its officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

The Registrant plans to enter into an underwriting agreement which provides that the underwriters are obligated, under some circumstances, to indemnify the Registrant's directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold by the Registrant since January 1, 2011:

(1) In October 2009 and March 2010, we issued and sold to investors promissory notes. In November 2011, all of the outstanding principal and accrued and unpaid interest due under the notes was cancelled in exchange for shares of Series A convertible preferred stock in connection with our Series B convertible preferred stock financing (discussed below). The aggregate of $2.9 million of outstanding principal and accrued and unpaid interest on these notes was exchanged for 957,961 shares of Series A convertible preferred stock at a conversion price of $3.00 per share.

(2) In November 2011 we entered into a Series B convertible preferred stock purchase agreement, or the first Series B purchase agreement, pursuant to which we issued and sold to investors an aggregate of 2,174,824 shares of our Series B convertible preferred stock. We received proceeds of approximately $6.8 million for which we issued 1,475,144 shares of Series B convertible preferred stock, at a purchase price of $4.625 per share. In addition, the aggregate of approximately $3.2 million of outstanding principal and accrued and unpaid interest on convertible notes issued in September 2010 and December 2010 automatically converted into 699,680 shares of Series B convertible preferred stock at a conversion price equal to $4.625 per share.

(3) In March 2012 we entered into a second Series B stock purchase agreement, or the second Series B stock purchase agreement, with certain new Series B investors, pursuant to which we received proceeds of approximately $3.1 million for which we issued 675,105 shares of Series B convertible preferred stock, at a purchase price of $4.625 per share.

(4) In July 2013 we held a second closing of our Series B financing. Pursuant to our first Series B stock purchase agreement, we issued 1,431,000 shares of Series B convertible preferred stock for cash and/or the cancellation of indebtedness totalling approximately $6.6 million and at a purchase price of $4.625 per share. Pursuant to our second Series B stock purchase agreement, we issued 666,319 shares of Series B convertible preferred stock for cash and/or the cancellation of indebtedness totalling approximately $3.1 million and at a purchase price of $4.625 per share.

(5) In November 2013 we entered into our first over-allotment closing of our Series B financing pursuant to amendments to our first Series B stock purchase agreement and second Series B stock purchase agreement. We received proceeds of approximately $7.5 million for which we issued 1,615,135 shares of Series B convertible preferred stock at a purchase price of $4.625 per share.

(6) In January 2014 we entered into our second over-allotment closing of our Series B financing pursuant to amendments to our first Series B stock purchase agreement and second Series B stock purchase agreement. We received proceeds of approximately $7.3 million for which we issued 1,582,705 shares of Series B convertible preferred stock at a purchase price of $4.625 per share.

(7) In August 2014 we entered into a Series C convertible preferred stock purchase agreement, or the Series C purchase agreement, pursuant to which we received proceeds of approximately $55 million for which we issued 10,091,743 shares of Series C convertible preferred stock, at a purchase price of $5.45 per share, and warrants to purchase up to 6,559,598 shares of Series C convertible preferred stock at an exercise price of $6.00 per share.

(8) From March 2006 to May 2014, the Registrant granted stock options under its 2006 and 2011 stock option plans to purchase up to an aggregate of 2,744,000 shares of its common stock to its employees, directors and consultants, at a weighted-average exercise price of $1.38 per share. None of these options to purchase shares of common stock have been exercised through June 30, 2014, except for one optionholder who exercised her right to purchase 7,500 shares of our common stock in June 2007.

The offers, sales and issuances of the securities described in paragraphs (1) through (7) above were deemed to be exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act (or Regulation D promulgated thereunder) as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about the Registrant.

The offers, sales and issuances of the securities described in paragraph (8) above were deemed to be exempt from registration under the Securities Act in reliance on Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were employees, directors or bona fide consultants of the Registrant and received the securities under the Registrant's EIP. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about the Registrant.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The list of exhibits is set forth under "Exhibit Index" at the end of this registration statement and is incorporated herein by reference.

(b) Financial Statement Schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) That, for the purpose of determining liability under the Securities Act to any purchaser:

(1) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(d) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(1) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(2) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(3) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(4) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of , State of , on the day of , 2014.

BELLICUM PHARMACEUTICALS, INC.

Thomas J. Farrell
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Thomas J. Farrell and , and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
Thomas J. Farrell	President, Chief Executive Officer and Member of the Board of Directors *(Principal Executive Officer)*	
	Chief Financial Officer *(Principal Financial and Accounting Officer)*	
Kevin M. Slawin, M.D.	Chief Technology Officer and Member of the Board of Directors	
Frank B. McGuyer	Member of the Board of Directors	
Dennis Stone, M.D.	Member of the Board of Directors	
James Brown	Member of the Board of Directors	
Reid M. Huber, Ph.D.	Member of the Board of Directors	

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
1.1†	Form of Underwriting Agreement.
3.1	Third Amended and Restated Certificate of Incorporation, as amended and as currently in effect.
3.2†	Form of Amended and Restated Certificate of Incorporation to become effective upon closing of this offering.
3.3	Bylaws, as currently in effect.
3.5†	Form of Amended and Restated Bylaws to become effective upon closing of this offering.
4.1†	Form of Common Stock Certificate of the Registrant.
4.2	Second Amended and Restated Investor Rights Agreement, by and among the Registrant and certain of its stockholders, dated August 22, 2014.
4.3	Investor Rights Agreement, by and between the Registrant, and ARIAD Gene Therapeutics, Inc., and ARIAD Pharmaceuticals, Inc., dated July 25, 2006.
5.1†	Opinion of Cooley LLP.
10.1†+	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.2+	Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan and Form of Nonqualified Stock Option Agreement.
10.3+	Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan and Forms of Incentive Stock Option Agreement and Nonqualified Stock Option Agreement.
10.4†+	Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan and Form of Stock Option Agreement, Notice of Exercise and Stock Option Grant Notice thereunder, and amendments thereto.
10.5†+	Bellicum Pharmaceuticals, Inc. Non-Employee Director Compensation Policy.
10.6+	Second Amended & Restated Employment Agreement by and between the Registrant and Thomas J. Farrell, dated November 9, 2011.
10.7+	Employment Agreement by and between the Registrant and David M. Spencer, Ph.D., dated November 28, 2011.
10.8+	Employment Agreement by and between the Registrant and Annemarie Moseley, dated October 17, 2011.
10.9+	Amendment 1 to Employment Agreement by and between the Registrant and Annemarie Moseley, dated October 17, 2011.
10.10+	Third Amended and Restated Consulting Agreement by and between the Registrant and Kevin M. Slawin, M.D. dated November 9, 2011.
10.11+	Employment Offer Letter by and between the Registrant and Ken Moseley, dated December 6, 2011.
10.12+	Employment Offer Letter by and between the Registrant and Joseph H. Senesac, dated June 8, 2011.
10.13	Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated June 1, 2012.
10.14	First Amendment to Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated September 13, 2013.

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
10.15*	Amended and Restated License Agreement by and between the Registrant and ARIAD Pharmaceuticals, Inc., dated March 7, 2011.
10.16*	Omnibus Amendment Agreement by and between Registrant and ARIAD Pharmaceuticals, Inc., dated October 3, 2014.
10.17*	Exclusive License Agreement by and between the Registrant and Baylor College of Medicine, dated March 20, 2008.
10.18*	Exclusive License Agreement by and between the Registrant and Baylor College of Medicine, dated June 27, 2010.
10.19*	Cancer Research Grant Contract by and between the Registrant and the Cancer Prevention and Research Institute of Texas, dated July 27, 2011.
10.20	Notice of Expansion of Licensed Field to Obtain Additional Exclusive Rights.
10.21	Promissory Note issued by Registrant to ARIAD Pharmaceuticals, Inc., dated October 3, 2014.
10.22	Loan and Security Agreement by and between the Registrant and Comerica Bank, dated December 13, 2012.
10.23	First Amendment to Loan and Security Agreement by and between the Registrant and Comerica Bank, dated March 1, 2014.
10.24	Second Amendment to Loan and Security Agreement by and between the Registrant and Comerica Bank, dated July 3, 2014.
10.25	Warrant to Purchase Common Stock issued to the State of Texas, dated September 27, 2007.
10.26	Form of Warrant to Purchase Common Stock issued to various parties on September 30, 2010, December 16, 2010, and March 31, 2011.
10.27	Form of Warrant to Purchase Series C Preferred Stock issued to various parties on August 22, 2014.
23.1†	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
23.2†	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1	Power of Attorney. Reference is made to the signature page hereto.

† To be filed by amendment.
+ Indicates management contract or compensatory plan.
* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

BELLICUM PHARMACEUTICALS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Bellicum Pharmaceuticals, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "***General Corporation Law***"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Bellicum Pharmaceuticals, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on July 14, 2004.

2. That the Board (as defined below) duly adopted resolutions proposing to amend and restate the Amended and Restated Certificate of Incorporation, as amended, of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefore, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Bellicum Pharmaceuticals, Inc. (the "***Corporation***").

SECOND: The address of the Corporation's registered office in the State of Delaware is: 1209 Orange Street, in the City of Wilmington, Delaware, 19801, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 65,000,000, consisting of (i) 37,500,000 shares of Common Stock, $0.01 par value per share (the "***Common Stock***") and (ii) 27,500,000 shares of Preferred Stock, $0.01 par value per share (the "***Preferred Stock***"), of which 2,600,000 shares have been designated Series A Convertible Preferred Stock (the "***Series A Preferred Stock***"), 8,200,000 shares have been designated Series B 6% Cumulative Convertible Participating Preferred Stock (the "***Series B Preferred Stock***") and 16,700,000 shares have been designated Series C Convertible Preferred Stock (the "***Series C Preferred Stock***").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, the holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Third Amended and Restated Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are solely entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Third Amended and Restated Certificate of Incorporation or pursuant to the General Corporation Law. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Third Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

Preferred Stock may be issued from time to time in one or more series, each of such series to consist of such number of shares and to have such terms, rights, powers and preferences, and the qualifications and limitations with respect thereto, as stated or expressed herein.

C. SERIES A PREFERRED STOCK, SERIES B PREFERRED STOCK AND SERIES C PREFERRED STOCK

The Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock have the following respective rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to “Sections” or “Subsections” in this Part C of this Article Fourth refer to sections and subsections of Part C of this Article Fourth.

1. Dividends.

1.1 Subject to Section 1.2 below, the holders of Preferred Stock, in preference to the holders of Common Stock, shall be entitled to receive, but only out of funds that are legally available therefor, cash dividends at the rate of eight percent (8%) of the applicable Original Issue Price (as defined below) per annum on each outstanding share of Preferred Stock. Such dividends shall be payable only when, as and if declared by the Board of Directors of the Corporation (the "***Board***") and shall be non-cumulative.

1.2 Subject to the terms set forth in this Section 1.2, in preference to the holders of any other class or series of capital stock, the holders of Series B Preferred Stock shall be entitled to receive an annual dividend, payable quarterly, if, as and when declared, and if not paid, accrued, equal to six percent (6%) of the Series B Original Issue Price. This dividend (the "***Accrued Dividend***") shall be cumulative and shall accrue on each share of Series B Preferred Stock during the period commencing on the date of original issuance of such share and ending on the date of filing of this Third Amended and Restated Certificate of Incorporation (the "***Filing Date***"), but shall not be compounded. In the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock, the amount of the per share Accrued Dividend shall be adjusted so that each holder of the Series B Preferred Stock receives a dividend on any securities received as a result of such recapitalization in an amount equal to the Accrued Dividend, times the number of shares of Series B Preferred Stock held by such holder immediately prior to such recapitalization.

1.3 The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than the Accrued Dividend) unless (in addition to the obtaining of any consents required elsewhere in this Third Amended and Restated Certificate of Incorporation) (a) all Accrued Dividends payable on the Series B Preferred Stock have been fully paid, (b) all dividends set forth in Section 1.1 above on the Preferred Stock have been paid or declared and set apart, and (c) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to the greater of (i) in the case of a dividend on any class of Common Stock or any class or series that is convertible into any class of Common Stock, that dividend per share of Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into the applicable class of Common Stock at the then-applicable Conversion Price (as defined below) and (B) the number of shares of Common Stock issuable upon conversion of a share of Preferred Stock at the then-applicable Conversion Price, in each case calculated on the record date for determination of holders entitled to receive such dividend and (ii) in the case of a dividend on any class or series that is not convertible into any class of Common Stock, at a rate per share of the applicable series of Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such class or series) and (B) multiplying such fraction by an amount equal to the respective Original Issue Price; provided, however, that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Section 1.3 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Preferred Stock dividend.

1.4 The "***Series A Original Issue Price***" shall mean $3.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock.

1.5 The "***Series B Original Issue Price***" shall mean $4.625 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock.

1.6 The "***Series C Original Issue Price***" shall mean $5.45 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock.

2.1.1 Preferential Payments to Holders of Series C Preferred Stock. In the event of any Deemed Liquidation Event (as hereinafter defined) or any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series C Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders (on a pari passu basis with the holders of any series of Preferred Stock ranking on liquidation on a parity with the Series C Preferred Stock), and before any payment shall be made to the holders of any class of Common Stock, the Series A Preferred Stock, the Series B Preferred Stock or any other class or series of capital stock ranking on liquidation junior to the Series C Preferred Stock by reason of their ownership thereof, an amount per share equal to the Series C Original Issue Price, plus any dividends declared but unpaid thereon (the "***Series C Liquidation Amount***"). If upon any such Deemed Liquidation Event, liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series C Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series C Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1.1, the holders of shares of Series C Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series C Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full

2.1.2 Preferential Payments to Holders of Series B Preferred Stock. In the event of any Deemed Liquidation Event (as hereinafter defined) or any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, following the preferential payments to the holders of Series C Preferred Stock described in Subsection 2.1.1, the holders of shares of Series B Preferred Stock then outstanding shall be entitled to be paid out of the assets

of the Corporation available for distribution to its stockholders (on a pari passu basis with the holders of any series of Preferred Stock ranking on liquidation on a parity with the Series B Preferred Stock), and before any payment shall be made to the holders of any class of Common Stock, the Series A Preferred Stock, or any other class or series of capital stock ranking on liquidation junior to the Series B Preferred Stock by reason of their ownership thereof, an amount per share equal to the Series B Original Issue Price, plus any dividends accrued or declared but unpaid thereon (the "***Series B Liquidation Amount***"). If upon any such Deemed Liquidation Event, liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series B Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series B Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1.2, the holders of shares of Series B Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series B Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.1.3 Preferential Payments to Holders of Series A Preferred Stock. In the event of any Deemed Liquidation Event or any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, following the preferential payments to the holders of Series C Preferred Stock in Subsection 2.1.1 and the holders of Series B Preferred Stock described in Subsection 2.1.2, the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders (on a pari passu basis with the holders of any series of Preferred Stock ranking on liquidation on a parity with the Series A Preferred Stock), and before any payment shall be made to the holders of any class of Common Stock, or any other class or series of capital stock ranking on liquidation junior to the Series A Preferred Stock by reason of their ownership thereof, an amount per share equal to the Series A Original Issue Price, plus any dividends declared but unpaid thereon (the "***Series A Liquidation Amount***"). If upon any such Deemed Liquidation Event, liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series A Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1.3, the holders of shares of Series A Preferred Stock and any other series of Preferred Stock ranking on liquidation on a parity with the Series A Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. Shares of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock shall be "participating" stock. Accordingly, in the event of any Deemed Liquidation Event (as hereinafter defined) or any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment of all preferential amounts required to be paid to the holders of shares of Series C Preferred Stock, Series B Preferred Stock, Series A Preferred Stock and any other series of Preferred Stock of the Corporation ranking on liquidation senior to any class of Common Stock,

the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of each class of Common Stock (including Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock convertible into Common Stock), pro rata on an as-converted basis based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "***Deemed Liquidation Event***" unless the holders of at least a majority of the outstanding shares of Preferred Stock, voting together as a class, on an as-converted basis elect otherwise by written notice sent to the Corporation at least three (3) days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any merger or consolidation solely between the Corporation and a wholly-owned subsidiary or parent of the Corporation, and any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly-owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of any class of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms as the actual outstanding shares of each class of Common Stock are converted or exchanged);

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly-owned subsidiary of the Corporation; or

(c) the sale of outstanding shares of the capital stock of the Corporation representing at least fifty percent (50%) of the aggregate number of shares then outstanding or of at least fifty percent (50%) of the voting power of the aggregate number of shares of then outstanding capital stock, other than (i) in a QPO (as hereinafter defined) and (ii) pursuant to that certain Series C Preferred Stock and Warrant Purchase Agreement by and among the Company and the Purchasers set forth on Exhibit A thereto, dated on or about the Filing Date (as the same may be amended from time to time, the "***Purchase Agreement***").

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) above unless the agreement or plan of merger, consolidation or sale for such transaction provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 above.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b) above, if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the 30th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Preferred Stock, and (ii) unless the holders of at least a majority of the then outstanding shares of Preferred Stock, voting together as a class, on an as-converted basis (including the holders of at least a majority of the then outstanding shares of Series B Preferred Stock and Series A Preferred Stock, voting together as a class, on an as-converted basis), so request in a written instrument delivered to the Corporation not later than 60 days after such Deemed Liquidation Event not to proceed with such redemption, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event and the proceeds of any contingent consideration when, as and if received (net in all cases of any retained liabilities associated with the assets sold, as determined in good faith by the Board, including the affirmative vote of a majority of the Preferred Directors (as defined in Section 3.2)) (the "***Net Proceeds***"), to the extent legally available therefor, on the 90th day after such Deemed Liquidation Event (the "***Redemption Date***"), to redeem (A) first, all outstanding shares of Series C Preferred Stock at a price per share equal to the Series C Liquidation Amount, and then (B) all outstanding shares of Series B Preferred Stock at a price per share equal to the Series B Liquidation Amount, and then (C) all outstanding shares of Series A Preferred Stock at a price per share equal to the Series A Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Net Proceeds are not sufficient to redeem all outstanding shares of Series C Preferred Stock and of any other series of Preferred Stock ranking on redemption on parity with the Series C Preferred Stock that is required to then be redeemed, or if the Corporation does not have sufficient lawfully available funds to effect such redemption, the Corporation shall redeem a pro rata portion of each holder's shares of Series C Preferred Stock and any such other series of Preferred Stock to the fullest extent of such Net Proceeds or such lawfully available funds, as the case may be, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares,

and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. The Corporation shall send written notice of the redemption (the "***Redemption Notice***") to each holder of record of Preferred Stock not less than forty (40) days prior to the Redemption Date. Each Redemption Notice shall state (w) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice; (x) the Redemption Date and the Redemption Price; (y) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and (z) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed. On or before the Redemption Date, each holder of shares of Preferred Stock to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. If the Redemption Notice shall have been duly given, and if on the Redemption Date the Redemption Price payable upon redemption of the shares of Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of any such certificate or certificates therefor. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. If the amount deemed paid or distributed under this Section 2 is made in property other than in cash, the value of such distribution shall be the fair market value of such property, determined as follows:

(a) For securities not subject to investment letters or other similar restrictions on free marketability,

(i) if traded on a securities exchange or the NASDAQ Stock Market, the value shall be deemed to be the average of the closing prices of the securities on such exchange or market over the 30-day period ending three days prior to the closing of such transaction;

(ii) if actively traded over-the-counter, the value shall be deemed to be the average of the closing bid prices over the 30-day period ending three days prior to the closing of such transaction; or

(iii) if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board.

(b) The method of valuation of securities subject to investment letters or other similar restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall take into account an appropriate discount (as determined in good faith by the Board) from the market value as determined pursuant to clause (a) above so as to reflect the approximate fair market value thereof.

(c) Any property other than securities shall be valued at its fair market value as determined in good faith by the Board and, in the discretion of the Board, may be distributed pro rata in kind or liquidated by the Board with the proceeds distributed as provided herein.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible based on the then-applicable Conversion Price as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law, any voting agreement entered into between the holders of Common Stock or the holders of Preferred Stock, or by the other provisions of this Third Amended and Restated Certificate of Incorporation, the holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The number of directors constituting the Board shall consist of up to eight (8) directors, except as approved in accordance with Subsection 3.3 of Part C of this Article Fourth. For so long as not less than fifty-one percent (51%) of the shares of Series C Preferred Stock issued on the Series C Original Issue Date are outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the holders of the shares of Series C Preferred Stock, exclusively and as a separate class, shall be entitled to elect three (3) directors of the Corporation (the "***Series C Directors***"). For so long as not less than fifty-one percent (51%) of the shares of Series A Preferred Stock issued on the first date of issuance of a share of Series A Preferred Stock are outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the holders of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation (the "***Series A Director***"). For so long as not less than fifty-one percent (51%) of the shares of Series B Preferred Stock issued on the first date of issuance of a share of Series B Preferred

Stock are outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the holders of the shares of Series B Preferred Stock, exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the "***Series B Directors***" and together with the Series C Directors and the Series A Director, the "***Preferred Directors***"). The following individuals shall also serve as directors of the Corporation (a) the Chief Executive Officer of the Corporation (or, if no Chief Executive Officer is then serving, the most senior member of management as determined by the Board), and (b) Kevin M. Slawin, M.D. for as long as he either (x) continues to own, directly or indirectly, not less than five percent (5%) of the issued and outstanding shares of the Corporation's Common Stock on a fully diluted basis, assuming the exercise of all outstanding and vested options, warrants and other rights to acquire shares of the Corporation's Common Stock and Preferred Stock and assuming conversion of all outstanding shares of capital stock, notes or other instruments convertible into the Corporation's Common Stock, whether registered in Kevin M. Slawin's name or in the name of his immediate family members or by trusts, family partnerships or other entities owned or controlled by Kevin M. Slawin or owned by or established for the benefit of his immediate family members or (y) is engaged by the Company or its affiliates to provide employment or consulting services of any kind or nature (including, without limitation, serving as Chief Medical Officer or Chief Technology Officer). If at any time Kevin M. Slawin's ownership falls below such level and he is no longer providing such services to the Company, he shall be deemed to have tendered to the Corporation his resignation as director to the Corporation. Any Preferred Director elected as provided above in this Subsection 3.2 may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. Any vacancy in the directorship held by Dr. Slawin shall be filled by a majority vote of stockholders voting together as a single class, on an as-converted basis. If the holders of shares entitled to vote pursuant to this Subsection 3.2 fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, then any directorship not so filled shall remain vacant until such time as the holders of the appropriate shares elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. A vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series.

3.3 Protective Provisions

3.3.1 Series A Preferred Stock and Series B Preferred Stock Protective Provisions. At any time when not less than an aggregate of 5,452,170 shares of Series A Preferred Stock and Series B Preferred Stock (the "***Junior Preferred Stock***") remain outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following actions set forth in this Subsection 3.3.1 without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of each of the Series A Preferred Stock and the Series B Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be):

(a) create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock and the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends, voting, redemption and other rights;

(b) amend, alter or repeal any provision of the Third Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, rights, preferences, privileges or restrictions of the Junior Preferred Stock;

(c) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) repurchases of any class of Common Stock pursuant to written contractual restrictions in existence on the first date of issuance of a share of Series C Preferred Stock (the "***Series C Original Issue Date***"), (iii) repurchases of any class of Common Stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof pursuant to agreements approved by the Board, including the affirmative vote of a majority of the Series A Director and Series B Directors and (iv) payments of the Accrued Dividend on the Series B Preferred Stock;

(d) commence a voluntary bankruptcy, reorganization or insolvency proceeding; or

(e) increase or decrease the authorized number of directors constituting the Board.

3.3.2 Series C Preferred Stock Protective Provisions. At any time when not less than an aggregate of 2,018,349 shares of Series C Preferred Stock remain outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following actions set forth in this Subsection 3.3.2 without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of Series C Preferred Stock voting together as a class on an as-converted basis, given in writing or by vote at a meeting, consenting or voting (as the case may be):

(a) amend, alter or repeal and of the powers, rights, preferences, privileges or restrictions of the Series C Preferred Stock;

(b) increase or decrease the authorized number of shares of Common Stock or Preferred Stock, including any class or series of Preferred Stock;

(c) create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends, voting, redemption and other rights;

(d) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) repurchases of any class of Common Stock pursuant to written contractual restrictions in existence on the Series C Original Issue Date, (iii) repurchases of any class of Common Stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof pursuant to agreements approved by the Board, including the affirmative vote of a majority of the Series C Directors and (iv) payments of the Accrued Dividend on the Series B Preferred Stock;

(e) liquidate, dissolve or wind-up the business and affairs of the Corporation;

(f) effect any Deemed Liquidation Event or otherwise sell, convey, dispose of or encumber all or substantially all of the Corporation's property or business or merge into or consolidate with any other corporation (other than a wholly-owned subsidiary or parent of the Corporation) or effect any transaction in which more than fifty percent (50%) of the voting power of the Corporation is disposed of;

(g) increase or decrease the authorized number of directors constituting the Board;

(h) issue any of the Corporation's equity securities to acquire all of the equity of another entity or all or substantially all of the assets of another entity if such issuance exceeds ten percent (10%) of the issued and outstanding shares of the Corporation's Common Stock on a fully diluted basis, assuming the exercise of all outstanding and vested options, warrants and other rights to acquire shares of the Corporation's Common Stock and Preferred Stock and assuming conversion of all outstanding shares of capital stock, notes or other instruments convertible into the Corporation's Common Stock;

(i) amend, alter, waive or repeal any provision of this Third Amended and Restated Certificate of Incorporation or Bylaws of the Corporation;

(j) incur any indebtedness in excess of $1,000,000, other than trade credit incurred in the ordinary course of business; or

(k) adopt any equity incentive plan or similar equity compensation arrangement or change the number of shares reserved for issuance under any such existing plan or arrangement.

3.3.3 Preferred Stock Protective Provisions. At any time when not less than an aggregate of 10,598,958 shares of Preferred Stock remain outstanding (as adjusted for stock splits, stock dividends and similar recapitalization events), the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following actions set forth in this Subsection 3.3.3 without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of Preferred Stock voting together as a class on an as-converted basis, given in writing or by vote at a meeting, consenting or voting (as the case may be):

(a) increase or decrease the authorized number of shares of Preferred Stock, including any class or series of Junior Preferred Stock;

(b) liquidate, dissolve or wind-up the business and affairs of the Corporation;

(c) effect any Deemed Liquidation Event or otherwise sell, convey, dispose of or encumber all or substantially all of the Corporation's property or business or merge into or consolidate with any other corporation (other than a wholly-owned subsidiary or parent of the Corporation) or effect any transaction in which more than fifty percent (50%) of the voting power of the Corporation is disposed of;

(d) effect any transaction or series of related transactions in which the shares of capital stock of the Corporation outstanding immediately prior to such transaction or series of related transactions do not represent, immediately following such transaction or series of related transactions, at least a majority, by voting power, of the capital stock of the Corporation or the surviving or resulting entity (or if the surviving or resulting entity is a wholly-owned subsidiary of another entity immediately following such transaction or series of related transactions, the parent entity of such surviving or resulting entity);

(e) make any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Corporation;

(f) make any loan or advance, or series of loans or advances, in excess (in the aggregate) of $5,000 to any person, including, any employee or director;

(g) guarantee any indebtedness except for trade accounts of the Corporation or any subsidiary arising in the ordinary course of business;

(h) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of two years;

(i) incur any aggregate indebtedness in excess of $200,000 that is not already included in a budget approved by the Board, including a majority of the Preferred Directors, other than trade credit incurred in the ordinary course of business;

(j) enter into any transaction with any director, officer or employee of the Corporation or any "associate" (as defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934) of any such person except transactions resulting in payments to or by the Corporation in an amount less than $60,000 per year, or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Corporation's business and upon fair and reasonable terms that are approved by the Board, including a majority of the Preferred Directors;

(k) change the principal business of the Corporation, enter into new lines of business, or exit the current line of business;

(l) sell, transfer, license, pledge or encumber technology or intellectual property owned or licensed by the Corporation, other than licenses granted in the ordinary course of business, unless in each case approved by the Board, including a majority of the Preferred Directors; or

(m) authorize or consent to any of the foregoing.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "***Conversion Rights***"):

4.1 Right to Convert.

4.1.1 Series A Preferred Stock Conversion Ratio. Each share of Series A Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series A Original Issue Price by the Series A Conversion Price (as defined below) in effect at the time of conversion. The "***Series A Conversion Price***" shall initially be equal to the Series A Original Issue Price. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Series B Preferred Stock Conversion Ratio. Each share of Series B Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series B Original Issue Price by the Series B Conversion Price (as defined below) in effect at the time of conversion. The "***Series B Conversion Price***" shall initially be equal to the Series B Original Issue Price. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.3 Series C Preferred Stock Conversion Ratio. Each share of Series C Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such

number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series C Original Issue Price by the Series C Conversion Price (as defined below) in effect at the time of conversion. The "***Series C Conversion Price***" shall initially be equal to the Series C Original Issue Price. Such initial Series C Conversion Price, and the rate at which shares of Series C Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. Each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price shall be referred to as a "***Conversion Price***."

4.1.4 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent, including, without limitation, that if the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act or a merger, sale or liquidation of the Corporation, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing of such transaction, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such transaction. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The time of conversion (the "***Conversion Time***") of such Preferred Stock shall (i) be the close of business on the date of receipt by the transfer agent (or

by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice, or (ii) be, in the event that the conversion request is subject to a contingency described in a holder's notice to the Corporation, as of the close of business on the date of the occurrence or lapse of such contingency, and, in each case or (i) or (ii), the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such applicable date. The Corporation shall, as soon as practicable after the Conversion Time, issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof, a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate(s) that were not converted into Common Stock, and cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and payment of any declared but unpaid dividends (other than Accrued Dividends) on the shares of Preferred Stock converted. At that time, all outstanding cumulated but unpaid Accrued Dividends due with respect to any Series B Preferred Stock surrendered for conversion shall be paid in cash or, if so elected in writing by the holder of such shares of Series B Preferred Stock, in Common Stock, at the Common Stock's fair market value determined by the Board as of the date of such conversion.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock, if any; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Third Amended and Restated Certificate of Incorporation, which the holders of the Preferred Stock shall approve. Before taking any action which would cause an adjustment reducing the Series A Conversion Price, the Series B Conversion Price or the Series C Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the respective Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Series A Conversion Price, adjusted Series B Conversion Price or adjusted Series C Conversion Price, as the case may be.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment of any dividends accrued or declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series A Conversion Price, Series B Conversion Price or Series C Conversion Price shall be made for any declared but unpaid dividends on the respective Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Series A Conversion Price, Series B Conversion Price and Series C Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "***Option***" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "***Series A Original Issue Date***" shall mean March 25, 2009.

(c) "***Series B Original Issue Date***" shall mean November 9, 2011.

(d) "***Series C Original Issue Date***" shall mean August 22, 2014.

(e) "***Convertible Securities***" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for any class of Common Stock, but excluding Options.

(f) "***Additional Shares of Common Stock***" shall mean all shares of any class of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series C Original Issue Date, other than the following shares of any class of Common Stock, and shares of any class of Common Stock deemed issued pursuant to the following Options and Convertible Securities (collectively "***Exempted Securities***"):

(i) shares of any class of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of any class of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8 below;

(iii) shares of any class of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved and existing as of the Series C Original Issue Date or subsequently approved by the Board, including the affirmative vote of a majority of the Preferred Directors;

(iv) shares of Common Stock issued or issuable to ARIAD Pharmaceuticals, Inc. or its nominee pursuant to Section 2.3 of the ARIAD Stock Purchase Agreement;

(v) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such Option or Convertible Security was either outstanding on the Series C Original Issue Date or subsequently was issued pursuant to a plan, agreement or arrangement approved in accordance with Subsection 4.4.1 (e)(iii), and in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(vi) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board, including a majority of the Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of

another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board, including the a majority of the Preferred Directors; or

(viii) shares of any class of Common Stock or Convertible Securities issued upon exercise of those certain warrants to purchase Preferred Stock issued by the Company pursuant to the Purchase Agreement.

(g) "***ARIAD Stock Purchase Agreement***" means the Stock Purchase Agreement between ARIAD Pharmaceuticals, Inc., ARIAD Gene Therapeutics, Inc. and the Corporation dated as of July 25, 2006.

4.4.2 No Adjustment of Series A Conversion Price, Series B Conversion Price or Series C Conversion Price.

(a) No adjustment in the Series A Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

(b) No adjustment in the Series B Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

(c) No adjustment in the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series C Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series C Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of any class of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options

or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to (i) the Series A Conversion Price pursuant to the terms of Subsection 4.4.4 below, (ii) the Series B Conversion Price pursuant to the terms of Subsection 4.4.5 below, or (iii) the Series C Conversion Price pursuant to the terms of Subsection 4.4.6 below, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of any class of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Series A Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such respective Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the respective Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to (i) the Series A Conversion Price pursuant to the terms of Subsection 4.4.4 below, (ii) the Series B Conversion Price pursuant to the terms of Subsection 4.4.5 or (iii) the Series C Conversion Price pursuant to the terms of Subsection 4.4.6 (either because the consideration per share of the Additional Shares of Common Stock subject thereto was equal to or greater than the respective Conversion Price then in effect, or because such Option or Convertible Security was issued before the respective Original Issue Date), are revised after the Series A Original Issue Date, Series B Original Issue Date or Series C Original Issue Date, as the case may be, as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a) above) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to (i) the Series A Conversion Price pursuant to the terms of Subsection 4.4.4 below, (ii) the Series B Conversion Price pursuant to the terms of Subsection 4.4.5 below or (iii) the Series C Conversion Price pursuant to the terms of Subsection 4.4.6 below, the respective Conversion Price shall be readjusted to such respective Conversion Price as would have obtained had such Option or, Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of any class of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Series A Conversion Price, the Series B Conversion Price or the Series C Conversion Price, provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of any class of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the respective Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Series A Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Series A Conversion Price in effect immediately prior to such issue, then the Series A Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Series A Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) "CP_1" shall mean the Series A Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of each class of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of each class of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of each class of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1) and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Adjustment of Series B Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Series B Conversion Price in effect immediately prior to such issue, then the Series B Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Series B Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) "CP_1" shall mean the Series B Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of each class of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of each class of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of each class of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) “C” shall mean the number of such Additional Shares of Common Stock issued in such transaction, including for purposes of this Subsection 4.4.5, any shares of Common Stock issued to ARIAD pursuant to Section 2.3 of the ARIAD Stock Purchase Agreement in such transaction.

4.4.6 Adjustment of Series C Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Series C Conversion Price in effect immediately prior to such issue, then the Series C Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) “CP_2” shall mean the Series C Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) “CP_1” shall mean the Series C Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) “A” shall mean the number of shares of each class of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of each class of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) “B” shall mean the number of shares of each class of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) “C” shall mean the number of such Additional Shares of Common Stock issued in such transaction, including for purposes of this Subsection 4.4.6, any shares of Common Stock issued to ARIAD pursuant to Section 2.3 of the ARIAD Stock Purchase Agreement in such transaction.

4.4.7 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board; and (iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of any class of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.8 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Series A Conversion Price pursuant to the terms of Subsection 4.4.4, an adjustment to the Series B Conversion Price pursuant to the terms of Subsection 4.4.5 or an adjustment to the Series C Conversion Price pursuant to the terms of Subsection 4.4.6 above then, upon the final such issuance, the respective Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series C Original Issue Date effect a subdivision of any class of the outstanding Common Stock, each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price in effect immediately before that subdivision shall each be proportionately decreased so that the number of shares of each class of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of each class of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series C Original Issue Date combine the outstanding shares of any class of Common Stock, each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of such class of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of each class of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on any class of the Common Stock in additional shares of any class of Common Stock, then and in each such event each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the respective Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of such class of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of such class of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of such class of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter each of the Series A Conversion Price, the Series B Conversion Price and the Series C Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made if the holders of Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock, as the case may be, simultaneously receive a dividend or other distribution of shares of any class of Common Stock in a number equal to the number of shares of such class of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into such class of Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of any class of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of any class of Common Stock in respect of outstanding shares of such class of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of such class of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into such class of Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which any class of the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of such class of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of such class of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series A Conversion Price, the Series B Conversion Price or the Series C Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 15 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the applicable series of Preferred Stock, a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the applicable series of Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the respective Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of such Preferred Stock. Such request may not be made more than once annually unless an event has occurred which would cause the applicable Conversion Price then in effect to be adjusted.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of any class of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of any class of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of such class of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of such class of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to such class of Preferred Stock and such class of Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Event.

5.1.1 Qualifying Public Offering; Vote of Preferred Stock. A) Immediately prior to the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on the NASDAQ Global Market, the NASDAQ Capital Market or the New York Stock Exchange, at a per share price of not less than $6.50 (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares after the Filing Date) and resulting in at least $50,000,000 of gross proceeds, prior to underwriting discounts, commissions and expenses, to the Corporation (a "***QPO***"); or B) upon the vote or written consent of a majority of each of the Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock (the time of such closing or date of such vote is referred to herein as the "***Mandatory Conversion Time***"): (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the applicable Conversion Price then in effect immediately prior to the Mandatory Conversion Time and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice, and shall thereafter receive certificates for the number of shares of Common Stock to which such holder is entitled pursuant to this Section 5. At the Mandatory Conversion Time, all outstanding shares of Preferred Stock shall be deemed to have been converted into shares of Common Stock, which shall be deemed to be outstanding of record, and all rights with respect to the Preferred Stock so converted, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate, except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the last sentence of this Subsection 5.2. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any accrued or declared but unpaid dividends on the shares of Preferred Stock converted. A mandatory conversion shall not be effective unless the payment of cash in lieu of a fractional share and all accrued and unpaid dividends have been paid in full.

5.3 Effect of Mandatory Conversion. All shares of Preferred Stock shall, from and after the Mandatory Conversion Time, no longer be deemed to be outstanding and, notwithstanding the failure of the holder or holders thereof to surrender the certificates for such shares on or prior to such time, all rights with respect to such shares shall immediately cease and terminate at the Mandatory Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment of any dividends accrued or declared but unpaid thereon. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redemption. Except as provided in Section 2.3.2(b), the Preferred Stock of the Corporation shall not be redeemable.

7. Redeemed, Purchased or Otherwise Acquired Shares. Any shares of Preferred Stock which are redeemed, purchased or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred.

8. Waiver. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock. Any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock. Any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the then outstanding shares of Series C Preferred Stock.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation.

FIFTH: In furtherance and not in limitation of the powers conferred by statute, and subject to any additional vote required by the Third Amended Restated Certificate of Incorporation, the Board is expressly authorized to adopt, amend or repeal the Bylaws of the Corporation (provided, that such adoption, amendment or repeal shall include the affirmative vote of a majority of the Preferred Directors).

SIXTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide. For so long as the holders of Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock are entitled to elect one or more directors of the Corporation pursuant to Section 3.2 of Part C of Article Fourth of this Third Amended and Restated Certificate of Incorporation, a quorum for any meeting of the Board shall require at least a majority of the Preferred Directors, then elected and serving.

SEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board or in the Bylaws of the Corporation.

EIGHTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

NINTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "***Indemnified Person***") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "***Proceeding***"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another Corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Tenth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Tenth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Tenth is not paid in full within 30 days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may, in the discretion of the Board, indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorney's fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorney's fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Tenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, the by-laws, agreement, vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors,

officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Third Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Amended and Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

[*Signature Page to Follow*]

IN WITNESS WHEREOF, Bellicum Pharmaceuticals, Inc. has caused this Amended and Restated Certificate of Incorporation to be executed by its President and Chief Executive Officer on this day of , 2014.

Bellicum Pharmaceuticals, Inc.

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & Chief Executive Officer

Signature Page to Third Amended and Restated Certificate of Incorporation of Bellicum Pharmaceuticals, Inc.

BYLAWS

OF

BELLICUM PHARMACEUTICALS, INC.

A Delaware Corporation

Date of Adoption

September 11, 2004

TABLE OF CONTENTS

		Page
Article 1 Offices		1
Section 1.1	Registered Office	1
Section 1.2	Other Offices	1
Article 2 Stockholders		1
Section 2.1	Place of Meetings	1
Section 2.2	Quorum; Adjournment of Meetings	1
Section 2.3	Annual Meetings	2
Section 2.4	Special Meetings	2
Section 2.5	Record Date	2
Section 2.6	Notice of Meetings	3
Section 2.7	Stockholder List	3
Section 2.8	Proxies	3
Section 2.9	Voting; Election; Inspectors	4
Section 2.10	Conduct of Meetings	4
Section 2.11	Treasury Stock	5
Section 2.12	Action Without Meeting	5
Article 3 Board of Directors		5
Section 3.1	Power; Number; Term of Office	5
Section 3.2	Quorum; Voting	6
Section 3.3	Place of Meetings; Order of Business	6
Section 3.4	First Meeting	6
Section 3.5	Procedure at Meetings	6
Section 3.6	Regular Meetings	6
Section 3.7	Special Meetings	6
Section 3.8	Removal	7
Section 3.9	Vacancies; Increases in the Number of Directors	7
Section 3.10	Compensation	7
Section 3.11	Action Without a Meeting; Telephone Conference Meeting	7
Section 3.12	Approval or Ratification of Acts or Contracts by Stockholders	7
Article 4 Committees		8
Section 4.1	Designation; Powers	8
Section 4.2	Procedure; Meetings; Quorum	8
Section 4.3	Substitution and Removal of Members; Vacancies	8
Article 5 Officers		9
Section 5.1	Number, Titles and Term of Office	9
Section 5.2	Removal	9
Section 5.3	Vacancies	9
Section 5.4	Powers and Duties	9

Section 5.5	Chairman of the Board	9
Section 5.6	President	9
Section 5.7	Vice Presidents	10
Section 5.8	Secretary	10
Section 5.9	Assistant Secretaries	10
Section 5.10	Treasurer	10
Section 5.11	Assistant Treasurers	10
Section 5.12	Salaries	10
Section 5.13	Action with Respect to Securities of Other Corporations	11
Section 5.14	Delegation	11
Article 6 Capital Stock		11
Section 6.1	Certificates of Stock	11
Section 6.2	Transfer of Shares	11
Section 6.3	Ownership of Shares	11
Section 6.4	Regulations Regarding Certificates	12
Section 6.5	Lost, Stolen, or Destroyed Certificates	12
Section 6.6	Fractional Shares	12
Article 7 Miscellaneous Provisions		12
Section 7.1	Fiscal Year	12
Section 7.2	Corporate Seal	12
Section 7.3	Notice and Waiver of Notice	12
Section 7.4	Facsimile Signatures	13
Section 7.5	Contracts	13
Section 7.6	Checks, Drafts, Etc .	13
Section 7.7	Depositories	13
Section 7.8	Books and Records	13
Section 7.9	Reliance upon Books, Reports and Records	14
Section 7.6	Application of Bylaws	14
Article 8 Indemnification of Officers and Directors		14
Section 8.1	Indemnification	14
Section 8.2	Claims and Defenses	15
Section 8.3	Nonexclusivity	15
Section 8.4	Insurance	15
Article 9 Amendments		15
Section 9.1	Amendments	15

BYLAWS
OF
BELLICUM PHARMACEUTICALS, INC.

Article 1
Offices

Section 1.1 Registered Office. The registered office Bellicum Pharmaceuticals, Inc. (the "Corporation"), which is required by the state of Delaware to be maintained in the state of Delaware, shall be the registered office named in the charter documents of the Corporation, or such other office as may be designated from time to time by the Board of Directors in the manner provided by law.

Section 1.2 Other Offices. The Corporation may also have offices at such other places both within and without the state of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require.

Article 2
Stockholders

Section 2.1 Place of Meetings. All meetings of the stockholders shall be held at the principal office of the Corporation, or at such other place within or without the state of Delaware as shall be specified or fixed in the notices or waivers of notice thereof.

Section 2.2 Quorum; Adjournment of Meetings. Unless otherwise required by law or provided in the charter documents of the Corporation or these Bylaws, (i) the holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at any meeting of stockholders for the transaction of business, (ii) in all matters other than election of directors, the affirmative vote of the holders of a majority of such stock so present or represented at any meeting of stockholders at which a quorum is present shall constitute the act of the stockholders, and (iii) where a separate vote by a class or classes is required, a majority of the outstanding shares of such class or classes, present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter and the affirmative vote of the majority of the shares of such class or classes present in person or represented by proxy at the meeting shall be the act of such class. The stockholders present at a duly organized meeting may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum, subject to the provisions of clauses (ii) and (iii) above.

Directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

Notwithstanding the other provisions of the charter documents of the Corporation or these Bylaws, the chairman of the meeting or the holders of a majority of the issued and outstanding stock, present in person or represented by proxy and entitled to vote thereat, at any meeting of stockholders, whether or not a quorum is present, shall have the power to adjourn such meeting from time to time, without any notice other than announcement at the meeting of

the time and place of the holding of the adjourned meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at such meeting. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally called.

Section 2.3 Annual Meetings. An annual meeting of the stockholders, for the election of directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held at such place (within or without the state of Delaware), on such date, and at such time as the Board of Directors shall fix and set forth in the notice of the meeting, which date shall be within thirteen (13) months subsequent to the last annual meeting of stockholders.

Section 2.4 Special Meetings. Unless otherwise provided in the charter documents of the Corporation, special meetings of the stockholders for any purpose or purposes may be called at any time by the President, by a majority of the Board of Directors, or by a majority of the executive committee (if any), at such time and at such place as may be stated in the notice of the meeting. Business transacted at a special meeting shall be confined to the purpose(s) stated in the notice of such meeting.

Section 2.5 Record Date. For the purpose of determining stockholders entitled to notice of or to vote at any meeting of stockholders, or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion, or exchange of stock or for the purpose of any other lawful action, the Board of Directors of the Corporation may fix a date as the record date for any such determination of stockholders, which record date shall not precede the date on which the resolutions fixing the record date are adopted and which record date shall not be more than sixty (60) days nor less than ten (10) days before the date of such meeting of stockholders, nor more than sixty (60) days prior to any other action to which such record date relates.

If the Board of Directors does not fix a record date for any meeting of the stockholders, the record date for determining stockholders entitled to notice of or to vote at such meeting shall be at the close of business on the day next preceding the day on which notice is given, or, if in accordance with Section 7.3 of these Bylaws notice is waived, at the close of business on the day next preceding the day on which the meeting is held. The record date for determining stockholders for any other purpose (other than the consenting to corporate action in writing without a meeting) shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

For the purpose of determining the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If the Board of Directors

does not fix the record date, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation at its registered office in the state of incorporation of the Corporation or at its principal place of business. If the Board of Directors does not fix the record date, and prior action by the Board of Directors is necessary, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 2.6 Notice of Meetings. Written notice of the place, date, and hour of all meetings, and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be given by or at the direction of the President, the Secretary, or the other person(s) calling the meeting to each stockholder entitled to vote thereat not less than ten (10) nor more than sixty (60) days before the date of the meeting. Such notice may be delivered either personally or by mail. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation.

Section 2.7 Stockholder List. A complete list of stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order showing the address of each such stockholder and the number of shares registered in the name of such stockholder, shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, at the principal place of business of the Corporation. The stockholder list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 2.8 Proxies. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to a corporate action in writing without a meeting may authorize another person or persons to act for him by proxy. Proxies for use at any meeting of stockholders shall be filed with the Secretary, or such other officer as the Board of Directors may from time to time determine by resolution, before or at the time of the meeting. All proxies shall be received and taken charge of and all ballots shall be received and canvassed by the secretary of the meeting, who shall decide all questions touching upon the qualification of voters, the validity of the proxies, and the acceptance or rejection of votes, unless an inspector or inspectors shall have been appointed by the chairman of the meeting, in which event such inspector or inspectors shall decide all such questions.

No proxy shall be valid after three (3) years from its date, unless the proxy provides for a longer period. Each proxy shall be revocable unless expressly provided therein to be irrevocable and coupled with an interest sufficient in law to support an irrevocable power.

Should a proxy designate two or more persons to act as proxies, unless such instrument shall provide the contrary, a majority of such persons present at any meeting at which their powers thereunder are to be exercised shall have and may exercise all the powers of voting or giving consents thereby conferred, or if only one be present, then such powers may be exercised

by that one; or, if an even number attend and a majority do not agree on any particular issue, each proxy so attending shall be entitled to exercise such powers in respect of such portion of the shares as is equal to the reciprocal of the fraction equal to the number of proxies representing such shares divided by the total number of shares represented by such proxies.

Section 2.9 Voting; Election; Inspectors. Unless otherwise required by law or provided in the charter documents of the Corporation, each stockholder shall on each matter submitted to a vote at a meeting of stockholders have one vote for each share of the stock entitled to vote which is registered in his name on the record date for the meeting. For the purposes hereof, each election to fill a directorship shall constitute a separate matter. Shares registered in the name of another corporation, domestic or foreign, may be voted by such officer, agent, or proxy as the bylaws (or comparable body) of such corporation may determine. Shares registered in the name of a deceased person may be voted by the executor or administrator of such person's estate, either in person or by proxy.

All voting, except as required by the charter documents of the Corporation or where otherwise required by law, may be by a voice vote; provided, however, upon request of the chairman of the meeting or upon demand therefor by stockholders holding a majority of the issued and outstanding stock present in person or by proxy at any meeting a stock vote shall be taken. Every stock vote shall be taken by written ballots, each of which shall state the name of the stockholder or proxy voting and such other information as may be required under the procedure established for the meeting. All elections of directors shall be by written ballots, unless otherwise provided in the charter documents of the Corporation.

At any meeting at which a vote is taken by written ballots, the chairman of the meeting may appoint one or more inspectors, each of whom shall subscribe an oath or affirmation to execute faithfully the duties of inspector at such meeting with strict impartiality and according to the best of such inspector's ability. Such inspector shall receive the written ballots, count the votes, and make and sign a certificate of the result thereof. The chairman of the meeting may appoint any person to serve as inspector, except no candidate for the office of director shall be appointed as an inspector.

Unless otherwise provided in the charter documents of the Corporation, cumulative voting for the election of directors shall be prohibited.

Section 2.10 Conduct of Meetings. The meetings of the stockholders shall be presided over by the President or, if the President is not present, by a chairman elected at the meeting. The Secretary of the Corporation, if present, shall act as secretary of such meetings, or, if the Secretary is not present, an Assistant Secretary shall so act; if neither the Secretary nor an Assistant Secretary is present, then a secretary shall be appointed by the chairman of the meeting.

The chairman of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of discussion as seem to the chairman in order.

Section 2.11 Treasury Stock. The Corporation shall not vote, directly or indirectly, shares of its own stock owned by it and such shares shall not be counted for quorum purposes. Nothing in this Section 2.11 shall be construed as limiting the right of the Corporation to vote stock, including but not limited to its own stock, held by it in a fiduciary capacity.

Section 2.12 Action Without Meeting. Unless otherwise provided in the charter documents of the Corporation, any action permitted or required by law, the charter documents of the Corporation, or these Bylaws to be taken at a meeting of stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the state of incorporation, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

Every written consent shall bear the date of signature of each stockholder who signs the consent, and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the state of incorporation, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

Prompt notice of the taking of corporation action without a meeting by less than a unanimous written consent shall be given by the Secretary to those stockholders who have not consented in writing.

Article 3
Board of Directors

Section 3.1 Power; Number; Term of Office. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors, and, subject to the restrictions imposed by law or the charter documents of the Corporation, the Board of Directors may exercise all the powers of the Corporation.

The number of directors which shall constitute the whole Board of Directors shall be determined from time to time by the Board of Directors (provided that no decrease in the number of directors which would have the effect of shortening the term of an incumbent director may be made by the Board of Directors). If the Board of Directors makes no such determination, the number of directors shall be one. Each director shall hold office for the term for which such director is elected, and until such director's successor shall have been elected and qualified or until such director's earlier death, resignation or removal.

Unless otherwise provided in the charter documents of the Corporation, directors need not be stockholders nor residents of the state of Delaware.

Section 3.2 Quorum; Voting. Unless otherwise provided in the charter documents of the Corporation, a majority of the number of directors fixed in accordance with Section 3.1 shall constitute a quorum for the transaction of business of the Board of Directors and the vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

Section 3.3 Place of Meetings; Order of Business. The directors may hold their meetings and may have an office and keep the books of the Corporation, except as otherwise provided by law, in such place or places, within or without the state of incorporation of the Corporation, as the Board of Directors may from time to time determine. At all meetings of the Board of Directors business shall be transacted in such order as shall from time to time be determined by the President or by the Board of Directors.

Section 3.4 First Meeting. Each newly elected Board of Directors may hold its first meeting for the purpose of organization and the transaction of business, if a quorum is present, immediately after and at the same place as the annual meeting of the stockholders. Notice of such meeting shall not be required. At the first meeting of the Board of Directors in each year at which a quorum shall be present, held after the annual meeting of stockholders, the Board of Directors shall elect the officers of the Corporation.

Section 3.5 Procedure at Meetings. The Board of Directors, at each regular meeting held immediately following the annual meeting of stockholders, may appoint one of their number as Chairman of the Board of Directors. The Chairman of the Board, if one is appointed, shall preside at meetings of the Board. In his absence at any meeting or if a Chairman is not appointed, any officer authorized by these Bylaws or any member of the Board selected by the members present shall preside. At meetings of the Board of Directors, the business shall be transacted in such order as the Board may from time to time determine.

Section 3.6 Regular Meetings. Regular meetings of the Board of Directors shall be held at such times and places, within or without the State of Delaware, as the Board of Directors shall determine. No notice of any kind of such regular meetings is required to be given to either old or new members of the Board of Directors.

Section 3.7 Special Meetings. Special meetings of the Board of Directors shall be held at any time pursuant to call of the Chairman of the Board, the President, or a majority of the directors. The Secretary shall give notice of each special meeting to each director at the director’s usual business or residence address by mail at least three (3) days before such meeting, or in person, by telegraph, telex or telephone at least one (1) day before such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail with postage thereon prepaid. Except as otherwise provided by law, the charter documents of the Corporation, or by these Bylaws, such notice need not specify the business to be transacted at, or the purpose of, such meeting. The signing of a written waiver of notice of any special meeting by the person or persons entitled to such notice, whether before or after the time stated therein, shall be equivalent to the receipt by such person or persons of all notice required to be given with

respect to such meeting. Attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express and announced purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 3.8 Removal. Any director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

Section 3.9 Vacancies; Increases in the Number of Directors. Unless otherwise provided in the charter documents of the Corporation, vacancies existing on the Board of Directors for any reason and newly created directorships resulting from any increase in the authorized number of directors may be filled by the affirmative vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director; and any director so chosen shall hold office until the next annual election and until such director's successor shall have been elected and qualified, or until such director's earlier death, resignation, or removal.

Section 3.10 Compensation. Directors and members of standing committees may receive such compensation as the Board of Directors from time to time shall determine to be appropriate, and shall be reimbursed for all reasonable expenses incurred in attending and returning from meetings of the Board of Directors.

Section 3.11 Action Without a Meeting; Telephone Conference Meeting. Unless otherwise restricted by the charter documents of the Corporation, any action required or permitted to be taken at any meeting of the Board of Directors or any committee designated by the Board of Directors may be taken without a meeting if all members of the Board of Directors or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or committee. Such consent shall have the same force and effect as a unanimous vote at a meeting, and may be stated as such in any document or instrument filed with the Secretary of State of the state of incorporation of the Corporation.

Unless otherwise restricted by the charter documents of the Corporation, subject to the requirement for notice of meetings, members of the Board of Directors, or members of any committee designated by the Board of Directors, may participate in a meeting of such Board of Directors or committee, as the case may be, by means of a conference telephone connection or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in such a meeting shall constitute presence in person at such meeting, except where a person participates in the meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 3.12 Approval or Ratification of Acts or Contracts by Stockholders. The Board of Directors in its discretion may submit any act or contract for approval or ratification at any annual meeting of the stockholders, or at any special meeting of the stockholders called for the purpose of considering any such act or contract, and any act or contract that shall be approved or be ratified by the vote of the stockholders holding a majority of the issued and outstanding shares

of stock of the Corporation entitled to vote and present in person or by proxy at such meeting (provided that a quorum is present) shall be as valid and as binding upon the Corporation and upon all the stockholders as if it has been approved or ratified by every stockholder of the Corporation. In addition, any such act or contract may be approved or ratified by the written consent of stockholders holding a majority of the issued and outstanding shares of capital stock of the Corporation entitled to vote, and such consent shall be as valid and binding upon the Corporation and upon all the stockholders as if it had been approved or ratified by every stockholder of the Corporation.

Article 4
Committees

Section 4.1 Designation; Powers. The Board of Directors may, by resolution passed by a majority of the whole board, designate one or more committees, including, if they shall so determine, an executive committee, with each such committee to consist of one or more of the directors of the Corporation. Any such designated committee shall have and may exercise such of the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation as may be provided in such resolution, except that no such committee shall have the power or authority of the Board of Directors in reference to amending the charter documents of the Corporation, approving or adopting or recommending to the Stockholders any action or matter required by law, these Bylaws, or the Corporation's Certificate of Incorporation to be submitted to the Stockholders for approval, or amending, altering, or repealing these Bylaws or adopting new bylaws for the Corporation. Any such designated committee may authorize the seal of the Corporation to be affixed to all papers that may require it. In addition to the above, such committee or committees shall have such other powers and limitations of authority as may be determined from time to time by the Board of Directors.

Section 4.2 Procedure; Meetings; Quorum. Any committee designated pursuant to this Article 4 shall keep regular minutes of its actions and proceedings in a book provided for that purpose and report the same to the Board of Directors at its meeting next succeeding such action, shall fix its own rules or procedures, and shall meet at such times and at such place or places as may be provided by such rules, or by such committee or the Board of Directors. Should a committee fail to fix its own rules, the provisions of these Bylaws, pertaining to the calling of meetings and conduct of business by the Board of Directors, shall apply as nearly as may be possible. At every meeting of any such committee, the presence of a majority of all the members thereof shall constitute a quorum, except as provided in Section 4.3 below, and the affirmative vote of a majority of the members present shall be necessary for the adoption by it of any resolution.

Section 4.3 Substitution and Removal of Members; Vacancies. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of such committee. In the absence or disqualification of a member of a committee, the member or members present at any meeting and not disqualified from voting, whether or not constituting a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of the absent or disqualified member. The Board of Directors shall have the power at any time to remove any member(s) of a committee and to appoint other directors in lieu of the person(s) so removed and shall also have the power to fill vacancies in a committee.

Article 5
Officers

Section 5.1 Number, Titles, and Term of Office. The officers of the Corporation shall be a President, Treasurer, a Secretary, and such other officers as the Board of Directors may from time to time elect or appoint (including, but not limited to, a Chairman of the Board, and or more Vice Presidents, (anyone or more of whom may be designated Executive Vice President or Senior Vice President) Vice Chairman of the Board, one or more Assistant Secretaries and one or more Assistant Treasurers). Each officer shall hold office until such officer's successor shall be duly elected and shall qualify or until such officer's death or until such officer shall resign or shall have been removed. Any number of offices may be held by the same person, unless the Certificate of Incorporation of the Corporation provides otherwise. Except for the Chairman of the Board and the Vice Chairman of the Board, no officer need be a director.

Section 5.2 Removal. Any officer or agent elected or appointed by the Board of Directors may be removed by the Board of Directors, with or without cause, whenever in its judgment the best interests of the Corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment of an officer or agent shall not of itself create any contract rights.

Section 5.3 Vacancies. Any vacancy in any office for any cause may be filled by the Board of Directors at any meeting.

Section 5.4 Powers and Duties. The officers of the Company shall have such powers and duties, except as modified by the Board of Directors, as generally pertain to their respective offices, as well as such powers and duties as from time to time may be conferred by the Board of Directors and by these Bylaws.

Section 5.5 The Chairman of the Board. The Chairman of the Board, if such an officer be elected, shall, if present, preside at all meetings of the Board of Directors and exercise and perform such other powers and duties as may be from time to time assigned to him by the Board of Directors or prescribed by these Bylaws.

Section 5.6 The President. The President shall be the chief executive officer of the Corporation. Subject to the control of the Board of Directors and the Executive Committee (if any), the President shall have general executive charge, management and control of the properties, business, and operations of the Corporation with all such powers as may be reasonably incident to such responsibilities; may agree upon and execute all leases, contracts, evidences of indebtedness, and other obligations in the name of the Corporation and may sign all certificates for shares of capital stock of the Corporation; and shall have such other powers and duties as designated in accordance with these Bylaws and as from time to time may be assigned to the President by the Board of Directors. The President shall preside at all meetings of the stockholders and of the Board of Directors.

Section 5.7 Vice Presidents. Each Vice President shall at all times possess power to sign all certificates, contracts, and other instruments of the Corporation, except as otherwise limited in writing by the Chairman of the Board, the President, or the Vice Chairman of the Board of the Corporation. Each Vice President shall have such other powers and duties as from time to time may be assigned to such Vice President by the Board of Directors, the Chairman of the Board, the President, or the Vice Chairman of the Board.

Section 5.8 Secretary. The Secretary shall keep the minutes of all meetings of the Board of Directors, committees of the Board of Directors, and the stockholders, in books provided for that purpose; shall attend to the giving and serving of all notices; may in the name of the Corporation affix the seal of the Corporation to all contracts and attest the affixation of the seal of the Corporation thereto; may sign with the other appointed officers all certificates for shares of capital stock of the Corporation; shall have charge of the certificate books, transfer books, and stock ledgers, and such other books and papers as the Board of Directors may direct, all of which shall at all reasonable times be open to inspection of any director upon application at the office of the Corporation during business hours; shall have such other powers and duties as designated in these Bylaws and as from time to time may be assigned to the Secretary by the Board of Directors, the Chairman of the Board, the President or the Vice Chairman of the Board; and shall in general perform all acts incident to the office of Secretary, subject to the control of the Board of Directors, the Chairman of the Board, the President, or the Vice Chairman of the Board.

Section 5.9 Assistant Secretaries. Each Assistant Secretary shall have the usual powers and duties pertaining to such offices, together with such other powers and duties as designated in these Bylaws and as from time to time may be assigned to an Assistant Secretary by the Board of Directors, the President, or the Secretary. The Assistant Secretaries shall exercise the powers of the Secretary during that officer's absence or inability or refusal to act.

Section 5.10 Treasurer. The Treasurer shall have responsibility for the custody and control of all the funds and securities of the Corporation, and shall have such other powers and duties as designated in these Bylaws and as from time to time may be assigned to the Treasurer by the Board of Directors or the President. The Treasurer shall perform all acts incident to the position of Treasurer, subject to the control of the Board of Directors or the President; and the Treasurer shall, if required by the Board of Directors, give such bond for the faithful discharge of the Treasurer's duties in such form as the Board of Directors may require.

Section 5.11 Assistant Treasurers. Each Assistant Treasurer shall have the usual powers and duties pertaining to such office, together with such other powers and duties as designated in these Bylaws and as from time to time may be assigned to each Assistant Treasurer by the Board of Directors, the President, or the Treasurer. The Assistant Treasurers shall exercise the powers of the Treasurer during that officer's absence or inability or refusal to act.

Section 5.12 Salaries. The salaries or other compensation of the officers of the Corporation shall be fixed from time to time by the Board of Directors. No officer shall be prevented from receiving such salary or other compensation by reason of the fact that he is also a director of the Corporation.

Section 5.13 Action with Respect to Securities of Other Corporations. Unless otherwise directed by the Board of Directors, the President, together with the Secretary or any Assistant Secretary shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of security holders of or with respect to any action of security holders of any other corporation in which this Corporation may hold securities and otherwise to exercise any and all rights and powers which this Corporation may possess by reason of its ownership of securities in such other corporation.

Section 5.14 Delegation. For any reason that the Board of Directors may deem sufficient, the Board of Directors may, except where otherwise provided by statute, delegate the powers or duties of any officer to any other person, and may authorize any officer to delegate specified duties of such office to any other person. Any such delegation or authorization by the Board shall be effected from time to time by resolution of the Board of Directors.

Article 6
Capital Stock

Section 6.1 Certificates of Stock. The certificates for shares of the capital stock of the Corporation shall be in such form, not inconsistent with that required by law and the charter documents of the Corporation, as shall be approved by the Board of Directors. Every holder of stock represented by certificates shall be entitled to have a certificate signed by or in the name of the Corporation by the President or a Vice President and the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer of the Corporation representing the number of shares (and, if the stock of the Corporation shall be divided into classes or series, certifying the class and series of such shares) owned by such stockholder which are registered in certified form; provided, however, that any of or all the signatures on the certificate may be facsimile. The stock record books and the blank stock certificate books shall be kept by the Secretary or at the office of such transfer agent or transfer agents as the Board of Directors may from time to time determine. In case any officer, transfer agent, or registrar who shall have signed or whose facsimile signature or signatures shall have been placed upon any such certificate or certificates shall have ceased to be such officer, transfer agent or registrar before such certificate is issued by the Corporation, such certificate may nevertheless be issued by the Corporation with the same effect as if such person were such officer, transfer agent, or registrar at the date of issue. The stock certificates shall be consecutively numbered and shall be entered in the books of the Corporation as they are issued and shall exhibit the holder’s name and number of shares.

Section 6.2 Transfer of Shares. The shares of stock of the Corporation shall be transferable only on the books of the Corporation by the holders thereof in person or by their duly authorized attorneys or legal representatives upon surrender and cancellation of certificates for a like number of shares. Upon surrender to the Corporation or a transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 6.3 Ownership of Shares. The Corporation shall be entitled to treat the holder of record of any share or shares of capital stock of the Corporation as the holder in fact thereof

and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the state of Delaware.

Section 6.4 Regulations Regarding Certificates. The Board of Directors shall have the power and authority to make all such rules and regulations as they may deem expedient concerning the issue, transfer, and registration or the replacement of certificates for shares of capital stock of the Corporation.

Section 6.5 Lost or Destroyed Certificates. The Board of Directors may determine the conditions upon which the Corporation may issue a new certificate of stock in place of a certificate theretofore issued by it which is alleged to have been lost, stolen, or destroyed and may require the owner of such certificate or such owner's legal representative to give bond, with surety sufficient to indemnify the Corporation and each transfer agent and registrar against any and all losses or claims which may arise by reason of the alleged loss, theft, or destruction of any such certificate or the issuance of such new certificate in the place of the one so lost, stolen, or destroyed.

Section 6.6 Fractional Shares. Only whole shares of the stock of the Corporation shall be issued. In case of any transaction by reason of which a fractional share might otherwise be issued, the Board of Directors, or the officers in the exercise of powers delegated by the Board of Directors, shall take such measures consistent with the law, the Certificate of Incorporation, and these Bylaws, including, but not limited to, the payment in cash of an amount equal to the fair value of any fractional share, as they may deem proper to avoid the issuance of any fractional share.

Article 7
Miscellaneous Provisions

Section 7.1 Fiscal Year. The fiscal year of the Corporation shall end on the 31 st day of December of each year.

Section 7.2 Corporate Seal. The corporate seal shall be circular in form and shall have inscribed thereon the name of the Corporation and the state of its incorporation, which seal shall be in the charge of the Secretary and shall be affixed to certificates of stock, debentures, bonds, and other documents, in accordance with the direction of the Board of Directors or a committee thereof, and as may be required by law; however, the Secretary may, if the Secretary deems it expedient, have a facsimile of the corporate seal inscribed on any such certificates of stock, debentures, bonds, contract, or other documents. Duplicates of the seal may be kept for use by any Assistant Secretary.

Section 7.3 Notice and Waiver of Notice. Whenever any notice is required to be given by law, the charter documents of the Corporation, or under the provisions of these Bylaws, said notice shall be deemed to be sufficient if given (i) by telegraphic, cable, or wireless transmission (including by telecopy or facsimile transmission) or (ii) by deposit of the same in a post office box or by delivery to an overnight courier service company in a sealed prepaid wrapper addressed to the person entitled thereto at such person's post office address, as it appears on the records of the Corporation, and such notice shall be deemed to have been given on the day of such transmission or mailing or delivery to courier, as the case may be.

Whenever notice is required to be given by law, the charter documents of the Corporation, or under any of the provisions of these Bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person, including without limitation a director, at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors, or members of a committee of directors need be specified in any written waiver of notice unless so required by the charter documents of the Corporation or these Bylaws.

Section 7.4 Facsimile Signatures. In addition to the provisions for the use of facsimile signatures elsewhere specifically authorized in these Bylaws, facsimile signatures of any officer or officers of the Corporation may be used whenever and as authorized by the Board of Directors.

Section 7.5 Contracts. The Chairman of the Board and the President shall have the power and authority to execute and deliver, in the name of and on behalf of the Corporation, contracts or instruments in the usual and regular course of business, and in addition, the Board of Directors may authorize any officer or officers, or any agent or agents, of the Company to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or may be confined to specific instances. Unless so authorized by the Board of Directors or by these Bylaws, no officer, agent, or employee shall have any power or authority to bind the Corporation by any contract or engagement, or to pledge its credit or to render it pecuniarily liable for any purpose or in any amount.

Section 7.6 Checks, Drafts, Etc. All checks, drafts, or other orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officers or employees of the Corporation as shall from time to time be authorized pursuant to these Bylaws or by resolution of the Board of Directors.

Section 7.7 Depositories. All funds of the Corporation shall be deposited from time to time to the credit of the Corporation in such banks or other depositories as the Board of Directors may from time to time designate, and upon such terms and conditions as shall be fixed by the Board of Directors. The Board of Directors may from time to time authorize the opening and maintaining with any such depository as it may designate of general and special accounts, and may make such special rules and regulations with respect thereto as it may deem expedient.

Section 7.8 Books and Records. The Corporation shall keep correct and complete books and records of account and shall keep minutes of the proceedings of its shareholders and Board of Directors, and shall keep at its registered office or principal place of business, or at the office of its transfer agent or registrar, a record of its shareholders, giving the names and addresses of all shareholders and the number and class of the shares held by each.

Section 7.9 Reliance upon Books, Reports and Records. A member of the Board of Directors, or a member of any committee designated by the Board of Directors, shall, in the performance of such person's duties, be protected to the fullest extent permitted by law in relying upon the records of the Corporation and upon information, opinions, reports, or statements presented to the Corporation.

Section 7.10 Application of Bylaws. In the event that any provisions of these Bylaws is or may be in conflict with any law of the United States, of the state of Delaware, or of any other governmental body or power having jurisdiction over this Corporation, or over the subject matter to which such provision of these Bylaws applies, or may apply, such provision of these Bylaws shall be inoperative to the extent only that the operation thereof unavoidably conflicts with such law, and shall in all other respects be in full force and effect.

Article 8
Indemnification of Officers and Directors

Section 8.1 Indemnification. Each person who was, is, or is threatened to be made a named defendant or respondent in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative (hereinafter a "proceeding"), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee, or agent of another corporation or of a partnership, joint venture, trust, or other enterprise, including service with respect to employee benefit plans, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee, or agent or in any other capacity while serving as a director, officer, employee, or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), against all expense, liability, and loss (including attorneys' fees, judgments, fines, ERISA excise taxes, or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith, and such indemnification shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of his or her heirs, executors, and administrators. Further, the Corporation shall pay the expenses (including attorneys' fees) incurred by an officer or director in defending any proceeding, the subject matter for which indemnification is sought herewith, in advance of its final disposition; provided, however, that, if the Delaware General Corporation Law requires, the payment of such expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such person while a director or officer, including, without limitation, service to an employee benefit plan) in advance of the final disposition of such proceeding, shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified under this Section or otherwise. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

Section 8.2 Claims and Defenses. If a claim under Section 8.1 is not paid in full by the Corporation within thirty days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall be entitled to be paid also the expense of prosecuting such claim. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking, if any is required, has been tendered to the Corporation) that the claimant has not met the standards of conduct which make it permissible under the Delaware General Corporation Law for the Corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the Corporation. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he or she has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that the claimant has not met the applicable standard of conduct.

Section 8.3 Nonexclusivity. The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this Article 8 shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, bylaw, agreement, vote of stockholders, or disinterested directors or otherwise.

Section 8.4 Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee, or agent of the Corporation or another corporation, partnership, joint venture, trust, or other enterprise against any such expense, liability, or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability, or loss under the Delaware General Corporation Law.

Article 9
Amendments

Section 9.1 Amendments. The Board of Directors shall have the power to adopt, amend, and repeal from time to time the Bylaws of the Corporation, subject to the right of the stockholders entitled to vote with respect thereto to amend or repeal such Bylaws as adopted or amended by the Board of Directors.

SECOND AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Second Amended and Restated Investor Rights Agreement (this "***Agreement***") is made and entered into as of August 22, 2014 (the "***Effective Date***"), by and among Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), the holders of the Company's Series A Preferred Stock (each a "***Series A Holder***" and collectively, the "***Series A Holders***"), the holders of the Company's Series B Preferred Stock (each a "***Series B Holder***" and collectively, the "***Series B Holders***"), the holders of the Company's Series C Preferred Stock (each a "***Series C Holder***" and collectively, the "***Series C Holders***", and together with the Series A Holders and the Series B Holders, the "***Preferred Holders***"), each as set forth on Schedule A attached hereto, and the holders of the Company's Common Stock other than ARIAD (defined below) set forth on Schedule B attached hereto (each a "***Common Holder***" and collectively, the "***Common Holders***" and together with the Preferred Holders, each an "***Investor***" and collectively, the "***Investors***"), ARIAD Pharmaceuticals, Inc., a Delaware corporation ("***ARIAD***"), and the spouses of the Investors, who join in this Agreement for certain purposes as provided herein, each as listed on the signature pages attached hereto. The Company, ARIAD and the Investors are each a "***Party***" and together are "***Parties***" to this Agreement.

WHEREAS, the Company, the Series B Holders, the Series A Holders, the Common Holders and ARIAD are parties to that certain Amended and Restated Investor Rights Agreement dated as of November 9, 2011 (as amended, the "***Prior Investor Rights Agreement***"); and

WHEREAS, the Company and ARIAD are parties to the ARIAD Investor Rights Agreement dated as of July 25, 2006 (as defined below); and

WHEREAS, the Company and the Series C Holders are parties to that certain Series C Preferred Stock and Warrant Purchase Agreement dated of even date herewith (the "***Purchase Agreement***"), pursuant to which the Series C Holders are acquiring shares of Series C Preferred Stock and warrants to purchase shares of Series C Preferred Stock (the "***Financing***"); and

WHEREAS, the obligations in the Purchase Agreement are conditioned upon the execution and delivery of this Agreement; and

WHEREAS, to induce the Series C Holders to execute and deliver the Purchase Agreement, the Company, the Series B Holders, the Series A Holders, the Common Holders and ARIAD have agreed to the execution and delivery of this Agreement, which amends and restates the Prior Investor Rights Agreement;

WHEREAS, the parties to this Agreement are the sole parties holding registration rights with respect to the Common Stock of the Company, and this Agreement is intended to define all of such rights outstanding as of the Effective Date;

NOW, THEREFORE, for and in consideration of the premises herein contained, mutual covenants and agreements, and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and subject to the terms and conditions herein contained, and with the intent to be legally bound hereby, the Parties agree as follows:

ARTICLE I

DEFINITIONS

"***1934 Act***" means the Securities Exchange Act of 1934, as amended.

"***Act***" means the Securities Act of 1933, as amended.

"***Affiliate***" means, with respect to a specified person or entity, a person or entity that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, such person or entity. For purposes of this definition, "control" (including "controlled by" and "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity, whether through the ownership of voting securities, by contract or otherwise.

"***Agreement***" shall have the meaning set forth in the preamble to this Agreement.

"***Approved Sale***" shall have the meaning set forth in Section 4.3.

"***ARIAD***" shall have the meaning set forth in the preamble to this Agreement.

"***ARIAD Common Stock***" means the shares of Common Stock currently held and hereafter acquired by ARIAD pursuant to and in accordance with the ARIAD Investor Rights Agreement and the ARIAD Stock Purchase Agreement.

"***ARIAD Holder***" means ARIAD as a holder of Common Stock.

"***ARIAD Investor Rights Agreement***" means the Investor Rights Agreement dated as of July 25, 2006, by and among the Company, ARIAD and ARIAD Gene Therapeutics, Inc., as amended.

"***ARIAD Stock Purchase Agreement***" means the Stock Purchase Agreement dated as of July 25, 2006, by and among the Company, ARIAD and ARIAD Gene Therapeutics, Inc.

"***BBI***" shall have the meaning set forth in Section 2.1(a).

"***Board of Directors***" means the Company's Board of Directors.

"***Closing***" shall have the meaning assigned to such term in the Purchase Agreement.

"***Common Holder***" and ***Common Holders***" shall have the meaning set forth in the preamble to this Agreement, and specifically excludes the ARIAD Holder.

"***Common Stock***" means the Company's common stock, par value $0.01 per share.

"***Company***" shall have the meaning set forth in the preamble to this Agreement.

"***Company Covered Person***" shall have the meaning set forth in Section 6.14(a).

"***Consummation Date***" shall have the meaning set forth in Section 5.3(a).

"***Disqualification Event***" shall have the meaning set forth in Section 6.14(a).

"***Effective Date***" shall have the meaning set forth in the preamble to this Agreement.

"***Expiration Date***" shall have the meaning set forth in Section 5.2(a)(iii).

"***Financing***" shall have the meaning set forth in the recitals to this Agreement.

"***Form S-3***" means such form under the Act as in effect on the date hereof or any registration form under the Act subsequently adopted by the SEC that permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

"***Fully-Exercising Investor***" shall have the meaning set forth in Section 5.1(b)(ii).

"***GAAP***" shall have the meaning set forth in Section 3.1(a).

"***Holders***" refers collectively to Series A Holders, the Series B Holders, the Series C Holders, the Common Holders and the ARIAD Holder.

"***Immediate Family Member***" shall mean a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in- law, brother-in-law, or sister-in-law, including adoptive relationships, of a person referred to herein.

"***Information Rights Holder***" shall have the meaning set forth in Section 3.1.

"***Initial Offering***" means the Company's first firm commitment underwritten public offering of its Common Stock under the Act.

"***Initiating Holder(s)***" shall have the meaning set forth in Section 2.1(a).

"***Inspection Rights Holder***" shall have the meaning set forth in Section 3.2.

"***Investor***" and ***Investors***" shall have the meaning set forth in the preamble to this Agreement.

"***Notice***" shall have the meaning set forth in Section 5.1(b)(i).

"***Offered Securities***" shall have the meaning set forth in Section 5.2(a).

"***Party***" and "***Parties***" shall have the meaning set forth in the preamble to this Agreement.

"***Preferred Directors***" shall mean the Series A Director, the Series B Directors and the Series C Directors.

"***Preferred Holder***" shall have the meaning set forth in the preamble to this Agreement.

"***Preferred Stock***" shall mean the Company's Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

"***Prior Investor Rights Agreement***" shall have the meaning set forth in the recitals to this Agreement.

"***Purchase Agreement***" shall have the meaning set forth in the recitals to this Agreement.

"***Purchase Notice***" shall have the meaning set forth in the Section 5.2(a)(ii).

"***QPO***" shall have the meaning ascribed to it in the Third Amended and Restated Certificate of Incorporation.

"***Register***," "***registered***," and "***registration***" refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Act, and the declaration or ordering of effectiveness of such registration statement or document.

"***Registrable Securities***" means (i) the shares of Common Stock issuable or issued upon conversion of Preferred Stock; (ii) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for, or in replacement of, the shares referenced in (i) above; and (iii) the ARIAD Common Stock, excluding in all cases, however, any Registrable Securities sold by a person or entity in a transaction in which his, her, or its rights under Article II are not assigned.

"***Registration Statement***" shall have the meaning set forth in Section 2.8.

"***Requisite Parties***" shall have the meaning set forth in Section 4.3.

"***Rights Holder***" shall mean an Information Rights Holder and an Inspection Rights Holder.

"***S-3 Initiating Holder(s)***" shall have the meaning set forth in Section 2.3(a).

"***Sale***" shall have the meaning set forth in Section 5.3(a).

"***Sale Notice***" shall have the meaning set forth in Section 5.2(a)(i).

"***SEC***" means the Securities and Exchange Commission.

"***Secondary Notice***" shall have the meaning set forth in Section 5.2(a)(iii).

"***Selling Group***" shall have the meaning set forth in Section 5.3(b).

"***Selling Common Holder***" shall have the meaning set forth in Section 5.2(a).

"***Selling Preferred Holder***" shall have the meaning set forth in Section 2.2(c).

"***Series A Director***" shall mean that director designated by the Series A Holders and elected pursuant to Section 4.1(c)(iii) below.

"***Series A Holder***" and "***Series A Holders***" shall have the meaning set forth in the preamble to this Agreement.

"***Series A Preferred Stock***" shall mean the Series A Convertible Preferred Stock of the Company, par value $0.01 per share.

"***Series B Directors***" shall mean those directors designated by the Series B Holders and elected pursuant to Section 4.1(c)(ii) below.

"***Series B Holder***" and "***Series B Holders***" shall have the meaning set forth in the preamble to this Agreement.

"***Series B Preferred Stock***" shall mean the Series B 6% Cumulative Convertible Participating Preferred Stock of the Company, par value $0.01 per share.

"***Series C Directors***" shall mean those directors designated by the Series C Holders and elected pursuant to Section 4.1(c)(i) below.

"***Series C Holder***" and "***Series C Holders***" shall have the meaning set forth in the preamble to this Agreement.

"***Series C Preferred Stock***" shall mean the Series C Convertible Preferred Stock of the Company, par value $0.01 per share.

"***Shares***" shall mean any share of, or securities convertible or exchangeable for any shares of, any class of the Company's capital stock.

"***T. Rowe Price Managed Holder***" shall have the meaning set forth in Section 2.12.

"***Third Amended and Restated Certificate of Incorporation***" means the Company's Third Amended and Restated Certificate of Incorporation filed with the Secretary of State of Delaware on or before the Closing, as may be amended from time to time.

"***Transfer***" means any assignment, sale, offer to sell, pledge, mortgage, hypothecation, encumbrance, disposition of or any like transfer or encumbering of any Shares.

"***Underwriter Carvebacks***" shall have the meaning set forth in Section 2.1(b).

"***Violation***" shall have the meaning set forth in Section 2.8(a).

ARTICLE II

REGISTRATION RIGHTS

Section 2.1 Demand Registration.

(a) Subject to the conditions of this Section 2.1, if the Company shall receive, at any time after the earlier of (i) three (3) years from the Closing and (ii) six (6) months following the closing of the Initial Offering, a written request from a Preferred Holder or Preferred Holders holding thirty percent (30%) or more of the Registrable Securities then outstanding (the "***Initiating Holder(s)***"), that the Company file a registration statement under the Act covering the registration of (a) with respect to any written request prior to the Initial Offering, at least twenty percent (20%) of the Registrable Securities then outstanding (or a lesser percentage provided that such registration under this Section 2.1 shall have an aggregate offering price, net of underwriting discounts and commissions, of $10,000,000 or more) and (b) with respect to any written request following the Initial Offering, any amount of the Registrable Securities then outstanding, then the Company shall:

(i) within ten (10) days of the receipt thereof, give written notice of such request to all other Preferred Holders;

(ii) subject to the limitations of this Section 2.1, use all reasonable efforts, as soon as practicable, and in any event within ninety (90) days of the receipt of such request, to file a registration statement under the Act covering all Registrable Securities which the Initiating Holder(s) request to be registered, together with all or any portion of Registrable Securities of any other Preferred Holders joining in such request as are specified in a written request delivered to the Company in accordance with Section 6.6 and received by the Company within twenty (20) days after the mailing of the Company's notice pursuant to Section 2.1(a); and

(iii) use its reasonable efforts to cause such registration statement to be declared effective by the SEC as soon as practicable.

Each such request by a Preferred Holder (other than the Initiating Holder(s)) shall specify the number of Registrable Securities proposed to be registered and the intended method of disposition thereof. The failure of any Preferred Holder (other than the Initiating Holder(s)) to respond within such twenty (20) day period referred to in clause (ii) above shall be deemed to be a waiver of such Preferred Holder's rights under this Section 2.1 with respect to such registration, provided that any such Preferred Holder may waive its or his rights under this Section 2.1 prior to the expiration of such twenty (20) day period by giving written notice to the Company, with a copy to the Initiating Holder(s). The Preferred Holders shall be limited to a maximum of two (2) demand registrations pursuant to this Section 2.1; *provided*, *however*, that Baker Brothers Investments ("***BBI***") shall maintain a right to demand one (1) registration pursuant to this Section 2.1 in the event that the two (2) demand registrations are made by Preferred Holders other than BBI and BBI does not participate in such registrations. The Company shall not be required to effect more than one (1) registration in any twelve (12) month period. A registration will not count toward the Preferred Holders' limit of two (2) demand registrations pursuant to this Section 2.1 if (Y) less than all Registrable Securities requested to be registered by the Preferred Holders are registered (except for Registrable Securities not included in the registration as a result of an Underwriter Carveback (as defined below)), or (Z) the registration is withdrawn at the request of the Preferred Holders when the Preferred Holders have

learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Preferred Holders at the time of their registration request and have withdrawn the request with reasonable promptness following disclosure by the Company or a third party of such material adverse change.

(b) If the Initiating Holder(s) intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 2.1 and the Company shall include such information in the written notice referred to in Section 2.1(a)(i). The underwriter will be selected by the Initiating Holder(s), subject only to the reasonable approval of the Company. In such event, the right of any Preferred Holder to include its or his Registrable Securities in such demand registration shall be conditioned upon such Preferred Holder's participation in such underwriting and the inclusion of such Preferred Holder's Registrable Securities in the underwriting to the extent provided herein. All Preferred Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided herein) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting. Notwithstanding any other provision of this Section 2.1, if the underwriter advises the Initiating Holder(s) and the Company in writing that marketing factors require a limitation of the number of securities underwritten ("***Underwriter Carvebacks***"), then the Company shall so advise all Preferred Holders of Registrable Securities that would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated among all Preferred Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities of the Company owned by each Preferred Holder, except that no Registrable Securities of a Preferred Holder shall be excluded unless and until all securities that are not Registrable Securities are first excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(c) The Company shall not be required to effect a demand registration pursuant to this Section 2.1:

(i) in any particular jurisdiction in which the Company would be required to execute a general consent to service of process in effecting such demand registration, unless the Company is already subject to service in such jurisdiction and except as may be required under the Act;

(ii) during the period starting with the date sixty (60) days prior to the Company's good faith estimate of the date of the filing of, and ending on a date one hundred eighty (180) days following the effective date of, a Company-initiated registration subject to Section 2.2 below, provided that the Company is actively employing in good faith all reasonable efforts to cause such registration statement to become effective;

(iii) if the Initiating Holder(s) propose to dispose of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.3 below; or

(iv) if the Company shall furnish to the Initiating Holder(s) a certificate signed by the Company's Chief Executive Officer or Chairman of the Board of Directors stating that in the good faith judgment of the Board of Directors, it would be materially detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the Initiating Holder(s), provided that such right to delay a request shall be exercised by the Company not more than once in any twelve (12) month period and provided further that the Company shall not register any securities for the account of itself or any other stockholder during such ninety (90) day period other than a registration statement relating either to the sale of securities to employees of the Company pursuant to a stock option, stock purchase or similar plan or an SEC Rule 145 transaction, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

Section 2.2 Company Registration.

(a) If (but without any obligation to do so) the Company proposes to register (whether for its own account or otherwise) any of its stock or other securities under the Act in connection with the public offering of such securities (other than (i) a registration relating solely to the sale of securities to participants in a Company stock plan, (ii) a registration relating to a corporate reorganization or other transaction on Form S-4 or under Rule 145 of the Act, (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered, or (v) a registration pursuant to Section 2.1), the Company shall, at such time, promptly give each Holder written notice of such registration. Upon the written request of each Holder given within twenty (20) days after mailing of such notice by the Company in accordance with Section 6.6, the Company shall, subject to the provisions of Section 2.2(c), use all reasonable efforts to cause to be registered under the Act all of the Registrable Securities that each such Holder has requested to be registered.

(b) The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The expenses of such withdrawn registration shall be borne by the Company in accordance with Section 2.6 hereof.

(c) In connection with any offering involving an underwriting of shares of the Company's capital stock, the Company shall not be required under this Section 2.2 to include any of the Preferred Holders' Registrable Securities or the ARIAD Holder's Registrable Securities or any of the Common Holder's Common Stock in such underwriting unless they accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by it and enter into an underwriting agreement in customary form with an underwriter or underwriters selected by the Company, and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of securities, including Registrable Securities, requested by Holders to be included in such offering exceeds the amount of securities sold other than by the Company that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, that the underwriters determine in their reasonable discretion will not jeopardize the success of the offering; *provided*, *however*, that no such reduction shall reduce the amount of Registrable Securities of the selling Holders included in the offering below twenty-five percent (25%) of the total amount of securities included in such offering, unless such offering is the Initial Offering and such registration does not include shares of any other selling stockholders, in which event any or all of the Registrable Securities of the Holders may be excluded in accordance with the immediately preceding clause. In no event shall any Registrable Securities be excluded from such offering unless all other stockholders' securities have been first excluded, including all of the Common Stock owned by the Common Holders proposed to be included in the registration. In the event that the underwriters determine that less than all of the Registrable Securities or Common Stock requested to be registered can be included in such offering, then the Registrable Securities and shares of Common Stock that are included in such offering shall be apportioned pro rata among the Selling Preferred Holders and the ARIAD Holder based on the number of Registrable Securities held by all Selling Preferred Holders and the ARIAD Holder or in such other proportions as shall mutually be agreed to by all such Parties. For purposes of apportionment, for any selling stockholder which is a Preferred Holder of Registrable Securities and which is an investment fund, partnership, limited liability company or corporation, the partners, members, retired partners, retired members, stockholders and Affiliates of such Preferred Holder, or the estates and family members of any such partners, retired partners, members and retired members and any trusts for the benefit of any of the foregoing persons shall be deemed to be a single "***Selling Preferred Holder***", and any pro-rata reduction with respect to such "***Selling Preferred Holder***" shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such "Selling Preferred Holder," as defined in this sentence.

Section 2.3 Form S-3 Registration.

(a) Subject to the conditions of this Section 2.3, if the Company shall receive a written request from a Preferred Holder or Preferred Holders or ARIAD Holder (the "***S-3 Initiating Holder(s)***"), that the Company effect a registration on Form S-3 and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by the S-3 Initiating Holder(s), then the Company shall:

(i) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(ii) as soon as practicable, effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such S-3 Initiating Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holders joining in such request as are specified in a written request given within twenty (20) days after receipt of such written notice from the Company; *provided*, *however*, that the Company shall not be obligated to effect any such registration, qualification, or compliance, pursuant to this Section 2.3: (A) if Form S-3 is not available for such offering by the Preferred Holders or ARIAD Holder; (B) if such Holders propose to sell Registrable Securities and Common Stock at an aggregate price to the public of less than $3,000,000 (net of discounts and commissions); (C) if the Company shall furnish to such Holders a certificate signed by the Company's Chief Executive Officer or Chairman of the Board stating that in the good faith judgment of the Board of Directors, it would be materially detrimental to the Company and its stockholders for such Form S-3 registration to be effected at such time, in which event the Company shall have the right to defer the filing of the Form S-3 registration statement for a period of not more than ninety (90) days after receipt of the request of the Preferred Holders or ARIAD Holder under this Section 2.3, *provided, that*, that the Company shall not utilize this right more than once in any twelve (12) month period and provided further that the Company shall not register any securities for the account of itself or any other stockholder during such ninety (90) day period (other than a registration relating solely to the sale of securities of participants in a Company stock plan, a registration relating to a corporate reorganization or transaction under Rule 145 of the Act, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered); (D) if the Company has, within the twelve (12) month period preceding the date of such request, already effected two (2) or more registrations on Form S-3 for the Preferred Holders or ARIAD Holder pursuant to this Section 2.3; (E) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification, or compliance, unless the Company is

already subject to service in such jurisdiction and except as may be required under the Act; or (F) during the period ending ninety (90) days after the effective date of a registration statement subject to Section 2.2.

(b) Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the S-3 Initiating Holder(s) but in any event not later than ninety (90) days after it receives the request. Registrations effected pursuant to this Section 2.3 shall not be counted as demands for registration or registrations effected pursuant to Sections 2.1 or 2.2, respectively.

(c) If the S-3 Initiating Holder(s) intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as part of their request made pursuant to this Section 2.3 and the Company shall include such information in the written notice referred to in Section 2.3(a)(i). The provisions of Section 2.1(b) shall be applicable to such request (with the substitution of Section 2.3 for references to Section 2.1), *provided*, *however,* in no event shall any Registrable Securities be excluded from such offering unless all other stockholders' securities have been first excluded, including all of the Common Stock owned by the Common Holders proposed to be included in the registration.

Section 2.4 Obligations of Company. Whenever required under this Article II to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use all reasonable efforts (including prompt and thorough response to reviews and inquiries of the SEC) to cause such registration statement to become effective and keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the Registration Statement has been completed; *provided*, *however*, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains from selling any securities included in such registration at the request of an underwriter of Common Stock (or other securities) of the Company; and (ii) in the case of any registration of Registrable Securities or Common Stock on Form S-3 which are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to one hundred twenty (120) days, if necessary, to keep the registration statement effective until all such Registrable Securities or Common Stock are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Act with respect to the disposition of all securities covered by such registration statement;

(c) furnish to the Holders such numbers of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities or Common Stock owned by them;

(d) use all reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders, provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service of process in such jurisdiction and except as may be required by the Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering;

(f) notify each Holder of Registrable Securities or Common Stock covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing;

(g) notify each Holder of Registrable Securities covered by such registration statement in writing of the effectiveness of such registration statement within twenty-four (24) hours of effectiveness;

(h) cause all such Registrable Securities and Common Stock registered pursuant hereto to be listed on each national securities exchange or trading system on which similar securities issued by the Company are then listed;

(i) provide a transfer agent and registrar for all Registrable Securities and Common Stock registered pursuant hereto and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration; and

(j) use all reasonable efforts to furnish, at the request of any Holder requesting registration of Registrable Securities and Common Stock, respectively, pursuant to this Article II, on the date that such Registrable Securities and Common Stock are delivered to the underwriters for sale in connection with a registration pursuant to this Article II, if such securities are being sold through underwriters, or, if such securities are not being sold through underwriters, on the date that the registration statement with respect to such securities becomes effective, (i) an opinion, dated such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities or Common Stock, respectively, and (ii) a "comfort" letter dated such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities and Common Stock, respectively.

Section 2.5 Information from Preferred Holder, ARIAD Holder and Common Holder. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Article II with respect to the Registrable Securities of any Selling Preferred Holder, ARIAD Holder or Common Stock of any selling Common Holder that such Holder shall furnish to the Company such information regarding itself or himself, the Registrable Securities or Common Stock held by it, him or her, and the intended method of disposition of such securities as shall be required to effect the registration of such Preferred Holder's Registrable Securities, ARIAD Holder's Registrable Securities or such Common Holder's Common Stock.

Section 2.6 Expenses of Registration.

(a) All expenses (other than underwriting discounts, selling commissions, and stock transfer taxes) incurred in connection with registrations, filings or qualifications pursuant to Section 2.1, including (without limitation) all registration, filing, and qualification fees, printers' and accounting fees, and fees and disbursements of counsel for the Company and the reasonable fees and expenses, not to exceed an aggregate of $50,000, of one (1) special counsel for the selling Holders shall be borne by the Company. Notwithstanding the foregoing, the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Preferred Holders holding a majority of the Registrable Securities to be registered (in which case all participating Preferred Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the closed or withdrawn registration); *provided further*, *however*, that if at the time of such withdrawal, the Preferred Holders have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Preferred Holders at the time of their request and have withdrawn the request with reasonable promptness following disclosure by the Company or any third party of such material adverse change, then the Preferred Holders shall not be required to pay any of such expenses and shall retain their rights pursuant to Section 2.1.

(b) The Company shall bear and pay all expenses incurred in connection with any registration, filing or qualification of Registrable Securities with respect to the registrations pursuant to Sections 2.2 and 2.3 hereof for each Preferred Holder and ARIAD Holder (which right may be assigned as provided in Section 2.10 hereof) and each Common Holder, including (without limitation) all registration, filing, and qualification fees, printers and reasonable accounting fees relating or apportionable thereto and the reasonable fees and expenses, not to exceed an aggregate of $50,000, of one (1) counsel for the selling Holders selected by the Preferred Holders and ARIAD Holder holding a majority of the Registrable Securities to be registered, but excluding underwriting discounts and commissions relating to Registrable Securities.

Section 2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Article II.

Section 2.8 Indemnification. In the event any Registrable Securities or shares of Common Stock are included in a registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto (collectively, a "***Registration Statement***"), under this Article II:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, their respective partners, members, officers, directors, and stockholders, legal counsel and accountants for each selling Holder, any underwriter (as defined in the Act) for such selling Holder and each person, if any, who controls such selling Holder or underwriter within the meaning of the Act or the 1934 Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Act, the 1934 Act, any other federal securities laws or any state securities laws, insofar as such losses, claims, damages, or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions, or violations (collectively, a "***Violation***"): (i) any untrue statement or alleged untrue statement of a material fact contained in such Registration Statement, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Act, the Exchange Act, any state securities laws or any rule or regulation promulgated under the Act, the Exchange Act, or any state securities laws; and the Company will pay to each such selling Holder, underwriter, controlling person or other aforementioned person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, or action as such expenses are incurred; *provided*, *however*, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld), nor shall the Company be liable in any such case for any such loss, claim, damage, liability, or action to the extent that it arises out of or is based upon a Violation that occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder, underwriter, controlling person or other aforementioned person; *provided further, however*, that the foregoing indemnity agreement with respect to any preliminary prospectus shall not inure to the benefit of any Holder or underwriter, or any person controlling such Holder or underwriter, from whom the person asserting any such losses, claims, damages, or liabilities purchased shares in the offering, if a copy of the prospectus (as then amended or supplemented if the Company shall have furnished any amendments or supplements thereto) was not sent or given by or on behalf of such Holder or underwriter to such person, if required by law so to have been delivered, at or prior to the written confirmation of the sale of the shares to such person, and if the prospectus (as so amended or supplemented) would have cured the defect giving rise to such loss, claim, damage, or liability.

(b) To the extent permitted by law, each Selling Holder will severally and not jointly indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the Registration Statement, each person, if any, who controls the Company within the meaning of the Act, legal counsel and accountants for the Company, each underwriter, each other Holder selling securities in such Registration Statement and each partner, member, director, officer, or controlling person of each such underwriter, other Holder, against any losses, claims, damages, or liabilities (joint or several) to which any of the foregoing persons may become subject, under the Act, the Exchange Act, any other federal securities laws or any state securities laws, insofar as such losses, claims, damages, or liabilities (or actions in respect

thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will pay any person intended to be indemnified pursuant to this Section 2.8(b), for any reasonable legal or other expenses reasonably incurred by such person in connection with investigating or defending any such loss, claim, damage, liability, or action as such expenses are incurred; *provided*, *however*, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Selling Holder (which consent shall not be unreasonably withheld), provided that in no event shall any indemnity under this Section 2.8(b) exceed the net proceeds from the offering received by such Selling Holder, except in the case of fraud or willful misconduct by such Selling Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) In order to provide for just and equitable contribution to joint liability under the Act in any case in which either (i) any Holder exercising rights under this Agreement, or any controlling person of any such Holder, makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Act may be required on the part of any such Selling Holder or any such controlling person in circumstances for which indemnification is provided under this Section 2.8, then, and in each such case, the Company, such will contribute to the aggregate losses, claims, damages or liabilities to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage, or expense as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be

determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; *provided however*, that, in any such case, (i) no such Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (ii) no person or entity guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) will be entitled to contribution from any person or entity who was not guilty of such fraudulent misrepresentation; *provided further*, that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such holder pursuant to Section 2.8(b), exceed the proceeds from the offering (net of any underwriting discounts or commissions) received by such Holder, except in the case of fraud or willful misconduct by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with an underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company, the Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities or Common Stock in a Registration Statement under this Article II, and shall survive the termination of this Agreement.

Section 2.9 Reports under 1934 Act. With a view to making available to the Holders the benefits of Rule 144 promulgated under the Act and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the Initial Offering;

(b) take such action, including the voluntary registration of its Common Stock under Section 12 of the 1934 Act, as is reasonably necessary to enable the Holders to utilize Form S-3 for the sale of their Registrable Securities and Common Stock such action to be taken as soon as practicable after the end of the fiscal year in which the first registration statement filed by the Company for the offering of its securities to the general public is declared effective;

(c) file with the SEC in a timely manner all reports and other documents required of the Company under the Act and the 1934 Act; and

(d) furnish to any Holder, so long as the Holder owns any Registrable Securities or Common Stock forthwith upon request (i) a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days following the effective date of the first registration statement filed by the Company), the

Act, and the 1934 Act (at any time after it has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after it so qualifies), (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration or pursuant to such form.

Section 2.10 Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities or Common Stock pursuant to this Article II may be assigned (but only with all related obligations) by a Holder to a transferee or assignee of all or some of such securities that (i) is a subsidiary, Affiliate, parent, partner, member, limited partner, retired partner, retired member or stockholder of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or such Holder's Immediate Family Member, respectively; (iii) is a successor by merger, reorganization or otherwise, of a Holder; or (iv) acquires at least twenty percent (20%) of a Holder's Registrable Securities, provided: (a) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned; (b) such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement, including without limitation the provisions of Section 2.12 below; and (c) such assignment shall be effective only if immediately following such transfer the further disposition of such securities by the transferee or assignee is restricted under the Act. For the purposes of determining the number of shares of Registrable Securities or Common Stock held by a transferee or assignee, the holdings of transferee or assignee (i) that is a subsidiary, parent, partner, limited partner, retired partner, member, retired member or stockholder of a Holder; (ii) that is an Affiliate of the Holder, which means with respect to a limited liability company or a limited liability partnership, a fund or entity managed by the same manager or managing member or general partner or management company or by an entity controlling, controlled by, or under common control with such manager or managing member or general partner or management company; (iii) who is a Holder's Immediate Family Member; or (iv) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member, shall be aggregated together and with those of the assigning Holder; provided that all assignees and transferees who would not qualify individually for assignment of registration rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices or taking any action under this Article II.

Section 2.11 Limitations on Subsequent Registration Rights. From and after the date of this Agreement and prior to the Company's Initial Offering, the Company shall not, without the prior written consent of (i) the holders of a majority of the Preferred Stock and ARIAD Common Stock voting together (for purposes of such calculation the Preferred Stock shall be deemed converted into Common Stock in accordance with its terms) and (ii) the holders of a majority of the Series C Preferred Stock (including BBI so long as BBI owns at least one million (1,000,000) shares of Preferred Stock and/or Common Stock (as adjusted for stock splits, stock dividends and similar recapitalization events)), enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder the right to include such securities in any registration unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the amount of the

Registrable Securities of the Preferred Holders and ARIAD Holder that are included or to demand registration of any securities held by such holder or prospective holder. Notwithstanding the foregoing, the Company shall be permitted with no additional approvals to provide the holder of the Common Stock Purchase Warrant issued by the Company to the Texas Office of Economic Development and Tourism dated September 27, 2007, with the registration rights provided for in such Common Stock Purchase Warrant on the exercise thereof.

Section 2.12 "Market Stand-Off" Agreement. Each Holder hereby agrees that it or he will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the Company's Initial Offering and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days) (a) lend, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right, or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired), or (b) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (a) or (b) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing provisions of this Section 2.12 shall only be applicable to the Holders if all officers, directors and greater than one percent (1%) stockholders of the Company enter into similar agreements. For purposes of clarification and avoidance of doubt, this Section 2.12 and any lock-up agreement executed by (i) BBI or (ii) T. Rowe Price Associates, Inc. for and on behalf of any Holder managed by T. Rowe Price Associates, Inc. (a "***T. Rowe Price Managed Holder***") shall not apply to shares of Common Stock purchased by BBI or a T. Rowe Price Managed Holder or any other account managed by T. Rowe Price in the Initial Offering or on the open market after the Initial Offering. The underwriters in connection with the Company's Initial Public Offering are intended third party beneficiaries of this Section 2.12 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in the Company's Initial Public Offering that are consistent with this Section 2.12 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply to all Holders subject to such agreements pro rata based on the number of shares subject to such agreements. In order to enforce the foregoing covenant, the Company may impose stop transfer instructions with respect to the Registrable Securities of each Preferred Holder and ARIAD Holder and Common Stock of each Common Holder (and the shares or securities of every other person subject to the foregoing restriction) until the end of such period.

Section 2.13 Termination of Registration Rights. No Holder shall be entitled to exercise any right provided for in this Article II after three (3) years following the consummation of the QPO or such earlier time at which all Registrable Securities held by such Holder, as applicable (and any Affiliate of the Holder with whom such Holder must aggregate its or his sales under Rule 144), can be sold without any volume limitations and without registration in compliance with Rule 144 of the Act within a ninety (90) day period.

ARTICLE III

COVENANTS OF THE COMPANY

Section 3.1 Delivery of Financial Information; Reporting Obligations. The Company shall deliver to the ARIAD Holder and to each Preferred Holder owning at least two hundred fifty thousand (250,000) shares of Preferred Stock (as adjusted for stock splits, stock dividends and similar recapitalization events) (each, an "***Information Rights Holder***"):

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company, an audited consolidated income statement of the Company for such year, an audited consolidated balance sheet and statement of stockholder's equity of the Company as of the end of such fiscal year, and an audited consolidated statement of cash flows of the Company for such fiscal year, such audited year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("***GAAP***") consistently applied and setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail. Such audited financial statements shall be accompanied by a report and opinion thereon by independent public accountants selected by the Board of Directors and acceptable to the holders of a majority of the Preferred Stock;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited consolidated income statement and consolidated statement of cash flows of the Company for such fiscal quarter and an unaudited consolidated balance sheet of the Company as of the end of such fiscal quarter, prepared in accordance with GAAP which shall each show a comparison to plan figures for such period and to the comparable period in the prior year prepared in accordance with GAAP with the exception that year end audit adjustments need not have been made;

(c) an annual budget and operating plans for the Company prior to the beginning of each fiscal year and (as soon as available) any subsequent revisions thereto;

(d) a report setting forth in detail all equity and debt holders of the Company within twenty (20) days after the end of each fiscal year; and

(e) such relevant business and other information supporting the financial statements described above, including, without limitation, copies of all detail and management reports, as any Information Rights Holder may reasonably request from time to time.

The Company will maintain true books and records of account in which full and correct entries will be made of all its business transactions pursuant to a system of accounting established and administered in accordance with GAAP consistently applied, and will set aside on its books all such proper accruals and reserves as shall be required under GAAP consistently applied.

Section 3.2 Inspection. The Company shall permit each Preferred Holder as long as such Preferred Holder owns at least two hundred fifty thousand (250,000) shares of Preferred Stock (as adjusted for stock splits, stock dividends and similar recapitalization events) (each, an

"***Inspection Rights Holder***"), at such Inspection Rights Holder's expense, to visit and inspect the Company's properties and assets, to examine its books of account and records, and to discuss the Company's affairs, finances, and accounts with its officers, senior management, counsel, and accountants, all at such reasonable times as may be requested by any Inspection Rights Holder; *provided, however*, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably considers to be a trade secret, privileged or similar confidential information without such Inspection Rights Holder executing a confidentiality and non-disclosure agreement in a form satisfactory to the Company.

Section 3.3 Confidentiality of Records. Each Rights Holder agrees to use the same degree of care as such Rights Holder uses to protect its own confidential information to keep confidential any information furnished to such Rights Holder pursuant to Sections 3.1 and 3.2 hereof that the Company identifies as being confidential or proprietary (so long as such information is not in the public domain), except that such Rights Holder may disclose such proprietary or confidential information (i) to any Affiliate, partner, subsidiary or parent of such Rights Holder as long as such Affiliate, partner, subsidiary or parent is advised of and agrees or has agreed to be bound by the confidentiality provisions of this Section 3.3 or comparable restrictions (for the avoidance of doubt, T. Rowe Price Associates, Inc. may share confidential information with the T. Rowe Price Managed Holders and vice versa); (ii) at such time as it enters the public domain through no fault of such Rights Holder; (iii) that is communicated to it free of any obligation of confidentiality; (iv) that is developed by such Rights Holder or its agents independently of and without reference to any confidential information communicated by the Company; (v) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring or valuing its investment in the Company as long as such person is advised of and agrees or has agreed to be bound by the confidentiality provisions of this Section 3.3 or comparable restrictions; or (vi) as required by applicable law. For the sake of clarity, nothing contained in this Section 3.3 shall in any way restrict or impair the obligations of the T. Rowe Price Managed Holders (or T. Rowe Price Associates, Inc. on their behalf) to report its holdings of the Company in accordance with applicable reporting laws and regulations, without prior notice to the Company.

Section 3.4 Non-Disclosure and Proprietary Rights Assignment Agreements. The Company will cause each person now or hereafter employed by the Company or any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information or trade secrets to enter into a non-disclosure and proprietary rights assignment agreement in the form attached hereto as Exhibit A. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements without the consent of the Board of Directors of the Company, which consent shall consist of the affirmative vote of a majority of the Preferred Directors.

Section 3.5 Stock Vesting. Unless otherwise approved by the Board of Directors, including a majority of the Preferred Directors, all stock options and other stock equivalents issued after the date of this Agreement to employees, directors, consultants and other service providers shall be subject to vesting as follows: (a) twenty-five percent (25%) of such stock shall vest at the end of the first year following the earlier of the date of issuance or such person's services commencement date with the Company, and (b) seventy-five percent (75%) of such

stock shall vest monthly over the remaining three (3) years. In addition, unless otherwise approved by the Board of Directors, including a majority of the Preferred Directors, (i) there shall be no transfers of Shares permitted prior to vesting and (ii) the Company shall retain a "right of first refusal" on employee transfers until the Initial Offering and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

Section 3.6 Director and Officer Insurance. The Company will use its best efforts to obtain and maintain in full force and effect director and officer liability insurance in such amounts and on such terms as are satisfactory to the Series C Holders.

Section 3.7 Directors' Liability and Indemnification. The Company's Third Amended and Restated Certificate of Incorporation and Bylaws shall provide (a) for elimination of the liability of directors to the maximum extent permitted by law and (b) for indemnification of directors for acts on behalf of the Company to the maximum extent permitted by law. In addition, the Company shall enter into and use its best efforts to at all times maintain indemnification agreements with each of its directors to indemnify such directors to the maximum extent permissible under applicable law.

Section 3.8 Successor Indemnification. In the event that the Company or any of its successors or assigns (a) consolidates with or merges into any other entity and shall not be the continuing or surviving corporation or entity of such consolidation or merger or (b) transfers or conveys all or substantially all of its properties and assets to any person or entity, then, and in each such case, to the extent necessary, proper provision shall be made so that the successors and assigns of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately prior to such transaction, whether pursuant to this Agreement, the Company's bylaws, its Third Amended and Restated Certificate of Incorporation or elsewhere, as the case may be.

Section 3.9 Termination of Covenants. Notwithstanding anything herein to the contrary, the covenants set forth in Sections 3.1 and 3.2 shall terminate and be of no further force or effect upon the earlier of (a) the closing of a QPO; (b) a merger or consolidation of the Company (other than one in which stockholders of the Company own a majority (by voting power) of the outstanding shares of the surviving or acquiring corporation); (c) a sale, lease, transfer, or other disposition of all or substantially all of the assets of the Company; (d) a transfer of shares of capital stock of the Company representing more than fifty percent (50%) of the votes entitled to be cast at a stockholders meeting to a person or entity, or group of persons or entities, that held (in the aggregate) less than ten percent (10%) of the shares of capital stock of the Company immediately before such transfer; (e) when the Company first becomes subject to the periodic reporting requirements of Sections 12(b), 12(g) or 15(d) of the 1934 Act; or (f) with respect to a Preferred Holder or ARIAD Holder, when such Preferred Holder or ARIAD Holder transfers more than fifty percent (50%) of such Preferred Holder's or ARIAD's Holder's original investment in Preferred Stock or ARIAD Common Stock, respectively.

ARTICLE IV

BOARD OF DIRECTORS; VOTING AGREEMENT

Section 4.1 Board of Directors; Voting Agreement.

(a) The Board of Directors of the Company shall consist of up to eight (8) members unless increased or decreased in size in accordance with the Company's Third Amended and Restated Certificate of Incorporation.

(b) Each Investor that has the right to designate a Preferred Director pursuant to this Section 4.1 shall have the right to appoint its designated Preferred Director to two (2) committees of the Board of Directors.

(c) Each of the Investors agrees to vote all of such Investor's Shares and any other voting securities of the Company over which such Investor has voting control, and the ARIAD Holder agrees to vote the ARIAD Common Stock, and each shall take all other necessary or desirable actions within such Investor's control (whether as a stockholder, director, member of a Board committee, or officer of the Company or otherwise, and including, without limitation, attendance at meetings in person or by proxy for purposes of obtaining a quorum and execution of written consents in lieu of meetings), and the Company shall take all necessary or desirable actions within its control (including, without limitation, calling special Board and stockholder meetings), so as to elect members of the Company's Board of Directors as follows :

(i) At each election of or action by written consent to elect directors in which the holders of Series C Preferred Stock, voting as a separate class, are entitled to elect directors of the Company, the Investors shall vote all of their respective Shares so as to elect (A) one individual designated by BBI so long as BBI holds at least 1,000,000 shares of Preferred Stock and/or Common Stock (as adjusted for stock splits, stock dividends and similar recapitalization events), (B) one individual designated by the holders of a majority of the Series C Preferred Stock, and (C) one individual designated by the holders of a majority of the Series C Preferred Stock who is not affiliated with any Investor or ARIAD, who is not an employee of the Company and who shall be reasonably acceptable to each of the other directors.

(ii) At each election of or action by written consent to elect directors in which the holders of Series B Preferred Stock, voting as a separate class, are entitled to elect directors of the Company, the Investors shall vote all of their respective Shares so as to elect two individuals designated by the holders of a majority of the Series B Preferred Stock.

(iii) At each election of or action by written consent to elect directors in which the holders of Series A Preferred Stock, voting as a separate

class, are entitled to elect directors of the Company, the Investors shall vote all of their respective Shares so as to elect one individual designated by the holders of a majority of the Series A Preferred Stock.

(iv) At each election of or action by written consent to elect directors in which the holders of Common Stock and Preferred Stock, voting together as a single class and on an as-if-converted to Common Stock basis, are entitled to elect directors of the Company, the Investors and ARIAD shall vote all of their respective Shares so as to elect (A) the Chief Executive Officer of the Company (or the most senior member of management in the event that there is no Chief Executive Officer), such director initially to be Thomas J. Farrell, and (B) Kevin M. Slawin, M.D. for as long as he either (1) continues to own not less than five percent (5%) of the issued and outstanding shares of the Company's Common Stock on a fully diluted basis, assuming the exercise of all outstanding and vested options, warrants and other rights to acquire shares of the Company's Common Stock and Preferred Stock and assuming conversion of all outstanding shares of capital stock, notes or other instruments convertible into the Company's Common Stock, whether registered in Kevin M. Slawin's name or in the name of his Immediate Family Members or by trusts, family partnerships or other entities owned or controlled by Kevin M. Slawin or owned by or established for the benefit of his Immediate Family Members or (2) is engaged by the Company or its affiliates to provide employment or consulting services of any kind or nature (including, without limitation, serving as Chief Medical Officer or Chief Technology Officer).

(v) The removal from the Board of Directors (with or without cause) of any representative described in Sections 4.1(c)(i), (ii), or (iii) shall be at the written request of the party or parties possessing the right to designate such representative, but only upon such written request and under no other circumstances.

(vi) In the event that any representative described in Sections 4.1(c)(i), (ii), or (iii) ceases to serve as a member of the Board of Directors during such representative's term of office, the resulting vacancy on the Board of Directors shall, at the option of the party or parties possessing the right to designate such representative, be filled by a representative designated by the party or parties possessing the right to designate such representative as provided hereunder. Any other vacancies on the Board of Directors shall be filled by a majority vote of the Company's stockholders, voting on an as-converted basis.

(d) The Company shall pay the reasonable out of pocket expenses incurred by each director in connection with attending the meetings of the Board of Directors and any committee thereof, including but not limited to reasonable travel expenses.

(e) Unless otherwise determined by the vote of a majority of the directors then in office (including at least a majority of the Preferred Directors), the Board of Directors shall meet at least quarterly in accordance with an agreed upon schedule.

Section 4.2 Observer Rights. So long as BBI holds at least 1,000,000 shares of Preferred Stock and/or Common Stock (as adjusted for stock splits, stock dividends and similar recapitalization events), the Company shall allow one representative designated by BBI to attend all meetings of the Company's Board of Directors in a nonvoting capacity, and in connection therewith, the Company shall give such representative copies of all notices, minutes, consents and other materials, financial or otherwise, which the Company provides to its Board of Directors; *provided, however*, that the Company reserves the right to exclude such representative from access to any material or meeting or portion thereof if the Company believes upon advice of counsel that such exclusion is reasonably necessary to preserve the attorney-client privilege, to protect highly confidential information or for other similar reasons. The decision of the Board of Directors with respect to the privileged or confidential nature of such information shall be final and binding.

Section 4.3 Change of Control. In the event that the holders of a majority of the then-outstanding shares of Preferred Stock (the "***Requisite Parties***"), approve a sale of the Company or all or substantially all of the Company's assets (an "***Approved Sale***"), whether by means of a merger, consolidation or sale of stock or assets, or otherwise, (A) if the Approved Sale is structured as a merger or consolidation of the Company, or a sale of all or substantially all of the Company's assets, each Investor and ARIAD agrees to be present, in person or by proxy, at all meetings for the vote thereon, to vote all shares of capital stock held by such person for and raise no objections to such Approved Sale, and waive and refrain from exercising any dissenters rights, appraisal rights or similar rights in connection with such Approved Sale, or (B) if the Approved Sale is structured as a sale of the stock of the Company, the Investors and ARIAD shall each agree to sell their respective Shares on the terms and conditions approved by the Requisite Parties; provided in each case that such terms do not provide that such Investor or ARIAD would receive as a result of such Approved Sale less than the amount that would be distributed to such Investor or ARIAD in the event the proceeds of such Approved Sale of the Company were distributed in accordance with the liquidation preferences set forth in the Third Amended and Restated Certificate of Incorporation. The Investors and ARIAD shall each take all necessary and desirable actions approved by the Requisite Parties in connection with the consummation of the Approved Sale, including the execution of such agreements and such instruments and other actions reasonably necessary to (x) provide the representations, warranties, indemnities, covenants, conditions, non-compete agreements, escrow agreements and other provisions and agreements relating to such Approved Sale and (y) effectuate the allocation and distribution of the aggregate consideration upon the Approved Sale. Notwithstanding the foregoing, an Investor or ARIAD will not be required to comply with this Section 4.3 in connection with any Approved Sale unless:

(a) any representations and warranties to be made by such Investor or ARIAD in connection with the Approved Sale are limited to representations and warranties related to authority, ownership and the ability to convey title to the shares of the Company's capital stock held by the Investor or ARIAD, including but not limited to representations and warranties that (i) the Investor or ARIAD holds all right, title and interest in and to such shares that such Investor or ARIAD purports to hold, free and clear of all liens and encumbrances, (ii) the obligations of the Investor or ARIAD in connection with the transaction have been duly authorized, if applicable, (iii) the documents to be entered into by the Investor or ARIAD have been duly executed by the Investor or ARIAD and delivered to the acquirer and are enforceable against the Investor or ARIAD in accordance with their respective terms and (iv) neither the execution and delivery of documents to be entered into in connection with the transaction, nor the performance of the Investor's or ARIAD's obligations thereunder, will cause a breach or violation of the terms of any agreement, law or judgment, order or decree of any court or governmental agency;

(b) the Investor or ARIAD shall not be liable for the inaccuracy of any representation or warranty made by any other Person in connection with the Approved Sale, other than the Company (except to the extent that funds may be paid out of an escrow established to cover breach of representations, warranties and covenants of the Company as well as breach by any Investor or ARIAD of any of identical representations, warranties and covenants provided by all Investors and ARIAD);

(c) the liability for indemnification, if any, of such Investor or ARIAD in the Approved Sale and for the inaccuracy of any representations and warranties made by the Company or its Investors or ARIAD in connection with such Approved Sale, is several and not joint with any other Person (except to the extent that funds may be paid out of an escrow established to cover breach of representations, warranties and covenants of the Company as well as breach by any Investor or ARIAD of any of identical representations, warranties and covenants provided by all Investors and ARIAD), and is pro rata in proportion to, and does not exceed, the amount of consideration paid to such Investor or ARIAD in connection with such Approved Sale;

(d) liability shall be limited to such Investor's or ARIAD's applicable share (determined based on the respective proceeds payable to each Investor or ARIAD in connection with such Approved Sale in accordance with the provisions of the Third Amended and Restated Certificate of Incorporation) of a negotiated aggregate indemnification amount that applies equally to all Investors and ARIAD but that in no event exceeds the amount of consideration otherwise payable to such Investor or ARIAD in connection with such Approved Sale, except with respect to claims related to fraud by such Investor or ARIAD, the liability for which need not be limited as to such Investor or ARIAD; and

(e) upon the consummation of the Approved Sale, (i) each holder of each class or series of the Company's capital stock will receive the same form of consideration for their shares of such class or series as is received by other holders in respect of their shares of such same class or series of stock, (ii) each holder of a series of Preferred Stock will receive the same amount of consideration per share of such series of Preferred Stock as is received by other holders in respect of their shares of such same series, (iii) each holder of Common Stock will

receive the same amount of consideration per share of Common Stock as is received by other holders in respect of their shares of Common Stock, and (iv) the aggregate consideration receivable by all holders of the Preferred Stock and Common Stock shall be allocated among the holders of Preferred Stock and Common Stock on the basis of the relative liquidation preferences to which the holders of each respective series of Preferred Stock and the holders of Common Stock are entitled in a Deemed Liquidation Event (assuming for this purpose that the Approved Sale is a Deemed Liquidation Event) in accordance with the Company's Third Amended and Restated Certificate of Incorporation.

Section 4.4 Irrevocable Proxy. To secure each Investor's and ARIAD's obligations to vote their respective Shares in accordance with Section 4.3 of this Agreement, each Investor and ARIAD hereby appoints the Chairman of the Board or the Chief Executive Officer of the Company, or either of them from time to time, or their designees, as such Investor's or ARIAD's true and lawful proxy and attorney, with the power to act alone and with full power of substitution, to vote all of such Investor's Shares and ARIAD's Shares as set forth in this Agreement and to execute all appropriate instruments consistent with this Agreement on behalf of such Investor or ARIAD if, and only if, such Investor or ARIAD fails to vote all of such Investor's Shares or ARIAD's Shares or execute such other instruments in accordance with the provisions of this Agreement within five days of the Company's or any other party's written request for such Investor's or ARIAD's written consent or signature. The proxy and power granted by each Investor and ARIAD pursuant to this Section are coupled with an interest and are given to secure the performance of such party's duties under this Agreement. Each such proxy and power will be irrevocable for the term hereof. The proxy and power, so long as any party hereto is an individual, will survive the death, incompetency and disability of such party or any other individual holder of an Investor's Shares or ARIAD's Shares, as the case may be, and, so long as any party hereto is an entity, will survive the merger or reorganization of such party or any other entity holding any of an Investor's Shares or ARIAD's Shares.

Section 4.5 Termination of Covenants. Notwithstanding anything herein to the contrary, the covenants set forth in this Article IV and Article V shall terminate and be of no further force or effect upon the earlier of (a) the closing of the QPO; (b) a merger or consolidation of the Company (other than one in which stockholders of the Company own a majority (by voting power) of the outstanding shares of the surviving or acquiring corporation); (c) a sale, lease, transfer, or other disposition of all or substantially all of the assets of the Company; or (d) a transfer of shares of capital stock of the Company representing more than fifty percent (50%) of the votes entitled to be cast at a stockholders meeting to a person or entity, or group of persons or entities, that held (in the aggregate) less than ten percent (10%) of the shares of capital stock of the Company immediately before such transfer.

ARTICLE V

PREEMPTIVE RIGHTS AND TRANSFER RESTRICTIONS

Section 5.1 Preemptive Rights.

(a) Subject to the terms and conditions specified in this Section 5.1, the Company hereby grants to each Investor a preemptive right with respect to future sales by the

Company of its Shares. For purposes of this Section 5.1, Investor includes any partners and Affiliates of an Investor. An Investor shall be entitled to apportion the preemptive right hereby granted it among itself and its partners and Affiliates in such proportions as it deems appropriate.

(b) Each time the Company proposes to offer any Shares, the Company shall first make an offering of such Shares to each Investor in accordance with the following provisions:

(i) The Company shall deliver a notice in accordance with Section 6.6 ("***Notice***") to the Investors stating (A) its bona fide intention to offer such Shares, (B) the number of such Shares to be offered, and (C) the price and terms upon which it proposes to offer such Shares.

(ii) By written notification received by the Company, within twenty (20) calendar days after receipt of the Notice, each Investor may elect to purchase or obtain, at the price and on the terms specified in the Notice, up to that portion of such Shares that equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion of the Preferred Stock then held, or issuable upon exercise of all warrants issued by the Company then held, by such Investor bears to the total number of shares of Common Stock of the Company then outstanding (assuming full conversion of all convertible Preferred Stock and full exercise of all warrants to issued by the Company to any Investor). The Company shall promptly, in writing, inform each Investor that elects to purchase all the Shares available to it, him or her (each, a "***Fully-Exercising Investor***") of any other Investor's failure to do likewise. During the ten (10) day period commencing after receipt of such information, each Fully-Exercising Investor shall be entitled to obtain that portion of the Shares for which Investors were entitled to subscribe but which were not subscribed for by the Investors that equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion of the Preferred Stock then held, or issuable upon exercise of all warrants to purchase shares of Common Stock issued by the Company then held, by such Fully-Exercising Investor bears to the total number of shares of Common Stock of the Company then held (assuming full conversion of all convertible Preferred Stock and full exercise of all warrants to purchase shares of Common Stock issued by the Company) by all Fully-Exercising Investors who wish to purchase such unsubscribed Shares.

(iii) If all Shares that Investors are entitled to obtain pursuant to Section 5.1(b)(ii) are not elected to be obtained as provided in Section 5.1(b)(ii) hereof, the Company may, during the ninety (90) day period following the expiration of the period provided in Section 5.1(b)(ii)

hereof, offer the remaining unsubscribed portion of such Shares to any person or persons at a price not less than, and upon terms no more favorable to the offeree than those specified in the Notice. If the Company does not enter into an agreement for the sale of the Shares within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Shares shall not be offered unless first reoffered to the Investors in accordance herewith.

(iv) The preemptive rights in this Section 5.1 shall not be applicable to (A) the issuance or sale of securities to employees or directors of, or consultants or advisors to, the Company or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Company, including a majority of the Preferred Directors; (B) the issuance of securities in a QPO; (C) the issuance of securities pursuant to the conversion or exercise of convertible or exercisable securities; (D) the issuance of securities by reason of a dividend, stock split, split-up or other distribution; (E) the issuance of securities pursuant to the acquisition of another corporation by the Company by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board of Directors, including a majority of the Preferred Directors; (F) the issuance of securities to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors, including a majority of the Preferred Directors; (G) the issuance of Common Stock to ARIAD pursuant to and in accordance with the ARIAD Stock Purchase Agreement or Section 4 of the ARIAD Investor Rights Agreement; or (H) the issuance of securities pursuant to the Purchase Agreement.

Section 5.2 Common Holder Right of First Offer.

(a) Each time any Common Holder (the "***Selling Common Holder***") proposes to Transfer (other than a Transfer by operation of law, including but not limited to as a result of a divorce, bankruptcy or death of a Common Holder or any other involuntary Transfer) any or all of the Shares standing in such Selling Common Holder's name or owned by such Selling Common Holder during the term of this Agreement (the "***Offered Securities***"), such Selling Common Holder shall first offer to the Company and then to the Preferred Holders the right to purchase all or any portion of the Offered Securities in accordance with the following provisions:

(i) Such Selling Common Holder shall deliver a written notice (a "***Sale Notice***") to the Company and to each Preferred Holder setting forth an irrevocable written offer to sell all of the Offered

Securities which the Selling Common Holder desires or is required to Transfer and stating (A) such Selling Common Holder's bona fide intention to Transfer the Offered Securities, (B) the name and the address of the proposed transferee, (C) the number of Shares to be Transferred, and (D) the purchase price per Share and terms of payment for which the Selling Common Holder proposes to Transfer the Offered Securities.

(ii) The Company shall have twenty (20) days after the delivery of the Sale Notice to notify such Selling Common Holder in writing (a "***Purchase Notice***") of its election or rejection to purchase all or any portion of the Offered Securities. The Purchase Notice shall identify the number of Offered Securities that the Company desires to purchase from the Selling Common Holder. The Company shall have the right to purchase any or all of the Offered Securities offered for sale as set forth in the Company's Purchase Notice. A copy of such Purchase Notice shall also be delivered to all Preferred Holders simultaneously with that provided to the Selling Common Holder. If the Company so elects to purchase all or a part of the Offered Securities as set forth herein, the Company shall be obligated to purchase such securities on the terms and conditions set forth in the Sale Notice. The Company shall close its purchase within sixty (60) days of the delivery of the Sale Notice. If the Sale Notice provides for the payment of non-cash consideration, the Company, at its option, may pay the consideration in cash equal to its good faith estimate of the present fair market value of the non-cash consideration offered.

(iii) If the Company does not elect to purchase all of the Offered Securities in accordance with Section 5.2(a)(ii) above, the Selling Common Holder shall deliver written notice to all of the Preferred Holders to that effect not later than ten (10) days following the Selling Common Holder's receipt of a Purchase Notice from the Company or the expiration of the Company's rights to purchase the Offered Securities (a "***Secondary Notice***"). Each Preferred Holder shall have twenty (20) days after the delivery of the Secondary Notice to notify such Selling Common Holder in writing (via a Purchase Notice) of its election or rejection to purchase all (or a part) of the Offered Securities. The Purchase Notice shall identify the total number of Offered Securities that such Preferred Holder desires to purchase from the Selling Common Holder, which amount designated may be greater than such Preferred Holder's pro rata portion of the Offered Securities. The Preferred Holders shall have the right to purchase such portion of the Offered Securities offered for sale as the Shares owned (on a fully diluted basis assuming conversion of the Preferred Stock and assuming exercise of any warrant to purchase shares of Common Stock issued by the Company to any Preferred Holder) by such Preferred Holder at such time shall bear to the outstanding Shares owned (on a fully diluted basis assuming conversion of the Preferred Stock and assuming exercise of any warrant to purchase shares of Common Stock

issued by the Company to any Preferred Holder) by all the other Preferred Holders. A copy of such Purchase Notice shall also be delivered to the Company simultaneously with that provided to the Selling Common Holder. If each Preferred Holder so elects to purchase all or a part of such Preferred Holder's pro rata portion of the Offered Securities as set forth herein, such Preferred Holder shall be obligated to purchase such securities on the terms and conditions set forth in the Sale Notice. If any Preferred Holder elects not to purchase all of such Preferred Holder's pro rata portion of the Offered Securities, then any such remaining shares of Offered Securities may be purchased on a pro rata basis by those other Preferred Holders that indicated on their respective Purchase Notice that they wanted to purchase a number of Offered Securities that is greater than their respective pro rata portion of the Offered Securities, in the same manner described above. The Preferred Holders shall close their respective purchases within sixty (60) days of the delivery of the Secondary Notice (an "***Expiration Date***"). If the Sale Notice provides for the payment of non-cash consideration, each Preferred Holder, at its option, may pay the consideration in cash equal to its good faith estimate of the present fair market value of the non-cash consideration offered.

(iv) If the Company and the Preferred Holders do not elect to purchase all of the Offered Securities designated in the Sale Notice, then no shares of Offered Securities shall be sold to the Company or the Preferred Holders, and the Selling Common Holder may transfer the remaining amount of the Offered Securities to the proposed transferee set forth on the Sale Notice, provided such transfer (A) is completed within sixty (60) days after the Expiration Date, (B) is made at the price and terms designated in the Sale Notice, and (C) the proposed transferee agrees to be bound by the terms and provisions of this Agreement and to become a party to this Agreement to the same extent as the Selling Common Holder immediately upon receipt of the Offered Securities. If the Offered Securities are not so transferred within such sixty (60) day time period, the Sale Notice given to the Company and the Preferred Holders shall be deemed to have expired and a new notice shall be required prior to any other or subsequent transfer of the Offered Securities.

(v) Any transferee of Common Stock in a transaction other than a transaction described in Section 5.2(a) shall, as a condition to the

registration of the transfer on the stock transfer records of the Company and its recognition by the Company as a valid transfer, execute a counterpart of this Agreement or such other documentation as shall be reasonably requested by the Company pursuant to which such transferee shall agree to be bound by the provisions of this Agreement.

(b) Notwithstanding anything in Section 5.2(a) to the contrary, a Common Holder may Transfer Shares to a Common Holder's Immediate Family Member or to a trust established for the sole benefit of the Common Holder or the Common Holder's Immediate Family Member or Members; provided that the Common Holder notifies the Company of such Transfer not less than ten (10) nor more than ninety (90) days prior to the Transfer and that the proposed transferee agrees to be bound by the terms and provisions of this Agreement and to become a party to this Agreement to the same extent as the Common Holder immediately upon the receipt of such Shares.

Section 5.3 Right of Co-Sale.

(a) As used in this Section 5.3, the term "***Sale***" means a sale or transfer made or agreed to by a Common Holder in the manner described in the first sentence of the following paragraph, and the term "***Consummation Date***" means the date fixed for the consummation of a Sale.

(b) Except with respect to a Transfer pursuant to Section 5.2(b), in the event any Common Holder or group of Common Holders (the "***Selling Group***") shall desire to sell all or any portion of their respective Shares to any third party in a transaction described in Section 5.2(a), and the Company and the Preferred Holders have not exercised their Rights of First Refusal as to such Shares in accordance with Section 5.2, each Preferred Holder and the ARIAD Holder shall have the option to require the Selling Group to purchase, or cause the purchase of, such number of Shares owned (on an as-converted basis) by such Preferred Holder and ARIAD Holder equal to the number of Shares to be transferred multiplied by a fraction, the numerator of which will be the number of shares of Common Stock that were issued or are issuable upon conversion of the Preferred Stock then held by such Preferred Holder or the ARIAD Common Stock, as the case may be, and the denominator of which will be sum of the total number of shares of Common Stock that were issued or are issuable upon conversion of the Preferred Stock held by all Preferred Holders and the ARIAD Common Stock, upon the same terms and conditions as those of the Sale as set forth in the written offer to the Preferred Holders and the Company as provided in Section 5.2 hereof. The option described herein shall be exercised by the giving of written notice of the exercise of such option to the Selling Group not more than ten (10) days after the date of receipt by the Preferred Holders and the ARIAD Holder of the Secondary Notice as set forth in Section 5.2. The Selling Group shall, on the Consummation Date and conditioned upon and contemporaneously with the Sale, purchase, or cause the purchase by the purchasers of, such Shares of the Preferred Holders and the ARIAD Holder upon terms and conditions the same as those of the Sale. If any Preferred Holder or the ARIAD Holder exercises the option under this Section 5.3, and if the Selling Group has elected to purchase (rather than cause the purchase of) the Shares owned by the Preferred Holders and the ARIAD Holder, then the Selling Group must resell to the purchasers the Shares so purchased

contemporaneously with the Sale and upon the same terms and conditions as those of the Sale. If the Selling Group shall fail to so purchase, or cause the purchase of, the Shares of the Preferred Holders and the ARIAD Holder as provided in this Section 5.3, then the Selling Group may not consummate the Sale.

ARTICLE VI

MISCELLANEOUS

Section 6.1 Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties (including transferees of any shares of Registrable Securities). Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

Section 6.2 Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF DELAWARE, WITHOUT REGARD TO PRINCIPLES REGARDING CONFLICTS OF LAWS.

Section 6.3 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Section 6.4 Electronic Transmission. Any signature page delivered pursuant to this Agreement or any agreement contemplated hereby via facsimile or other electronic transmission shall be binding to the same extent as an original signature. Any party who delivers such a signature page agrees to later deliver an original counterpart to any Party who requests it.

Section 6.5 Interpretation. The article and section headings contained in this Agreement are solely for the purpose of reference, are not part of the agreement of the parties, and shall not in any way affect the meaning or interpretation of this Agreement.

Section 6.6 Notices. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient; if not, then on the next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the party to be notified at the following addresses (or at such other address or electronic mail address for a party as shall be specified by like notice; provided that notices of a change of address shall be effective only upon receipt thereof):

If to the Company:

Bellicum Pharmaceuticals, Inc.
2130 W. Holcombe Blvd., Suite 850
Houston, Texas 77030
Attention: Thomas J. Farrell
Telephone: (713) 341-6472
Telecopy: (713) 335-1446

With a copy (which shall not constitute notice) to:

Cooley LLP
4401 Eastgate Mall
San Diego, California 92121
Attention: Julie M. Robinson
Telephone: 858-550-6092
Telecopy: 858-550-6420

If to the Series C Holders:

To the addresses indicated on the signature pages hereto.

With a copy (which shall not constitute notice) to:

Goodwin Procter LLP
The New York Times Building
620 Eighth Avenue
New York, New York 10018
Attention: Thomas S. Levato
Telephone: 212-459-7256
Telecopy: 212-355-3333

If to the Series B Holders:

To the addresses indicated on the signature pages hereto,

If to the Series A Holders:

To the addresses indicated on the signature pages hereto.

If to the Common Holders:

To the addresses indicated on the signature pages hereto.

If to ARIAD:

ARIAD Pharmaceuticals, Inc.
26 Landsdowne Street
Cambridge, MA 02139
Attention: Chief Executive Officer

Section 6.7 Entire Agreement; Amendment and Waivers. This Agreement, including the documents, schedules, instruments, and agreements referred to herein, and the agreements and documents executed contemporaneously herewith embody the entire agreement and understanding of the Parties hereto in respect of the subject matter hereof. There are no restrictions, promises, representations, warranties, covenants, or undertakings, other than those expressly set forth or referred to herein or therein. This Agreement supersedes all prior agreements and understandings between the parties with respect to such subject matter except for the ARIAD Stock Purchase Agreement and the ARIAD Investor Rights Agreement, as amended. This Agreement may be amended only in writing with the approval of the Company, a majority of the Common Stock and not less than 67% of the Preferred Stock and ARIAD Common Stock, voting together (for purposes of such calculation the Preferred Stock shall be deemed converted into Common Stock in accordance with its terms); *provided, however* that in no event shall (i) Section 4.1(c)(i) be amended, supplemented, or otherwise modified without the prior written consent of the holders of a majority of the shares of Series C Preferred Stock or (ii) Section 4.1(c)(iv) insofar as it relates to Kevin M. Slawin M.D. be amended, supplemented, or otherwise modified without the prior written consent of Kevin M. Slawin, M.D.

Section 6.8 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

Section 6.9 Aggregation of Stock. All shares of Registrable Securities or Common Stock held or acquired by affiliated entities or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

Section 6.10 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such non-breaching or non-defaulting party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent, or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

Section 6.11 Time is of the Essence. Time is of the essence in performance of the obligations under this Agreement.

Section 6.12 Spouses. The spouses of the Investors are fully aware of, understand, and fully consent and agree to the provisions of this Agreement and its binding effect upon any community property interests they may now or hereafter own, and agree that the termination of their marital relationship with any Investor for any reason shall not have the effect of removing any Shares otherwise subject to this Agreement from the coverage hereof and that their awareness, understanding, consent and agreement are evidenced by their execution of this Agreement.

Section 6.13 Legend. Each certificate representing shares of Common Stock or Preferred Stock shall, in addition to any other Legends required by contract or applicable law, bear substantially the following Legend: "THE SHARES EVIDENCED OR CONSTITUTED HEREBY ARE SUBJECT TO THE TERMS AND CONDITIONS OF AN INVESTOR RIGHTS AGREEMENT BETWEEN THE COMPANY AND THE HOLDER OF THESE SECURITIES WHICH, AMONG OTHER THINGS, SUBSTANTIALLY RESTRICTS THE TRANSFERABILITY OF THESE SECURITIES. THE SALE, TRANSFER, OR OTHER DISPOSITION AND VOTING OF SUCH SECURITIES IS SUBJECT TO THE TERMS OF SUCH AGREEMENT, AND SUCH SECURITIES ARE TRANSFERABLE ONLY UPON PROOF TO THE COMPANY OF COMPLIANCE THEREWITH."

Section 6.14 No "Bad Actor" Disqualification.

(a) The Company has exercised reasonable care to determine whether any Company Covered Person (as defined below) is subject to any of the "bad actor" disqualifications described in Rule 506(d)(1)(i) through (viii), as modified by Rules 506(d)(2) and (d)(3), under the Act (each, a "***Disqualification Event***"). To the Company's knowledge, no Company Covered Person is subject to a Disqualification Event. The Company has complied, to the extent required, with any disclosure obligations under Rule 506(e) under the Act. For purposes of this Agreement, "***Company Covered Persons***" are those persons specified in Rule 506(d)(1) under the Act; *provided*, *however*, that Company Covered Persons do not include (i) any Series C Holder, (ii) any person or entity that is deemed to be an affiliated issuer of the Company solely as a result of the relationship between the Company and any Investor or ARIAD or (iii) any director of the Company that has been designated by any Investor or ARIAD.

(b) Each Series C Holder represents and warrants that neither (i) such person, nor (ii) any entity that controls such person or is under the control of, or under common control with, such person, nor (iii) any director of the Company that has been designated by such person, is subject to any Disqualification Event, except for Disqualification Events covered by Rule 506(d)(2)(ii) or (iii) under the Act and disclosed in writing in reasonable detail to the Company. No party to this Agreement will select a designee that is subject to any Disqualification Event, except for Disqualification Events covered by Rule 506(d)(2)(ii) or (iii) or (d)(3) under the Act, in which case such party will promptly disclose in writing to the Company and other parties to this Agreement any and all information necessary for the Company to determine whether Rule 506(d)(2)(ii) or (iii) or (d)(3) applies.

(c) Each party to this Agreement represents that it has exercised reasonable care to determine the accuracy of the representation made by it in either Section 6.14(a) or (b) above as applicable, and agrees to notify each other party to this Agreement if it becomes aware of any fact that makes the representation given by it hereunder inaccurate.

(d) Notwithstanding any other provision in this Agreement to the contrary, no party to this Agreement will be required to vote for any director or proposed director who is subject to a Disqualification Event, except for Disqualification Events covered by Rule 506(d)(2)(ii) or (iii) or (d)(3) under the Act.

[Signature pages follow]

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMPANY:

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President and Chief Executive Officer

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: /s/ Joseph E. Edelman
Name: Joseph E. Edelman
Title: Managing Member of Investment Advisor

Address: 499 Park Avenue, 25Fl
New York, NY 10022

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

TITAN PERC, LTD.

By: /s/ Darren Ross
Name: Darren Ross
Title: Director

Address: 2 International Drive, Suite 200
Rye Brook, NY 10573

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RA CAPITAL HEALTHCARE FUND, LP

By: /s/ Peter Kolchinsky
Name: Peter Kolchinsky
Title: Manager

Address: 20 Park Plaza, Suite 1200
Boston, MA 02116

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

T. Rowe Price Health Sciences Fund, Inc.
TD Mutual Funds – TD Health Sciences Fund
Valic Company I – Health Sciences Fund
T. Rowe Price Health Sciences Portfolio
John Hancock Variable Insurance Trust – Health Sciences Trust
John Hancock Funds II – Health Sciences Fund, Each fund, severally and not jointly

By: T. ROWE PRICE ASSOCIATES, INC., Investment Adviser or Subadviser

By: /s/ Darrell Braman

Name: Darrell Braman

Title: Vice President

T. Rowe Price Associates, Inc.
100 East Pratt Street
Baltimore, MD 21202
Attn: Andrew Baek, Vice President and Senior Legal Counsel
Phone: 410-345-2090
E-mail: andrew_baek@troweprice.com

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JENNISON GLOBAL HEALTHCARE MASTER FUND, LTD.

By: Jennison Associates LLC, as the Investment Manager of the Fund

By:	/s/ David Chan
Name:	David Chan
Title:	Managing Director of Jennison Associates LLC
Address:	c/o Jennison Associates LLC 466 Lexington Avenue New York, New York 10017

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

REDMILE CAPITAL FUND, LP

By: /s/ Jeremy Greem
Name: Jeremy Greem
Title: Managing Member of the GP and the Investment Manager

Address: One Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

REDMILE CAPITAL OFFSHORE FUND, LTD.

By: /s/ Jeremy Greem
Name: Jeremy Greem
Title: Managing Member of the Investment Manager

Address: One Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

REDMILE CAPITAL OFFSHORE FUND II, LTD.

By: /s/ Jeremy Greem
Name: Jeremy Greem
Title: Managing Member of the Investment Manager

Address: One Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

REDMILE SPECIAL OPPORTUNITIES FUND, LTD.

By: /s/ Jeremy Greem
Name: Jeremy Greem
Title: Managing Member of the Investment Manager

Address: One Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RIDGEBACK CAPITAL INVESTMENTS LP

By: /s/ Chris Sheldon
Name: Chris Sheldon
Title: C.T.O.

Address: 75 Ninth Avenue, 5th Floor
New York, New York 10011

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SABBY HEALTHCARE VOLATILITY MASTER FUND, LTD.

By: /s/ Robert Grundstein
Name: Robert Grundstein
Title: COO of Investment Manager

Address: c/o Sabby Management
10 Mountainview Road, Suite 205
USR, NJ 07458

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SABBY VOLATILITY WARRANT MASTER FUND, LTD.

By: /s/ Robert Grundstein
Name: Robert Grundstein
Title: COO of Investment Manager

Address: c/o Sabby Management
10 Mountainview, Rd, Suite 205
U.S.R, NJ 07458

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

VENBIO SELECT FUND LLC

By: /s/ Behzad Aghazadeh
Name: Behzad Aghazadeh
Title: Portfolio Manager

Address: 1350 Avenue of the Americas, 20th Fl.
NY, NY 10019

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SPHERA GLOBAL HEALTHCARE MASTER FUND L.P.

By: /s/ Doron Breen
Name: Doron Breen
Title: Director

Address: c/o Sphera Funds Mgmt.
21 Haarbaa St.
Tel-Aviv, Israel

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

AJU LIFE SCIENCE OVERSEAS EXPANSION PLATFORM FUND

By: /s/ Jung-Kyoo Yang
Name: Jung-Kyoo Yang
Title: CFO and President

Address: 679-5, Yeoksam-doing, 4th floor
Gangnam-gu
Seoul, Korea, 135-916
Attn: Jung-Kyoo Yang, President / CEO

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

MCLW PARTNERS, LTD.,
a Texas limited partnership

By: MCLW GP LLC,
a Texas limited liability company,
Its General Partner

By: /s/ Marc Winograd
Name: Marc Winograd
Title: President

Address: 5216 Pine Street
Bellaire, TX 77401

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

GEORGE A. RIZZO

/s/ George A. Rizzo
(Signature)

Address:

SPOUSE:

By: /s/ Fay Rizzo
Name: Fay Rizzo
Spouse of George A. Rizzo

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

GEORGE AND FAY RIZZO FAMILY PARTNERSHIP, LTD.

By: /s/ George A. Rizzo
Name: George A. Rizzo
Title: General Partner

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

WILLIAM K. MCGEE, JR.
By: Florence McGee, his attorney-in-fact

By: /s/ Florence McGee
Name: Florence McGee
Title: Attorney-in-Fact for William K. McGee, Jr.

Address:

SPOUSE:

By: /s/ Florence McGee
Name: Florence McGee
Spouse of William K. McGee, Jr.

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

MCGUYER INVESTMENTS LTD.

By: /s/ Frank McGuyer
Name: Frank McGuyer
Title: Managing General Partner

Address: 11007 Wickwood Dr.
Houston, TX 77024

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JEROLD WINOGRAD

/s/ Jerold Winograd
(Signature)

Address:

SPOUSE:

By: /s/ Bonnie Winograd
Name: Bonnie Winograd
Spouse of Jerold Winograd

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

STACY CAPITAL PARTNERS, LTD.

By: /s/ T. Don Stacy
Name: T. Don Stacy
Title: Managing Partner

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

T. DON STACY AND WANDA T. STACY, JOINT TENANTS WITH RIGHT OF SURVIVORSHIP

By: /s/ T. Don Stacy
Name: T. Don Stacy

By: /s/ Wanda T. Stacy
Name: Wanda T. Stacy

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

ANN GORDON TRAMMELL

/s/ Ann G. Trammell
(Signature)

Address:

SPOUSE:

Name: _____
Spouse of Ann Gordon Trammell

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SCOTT M. HOFFER

By: /s/ Scott M. Hoffer
Name: Scott M. Hoffer

Address:

SPOUSE:

By: /s/ Gayle Hoffer
Name: Gayle Hoffer
Spouse of Scott M. Hoffer

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

NICOLE B. WINOGRAD GST TRUST

By: /s/ Jerold Winograd
Name: Jerold Winograd
Title: Co-Trustee

By: /s/ Bonnie Winograd
Name: Bonnie Winograd
Title: Co-Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JORDANA SLAWIN 2012 FAMILY TRUST

By: /s/ Jordana Roteman Slawin
Name: Jordana Roteman Slawin
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

KEVIN SLAWIN, TRUSTEE OF THE KEVIN SLAWIN 2009 FAMILY TRUST

By: /s/ Kevin M. Slawin
Name: Kevin M. Slawin, M.D.
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RYAN L. WINOGRAD FAMILY GST TRUST

By: /s/ Marc Winograd
Name: Marc Winograd
Title: Co-Trustee

By: /s/ Carol L. Winograd
Name: Carol L. Winograd
Title: Co-Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

ALEC L. WINOGRAD FAMILY GST TRUST

By: /s/ Marc Winograd
Name: Marc Winograd
Title: Co-Trustee

By: /s/ Carol L. Winograd
Name: Carol L. Winograd
Title: Co-Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

EVAN L. WINOGRAD FAMILY GST TRUST

By: /s/ Marc Winograd
Name: Marc Winograd
Title: Co-Trustee

By: /s/ Carol L. Winograd
Name: Carol L. Winograd
Title: Co-Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JEROLD WINOGRAD – SEPARATE PROPERTY ACCOUNT

By: /s/ Jerold Winograd

Name: Jerold Winograd

Address: 4295 San Felipe
Suite 370
Houston, TX 77027

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

EIGHTY SEVEN EIGHTEEN, LTD.

By: 8718 GP, LLC
Its General Partner

By: /s/ Marc Winograd
Name: Marc Winograd
Title: President

Address: 4295 San Felipe
Suite 370
Houston, TX 77027

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

ELIZABETH WINOGRAD – SEPARATE PROPERTY ACCOUNT

By: /s/ Elizabeth Winograd
Name: Elizabeth Winograd
Title:

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

WRB INTERESTS, LTD.

By: /s/ W. Russell Brown, Jr.
Name: W. Russell Brown, Jr.
Title: Managing Partner

Address: 777 Post Oak Blvd.
Ste 333
Houston, TX 77056

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

DAVID H. GOODMAN 2003 TRUST

By: /s/ Jerold Winograd
Name: Jerold Winograd
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

PATRICIA J. GOODMAN 2003 TRUST

By: /s/ David H. Goodman
Name: David H. Goodman
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

DAVID H. GOODMAN

/s/ David H. Goodman
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

TERRY MCDANIEL

/s/ Terry Mcdaniel
(Signature)

Address:

SPOUSE:

By: /s/ Shannon McDaniel
Name: Shannon McDaniel
Spouse of Terry McDaniel

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

WARREN FLORKIEWICZ

/s/ Warren Florkiewicz
(Signature)

Address: _____

_____

SPOUSE:

By: /s/ Laurie Florkiewicz
Name: Laurie Florkiewicz
Spouse of Warren Florkiewicz

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

B. SHALE INVESTMENTS, LTD.

By: /s/ Richard Bennett
Name: Richard Bennett
Title: Partner

Address: 100 Congress Avenue
Suite 1600
Austin, TX 78701

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

NORMAN JESIN

/s/ Norman Jesin
(Signature)

Address:

SPOUSE:

By: /s/ Edie Neuberger
Name: Edie Neuberger (Jesin)
Spouse of Norman Jesin

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JERRY JESIN

/s/ Jerry Jesin
(Signature)

Address:

SPOUSE:

By: N/A
Name:
Spouse of Jerry Jesin

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RONALD L. PRICE

/s/ Ronald L. Price
(Signature)

Address:

SPOUSE:

By: /s/ Lisa H. Price
Name: Lisa H. Price
Spouse of Ronald L. Price

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

2009 SLAWIN FAMILY PARTNERSHIP

By: /s/ Kevin Slawin
Name: Kevin Slawin, M.D.
Title: General Partner

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

IMI MARINE OPERATIONS, INC.

By: /s/ Marshall P. Cloyd
Name: Marshall P. Cloyd
Title: Chairman

Address: 10000 Memorial Drive
Suite 700
Houston, TX 77024

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RELDA FINGER HOFFER

By: /s/ Relda Finger Hoffer
Name: Relda Finger Hoffer

Address:

SPOUSE:

By: _____
Name: _____
Spouse of Relda Finger Hoffer

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

NFS/FMTC FBO GEORGE RIZZO IRA

By: /s/ George A. Rizzo
Name: George A. Rizzo
Title:

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

CHARLES H. MUTTERPERL IRA

By: /s/ Charles H. Mutterperl
Name: Charles H. Mutterperl
Title: Beneficiary

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

TREK HOLDINGS, LLC

By: /s/ William S. O'Donnell, Jr.
Name: William S. O'Donnell, Jr.
Title: Manager

Address: 7500 San Felipe, #1060
Houston, TX 77063

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

TED JOHNSON INVESTMENT TRUST

By: /s/ Walter Johnson
Name: Walter Johnson
Title: Trustee

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

CORRIGAN SECURITIES, INC.

By: /s/ Leo F. Corrigan III
Name: Leo F. Corrigan III
Title: President

Address: 2000 McKinney, Suite 1225
Dallas, TX 75201

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

THOMAS J. FARRELL

/s/ Thomas J. Farrell
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

CARCHARODON, LLC

By: /s/ Charles W. Kelly
Name: Charles W. Kelly
Title: Manager

Address: 3050 Post Oak Blvd., Ste. 200
Houston, TX 77056

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RALPH S. O'CONNOR

/s/ Ralph S. O'connor
(Signature)

Address:

SPOUSE:

By: /s/ Becky G. O'Connor
Name: Becky G. O'Connor
Spouse of Ralph S. O'Connor

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

GILLSON LONGENBAUGH FOUNDATION

By: /s/ Lawrence I. Levy
Name: Lawrence I. Levy
Title: President

Address: 2121 Sage Road
Suite 120
Houston, TX 77056

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

GOLDENEYE PARTNERS II, LTD.

By: /s/ Kenneth J. Lewis
Name: Kenneth J. Lewis
Title: Vice President, Goldeneye
Its General Partner

Address: 2211 Norfolk Street, Ste. 1030
Houston, TX 77098

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

AVG VENTURES, LP

By: AVG VENTURES GP, LLC
Its General Partner

By: /s/ James Brown
Name: James Brown
Title: Manager

Address: 500 Ygnacio Valley Rd.
Suite 360
Walnut Creek, CA 94596

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JOHN BIRD AND JENNIFER BIRD, JOINT TENANTS WITH RIGHT OF SURVIVORSHIP

By: /s/ John Bird
Name: John Bird

By: /s/ Jennifer Bird
Name: Jennifer Bird

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JOHN R. IRWIN AND MARGO IRWIN, TENANTS IN COMMON

By: /s/ John R. Irwin
Name: John R. Irwin

By: /s/ Margo Irwin
Name: Margo Irwin

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

J. KEVIN IRONS

/s/ J. Kevin Irons
(Signature)

Address:

SPOUSE:

By: /s/ Darlene Irons
Name: Darlene Irons
Spouse of J. Kevin Irons

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

LOUIS B. CUSHMAN

/s/ Louis B. Cushman
(Signature)

Address:

SPOUSE:

By: /s/ Christina S. Cushman
Name: Christina S. Cushman
Spouse of Louis B. Cushman

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SUSAN BENTSEN CORRIGAN

/s/ Susan Bentsen Corrigan

(Address)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

FLYERS OIL & GAS LLC

By: /s/ Scott P. Sealy, Jr.
Name: Scott P. Sealy, Jr.
Title: Member

Address: 8401 N. Central Expy, Ste. 150
Dallas, TX 75225

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

JESSE KIRK AND MILO KIRK

/s/ Jesse Kirk
(Signature)

/s/ Milo Kirk
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

LAWRENCE I. LEVY, INDIVIDUALLY

/s/ Lawrence I. Levy
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

LINDA D. SCHAEFER

/s/ Linda D. Schaefer
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

MPS CAPITAL FUNDS, L.L.C.

By: /s/ Mark P. Sealy
Name: Mark P. Sealy
Title: Manager

Address: 333 Texas Street, Ste. 1050
Shreveport, Louisiana 71101

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

DAN M. MOODY, JR.

/s/ Dan M. Moody, Jr.
(Signature)

Address: _____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

MARK HARVEY MULLINS 2011 TRUST

By: /s/ Mark Harvey Mullins
Name: Mark Harvey Mullins
Title: Trustee

Address: 4545 Post Oak Place Drive, Ste. 144
Houston, TX 77027

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

DON R. MULLINS AND GWEN G. MULLINS, COMMUNITY PROPERTY

/s/ Don R. Mullins
(Signature)

/s/ Gwen G. Mullins
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

KERYL A. ROWDEN

/s/ Keryl A. Rowden
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RENEE ROLKE GREEN 2011 TRUST

By: /s/ Renee Rolke Green
Name: Renee Rolke Green
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

REMEDITEX VENTURES LLC

By: /s/ Brett A. Ringle
Name: Brett A. Ringle
Title: President

Address: 2101 Cedar Springs Road, Suite 601
Dallas, TX 75201

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

SEALY FAMILY OIL & GAS PARTNERSHIP I, L.P.

By: /s/ Scott P. Sealy
Name: Scott P. Sealy
Title: Managing Partner

Address: 8401 N. Central Expy, Suite 150
Dallas, TX 75225

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

KEVIN SLAWIN, M.D.

/s/ Kevin Slawin
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

DAVID SPENCER

/s/ David Spencer
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

L.E. SIMMONS

/s/ L.E. Simmons
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

THOMAS F. SORIERO

/s/ Thomas F. Soriero
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

RONALD W. ECKEL

/s/ Ronald W. Eckel
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

THE BENTSEN 2010 IRREVOCABLE ASSET TRUST

By: /s/ Calvin R. Bentsen
Name: Calvin R. Bentsen
Title: Co-Trustee

Address: 100 Savannah Avenue, Suite 360
McAllen, TX 78503

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

BENTSEN INVESTMENT PARTNERSHIP, LTD

By: Beutsen Management, LLC
General Partner

By: /s/ Calvin R. Beutsen
Name: Calvin R. Beutsen
Title: President

Address: 100 Savannah Avenue, Suite 360
McAllen, TX 78503

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

EDWIN H. FRANK, III

/s/ Edwin H. Frank, III
(Signature)

Address: _____
_____

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

667, L.P. (account #1)

BY: BAKER BROS. ADVISORS LP, management company and investment adviser to **667, L.P.**, pursuant to authority granted to it by Baker Biotech Capital, L.P., general partner to 667, L.P., and not as the general partner.

By: /s/ Scott Lessing
Scott Lessing
President

Address: Baker Brothers Investments
667 Madison Avenue, 21st Floor
New York, NY 10065
Attn: Scott L. Lessing

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

667, L.P. (account #2)

BY: BAKER BROS. ADVISORS LP, management company and investment adviser to **667, L.P.**, pursuant to authority granted to it by Baker Biotech Capital, L.P., general partner to 667, L.P., and not as the general partner.

By: /s/ Scott Lessing
Scott Lessing
President

Address: Baker Brothers Investments
667 Madison Avenue, 21st Floor
New York, NY 10065
Attn: Scott L. Lessing

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

BAKER BROTHERS LIFE SCIENCES, L.P.

By: BAKER BROS. ADVISORS LP, management company and investment adviser to **Baker Brothers Life Sciences, L.P.**, pursuant to authority granted to it by Baker Brothers Life Sciences Capital, L.P., general partner to Baker Brothers Life Sciences, L.P., and not as the general partner.

By: /s/ Scott Lessing

Scott Lessing
President

Address: Baker Brothers Investments
667 Madison Avenue, 21st Floor
New York, NY 10065
Attn: Scott L. Lessing

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

PREFERRED HOLDER:

14159, L.P.

By: **BAKER BROS. ADVISORS LP**, management company and investment adviser to **14159, L.P.**, pursuant to authority granted to it by 14159 Capital, L.P., general partner to 14159, L.P., and not as the general partner.

By: /s/ Scott Lessing
Scott Lessing
President

Address: Baker Brothers Investments
667 Madison Avenue, 21st Floor
New York, NY 10065
Attn: Scott L. Lessing

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

KEVIN M. SLAWIN

/s/ Kevin M. Slawin
(Signature)

Address:

SPOUSE:

By: /s/ Jordana Slawin
Name: Jordana Slawin
Spouse of Kevin M. Slawin, M.D.

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

JORDANA SLAWIN 2012 FAMILY TRUST

By: /s/ Jordana Roteman Slawin
Name: Jordana Roteman Slawin
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

KEVIN SLAWIN, TRUSTEE OF THE KEVIN SLAWIN 2009 FAMILY TRUST

By: /s/ Kevin M. Slawin
Name: Kevin M. Slawin, M.D.
Title: Trustee

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

DAVID M. SPENCER, PH.D.

/s/ David M. Spencer
(Signature)

Address:

SPOUSE:

By: /s/ Zsofia Intody
Name: Zsofia Intody
Spouse of David M. Spencer

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

THOMAS J. FARRELL

/s/ Thomas J. Farrell
(Signature)

Address:

IN WITNESS WHEREOF, each of the Parties hereto has executed this Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMMON HOLDER:

KERYL A. ROWDEN

/s/ Keryl A. Rowden
(Signature)

Address:

Exhibit 4.3

INVESTOR RIGHTS AGREEMENT

BETWEEN

BELLICUM PHARMACEUTICALS, INC.

AND

ARIAD GENE THERAPEUTICS, INC.

AND

ARIAD PHARMACEUTICALS, INC.

1.	Registration Rights	1
2.	Covenants of the Company	2
3.	Co-Sale Rights	4
4.	Percentage Maintenance	6
5.	Observer Rights	8
6.	Miscellaneous	9

INVESTOR RIGHTS AGREEMENT

This **INVESTOR RIGHTS AGREEMENT** (the "**Agreement**") is made as of July 25, 2006, by and between Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "**Company**" or "**Bellicum**") having a place of business at Twelve Greenway Plaza, Suite 1380, Houston, Texas 77046, and ARIAD Pharmaceuticals, Inc., and ARIAD Gene Therapeutics, Inc., both Delaware corporations with their principal place of business at 26 Landsdowne Street, Cambridge, Massachusetts 02139 (collectively, the "**Investor**").

WHEREAS, the Company and the Investor have entered into a License Agreement (the "**License Agreement**") regarding certain proprietary Licensed Patents and Licensed Technology (as those terms are defined in the License Agreement; and

WHEREAS, the Company has issued and sold (and in the future will issue and sell) to the Investor certain shares of its common stock, par value $.01 per share (the "**Common Stock**") pursuant to a Stock Purchase Agreement of even date herewith (the "**Stock Purchase Agreement**"); and

WHEREAS, as a condition to entering into the Stock Purchase Agreement, the Company has agreed to grant the Investor certain rights and covenants set forth herein;

NOW, THEREFORE, in consideration of the premises and mutual agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, and intending to be legally bound hereby, the parties hereto agree as follows. Initially capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Stock Purchase Agreement:

1. Registration Rights. The Company hereby covenants and agrees with the Investor that at such time as the Company extends piggyback registration rights to any purchaser

of the Company's preferred stock or Convertible Securities it will extend piggyback registration rights to the Investor, which will be identical in scope and priority, with the initial grant of piggyback registration rights granted to any purchaser of at least one million dollars ($1,000,000) of the Company's preferred stock or Convertible Securities and will be transferable to any person or entity to which Investor transfers not less than 50,000 shares of Common Stock, as adjusted to reflect stock splits, stock dividends, recapitalizations similar divisions and combinations.

2. Covenants of the Company.

2.1 Delivery of Financial Statements to Investor. The Company shall deliver to the Investor, as long as the Investor holds not less than 100,000 shares of Common Stock of the Company, as adjusted to reflect stock splits, stock dividends, recapitalizations similar divisions and combinations:

(a) as soon as practicable, but in any event within one hundred eighty (180) days after the end of each fiscal year of the Company, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholder's equity as of the end of such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("**GAAP**"), and audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within thirty (30) days after the end of each of the first three (3) quarters of each fiscal year of the Company, beginning with the quarter ending June 30, 2006, an unaudited profit or loss statement for such fiscal quarter and an unaudited balance sheet as of the end of such fiscal quarter.

(c) with respect to the financial statements called for in subsection (b) of this Section 2.1, an instrument executed by the Chief Financial Officer or Chief Executive

Officer of the Company and certifying that such financial statements were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (with the exception of footnotes that may be required by GAAP) and fairly present the financial condition of the Company and its results of operations for the period specified, subject to year-end audit adjustment.

(d) at such time at substantially similar financial reporting rights are granted to a purchaser of the Company's preferred stock, the provisions of Section 2.1 shall be automatically amended to conform to the provisions of such grant, and the entitlement of the Investor to receive financial information pursuant to Section 2.1 shall be deemed satisfied by the delivery to Investor of the information required to be provided to such preferred stock investors.

2.2 Limitation on Access to Information. The information provided by the Company pursuant to Section 2.1 shall be treated as Confidential Information as defined in the License Agreement and shall be subject to Article 5 thereof; **provided**, that, notwithstanding anything to the contrary in Section 2.1 above, the Company reserves the right not to provide information to the Investor (i) if delivery of such information to the Investor would result in disclosure to the Investor of (A) proprietary or strategic information relating to the Company's corporate partnering programs other than those involving a Sublicense under the License Agreement, (B) the Company's know-how or confidential trade secrets other than Bellicum Technology (as defined in the License Agreement) or (C) information subject to attorney-client privilege, **provided**, **further**, that nothing contained in this Section 2.2 shall limit the Investor's rights or the Company's obligations under the License Agreement or the Stock Purchase Agreement.

2.3 Termination of Information; Assignment. The covenants set forth in Section 2.1 shall terminate as to the Investor and be of no further force or effect on the earlier of the Equity Termination Date or when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the 1934 Act. The rights to receive and have access to information relating to the Company pursuant to Section 2.1 may be assigned (but only with all related obligations) by the Investor in the event of a merger, consolidation or sale of all or substantially all of the assets of the Investor or as a result of the assignment by the Investor of all of its rights hereunder, provided (a) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such information rights are being assigned; and (b) such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement and enters into a confidentiality agreement with the Company containing substantially similar confidentiality obligations to the Company as those contained in the License Agreement.

3. Co-Sale Rights.

3.1 (a) In the event that Kevin Slawin, M.D. or any transferee of his in a transaction not subject to this Article 3 pursuant to Section 3.1(d) (the "**Co-Sale Offeree**") receives a bona fide offer from a third party or parties, other than the Company or any Permitted Transferee (as defined below) (the "**Co-Sale Offeror**"), to acquire any of his equity in the Company (the "**Take-Along Shares**") for a specified price payable in cash or otherwise and on specified terms and conditions (the "**Co-Sale Offer**"), and the Co-Sale Offeree proposes to sell or otherwise transfer any or all of the Take-Along Shares to the Co-Sale Offeror pursuant to the Co-Sale Offer, Investor shall have the right to sell to the Co-Sale Offeror, at the same price per

share and on the same terms and conditions as stated in the Co-Sale Offer, such number of shares equal to the Take-Along Shares multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock owned by Investor and the denominator of which shall be the sum of the number of shares of Common Stock (assuming exercise or conversion of all Convertible Securities) owned by the Co-Sale Offeree plus the number of shares of Common Stock (assuming exercise or conversion of all Convertible Securities) owned by the Investor. Promptly upon receipt of a Co-Sale Offer, the Co-Sale Offeree will send a copy of the document outlining the terms of the proposed transfer to the Investor (with a copy to the Company), which shall include the name of the proposed transferee, the proposed purchase price per share, the terms of payment of such purchase price and all other matters relating to such sale (the "**Proposal**").

(b) If Investor wishes to participate in any sale pursuant to Section 3.1(a) it shall notify the Co-Sale Offeree in writing of such intention and the number of shares it wishes to sell pursuant to this Section 3.1(b) not later than twenty (20) days after delivery of the Proposal. If the Co-Sale Offeree does not receive such notice from Investor within such twenty (20) day period, the Co-Sale Offeree shall, subject to the provision of Section 3.1(b), be free to consummate the proposed transaction without any obligation to include shares owned by Investor in such transaction.

(c) The Co-Sale Offeree and Investor, after having provided timely notice, shall sell to the Co-Sale Offeror all of the shares proposed to be sold by them at not less than the price and upon other terms and conditions, if any, not more favorable to the Co-Sale Offeror than those stated in the Co-Sale Offer.

(d) The restrictions on transfer contained in this Section 3.1 shall not apply to transfers by any Co-Sale Offeree (a) to such Co-Sale Offeree's children or other member of such Co-Sale Offeree's immediate family, or to a trust for the sole benefit of such persons, (b) to a limited liability company or family limited partnership controlled by such Co-Sale Offeree, (c) to such Co-Sale Offeree's guardian or conservator, (d) in the event of such Co-Sale Offeree's death, to such Co-Sale Offeree's executor(s) or administrator(s), or (e) to Bellicum pursuant to the Plan and any related restricted stock agreement or stock option agreement; provided that such transferee agrees in writing to be bound by the provisions of this Section 3 as a Co-Sale Offeree.

(e) The Co-Sale rights set forth in this Article 3 (i) shall be transferable to any person or entity to which Investor transfers not less than 100,000 shares of Common Stock, as adjusted to reflect stock splits, stock dividends, recapitalizations similar divisions and combinations, and (ii) shall terminate on the Equity Termination Date as defined in the Stock Purchase Agreement.

4. Percentage Maintenance.

4.1 **Notice of New Issuance**. From and after the date of consummation of a Qualified Financing, except with respect to "Exempt Issuances" as defined in Paragraph 4.3 below, in the event that the Company issues any shares of Common Stock or any Convertible Securities, the Company will deliver to Investor a written notice (the "Offer Notice") upon the completion of such issuance (the "New Issuance"), stating the price and other terms and conditions thereof.

4.2 **Right to Purchase Shares or Convertible Securities**. Subject to Paragraph 3.3 hereof, in the event of a New Issuance (other than an Exempt Issuance), Investor

shall have the right to purchase all (or any portion) of a number of shares of Common Stock or Convertible Securities at the price and on the terms upon which the New Issuance was made, such price to be paid in full in cash or by check at the time of issuance of such securities to Investor so that, after giving effect to the issuance to Investor and the conversion, exercise and exchange into or for (whether directly or indirectly) shares of Common Stock of all such Convertible Securities, Investor will continue to maintain its same proportionate ownership of Common Stock as of the date immediately preceding the New Issuance, treating Investor for the purpose of such computation, as the holder of the number of shares of Common Stock which would be issuable to it upon conversion, exercise and exchange of all Convertible Securities held by them on the date immediately preceding the New Issuance and assuming the like conversion, exercise and exchange of all such securities held by other persons. The rights set forth in this Paragraph 4.2 shall be exercised by Investor, if at all, by written notice to the Company delivered not later than thirty (30) days after the receipt by Investor of the Offer Notice in accordance with the terms and conditions stated therein, and such right shall expire at the end of the thirtieth day after the day of the receipt by Investor of the Offer Notice.

4.3 Exempt Issuances. The issuances referred to in Paragraph 4.1 which will not give Investor the rights described in Paragraph 4.2 (the "Exempt Issuances") are issuances in which shares of Common Stock or Rights or Convertible Securities of the Company are issued (i) upon conversion of the preferred stock of the Company or any other Convertible Securities outstanding as of the date of this Agreement, (ii) as a dividend, stock split or distribution payable pro rata to all holders of Common Stock or Convertible Securities; (iii) to employees, officers, directors or consultants of the Company pursuant to the Company's Stock Plan, (iv) in a Dilutive Financing or (v) in a transaction the primary purpose of which is other than financing the Company, including but not limited to an equipment lease or loan, a license, a strategic alliance or an acquisition.

4.4. Assignment. The rights granted to Investor under this Paragraph 4 shall be assignable to any party to which the Investor transfers not less than 100,000 shares of Common Stock, as adjusted to reflect stock splits, stock dividends, recapitalizations similar divisions and combinations.

4.5 Termination. The rights granted under this Paragraph 4 shall terminate immediately before the consummation by the Company of an Initial Public Offering or a Company Sale.

5. Observer Rights. For so long as the Investor owns not less than 100,000 shares of Common Stock, as adjusted to reflect stock splits, stock dividends, recapitalizations similar divisions and combinations, from and after the Effective Date, one representative of Investor (the "**Observer**"), shall be entitled to (a) be present at all meetings of the Board of Directors of Bellicum or any Executive Committee thereof, and (b) notification of any such meetings, including such meetings' time and place, in the same manner as the Directors of the Company. The Observer shall have the same access to information concerning the business and operations of Bellicum and at the same time as the directors of Bellicum. Notwithstanding the above, the Observer shall not be a director. As such, the Observer shall not have the right to vote at any meetings. Bellicum, in its sole discretion, reserves the right to exclude any Observer from all or part of any meeting of the Board of Directors of Bellicum to the extent reasonably necessary to protect confidential information of Bellicum to which Investor is not entitled under the License Agreement or maintain a legal privilege with respect to information of Bellicum. Notwithstanding anything to the contrary herein, the prohibitions and rights provided in this Section 4 will terminate upon the Equity Termination Date. The rights granted under this Paragraph 5 are personal to the Investor and may not be assigned.

6. Miscellaneous.

6.1 Successors and Assigns; Subsequent Parties. The terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and permitted assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement. Subject to the terms of this Agreement, no party hereby may assign its rights or obligations hereunder without the prior written consent of the other parties; provided, however, that either party may, without the written consent of the other party, assign this Agreement and its rights and delegate its obligations hereunder in connection with the transfer or sale of all or substantially all of such party's assets or business related to this Agreement or in the event of its merger, consolidation, change in control or similar transaction. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 6.1 or another express provision of this Agreement shall be void.

6.2 Governing Law. This Agreement will be construed, interpreted and applied in accordance with the laws of the State of Delaware (excluding its body of law controlling conflicts of law).

6.3 Counterparts. This Agreement may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

6.4 Waiver. The terms or conditions of this Agreement may be waived only by a written instrument executed by the Party waiving compliance. The failure of either party at any time or times to, require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either party of any condition or term shall be deemed as a continuing waiver of such condition or term or of another condition or term.

6.5 Headings. Section and subsection headings are inserted for convenience of reference only and do not form part of this Agreement.

6.6 Force Majeure. Neither party shall be liable for failure of or delay in performing obligations set forth in this Agreement, and neither shall be deemed in breach of its obligations, if such failure or delay is due to natural disasters or any causes beyond the reasonable control of such party. In event of such *force majeure*, the party affected thereby shall use reasonable efforts to cure or overcome the same and resume performance of its obligations hereunder.

6.7 Notices. Unless otherwise provided, all notices, requests, consents and other communications hereunder shall be in writing, shall be addressed to the receiving party's address set forth below or to such other address as a party may designate by notice hereunder, and shall be either (i) delivered by hand, (ii) made by telecopy or facsimile transmission, (iii) sent by overnight courier providing evidence of delivery, or (iv) sent by registered or certified mail, return receipt requested, postage prepaid.

If to the Company:	Bellicum Pharmaceuticals, Inc. Twelve Greenway Plaza, Suite 1380 Houston, TX 77046 Attn: Chief Executive Officer
With a copy to:	Bracewell & Giuliani, LLP South Tower Pennzoil Place 711 Louisiana St, STE 2300 Houston, Texas 77002-2770 Attn: William D. Gutermuth, Esq.
If to the Investor:	ARIAD Pharmaceuticals, Inc. 26 Landsdowne Street Cambridge, MA 02139 Attn: Chief Executive Officer
With a copy to:	Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 Attn: Jeffrey M. Wiesen, Esquire Facsimile: (617) 542-2241

All notices, requests, consents and other communications hereunder shall be deemed to have been given either (i) if by hand, at the time of the delivery thereof to the receiving party at the address of such party set forth above, (ii) if made by telecopy or facsimile transmission, at the time that receipt thereof has been acknowledged by electronic confirmation or otherwise, (iii) if sent by overnight courier, on the next business day following the day such notice is delivered to the courier service, or (iv) if sent by registered or certified mail, on the fifth business day following the day such mailing is made.

6.8 Expenses. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

6.9 Amendments. Any term of this Agreement may be amended only with the written consent of the Company and the Investor; provided, however, that any amendment to the provisions of Section 3 shall require the written consent of Kevin M. Slawin, M.D.

6.10 Severability. If any provision(s) of this Agreement are or become invalid, are ruled illegal by any court of competent jurisdiction or are deemed unenforceable under then current applicable law from time to time in effect during the term hereof, it is the intention of the parties that the remainder of this Agreement shall not be affected thereby provided that a party's rights under this Agreement are not materially affected. The parties hereto covenant and agree to renegotiate any such term, covenant or application thereof in good faith in order to provide a reasonably acceptable alternative to the term, covenant or condition of this Agreement or the application thereof that is invalid, illegal or unenforceable, it being the intent of the parties that the basic purposes of this Agreement are to be effectuated.

6.11 Entire Agreement. This is the entire Agreement between the Parties with respect to the subject matter hereof and supersedes all prior representations, understandings and agreements between the Parties with respect to the subject matter hereof.

6.12 Construction. The parties hereby acknowledge and agree that: (i) each party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (ii) the rule of construction to the effect that any ambiguities are resolved against the drafting party shall not be employed in the interpretation of this Agreement; and (iii) the terms and provisions of this Agreement shall be construed fairly as to all parties hereto and not in a favor of or against any party, regardless of which party was generally responsible for the preparation of this Agreement.

6.13 Remedies. It is specifically understood and agreed that any breach of the provisions of this Agreement by any person subject hereto will result in irreparable injury to the other parties hereto, that the remedy at law alone will be an inadequate remedy for such breach, and that, in addition to any other remedies which they may have, such other parties may enforce their respective rights by actions for specific performance (to the extent permitted by law).

6.14 Status. Nothing in this Agreement is intended or shall be deemed to constitute a partner, agency, employer-employee, or joint venture relationship between the parties.

6.15 Further Assurances. Each party agrees to execute, acknowledge and deliver such further instructions, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

6.16 Counterparts. This Agreement may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

6.17 Authority of ARIAD Pharmaceuticals, Inc. ARIAD Gene Therapeutics, Inc. ("AGTI") hereby appoints ARIAD Pharmaceuticals, Inc. ("API") as its exclusive proxy and agent with respect to its ownership of Common Stock and for all purposes of this Agreement, and hereby instructs Bellicum to deal solely with API and to treat API as if it is the sole owner of the Common Stock owned by AGTI and API. Subject to this Section 6.17, AGTI and API may freely transfer their interest in the Common Stock between them. AGTI and API jointly and severally agree to indemnify and hold Bellicum harmless from any and all loss, costs, liability, claim or expense incurred by the Company as the result of claims against the Company with respect to actions taken in compliance with this instruction. The proxy and grant

of agency authority granted hereby is coupled with an interest and shall not be revocable without the written consent an acknowledgement of the Company, which shall not be unreasonably withheld.

[THE REMAINDER OF THE PAGE IS LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this **Investor Rights Agreement** or caused this Agreement to be executed by their duly authorized representatives, as of the date first written above.

COMPANY:

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Kevin M. Slawin, M.D.
Name: Kevin M. Slawin
Title: President

INVESTOR:

ARIAD PHARMACEUTICALS, INC.

By: /s/ Laurie A. Allen
Laurie A. Allen
Senior Vice President, Legal and Business Development

ARIAD GENE THERAPEUTICS, INC.

By: /s/ Harvey J. Berger
Harvey J. Berger, M.D.
President and Chief Executive Officer

JOINDER OF KEVIN SLAWIN, M.D.:

The undersigned, Kevin M. Slawin, M.D., hereby joins this Agreement solely for purposes of Section 3 and agrees to be bound by the provisions of Section 3.

/s/ Kevin M. Slawin
Kevin M. Slawin, M.D.

BELLICUM PHARMACEUTICALS, INC.
2006 STOCK OPTION PLAN

SECTION 1. Purpose of the Plan. The purpose of this Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan ("*Plan*") is to encourage ownership of common stock, $.01 par value ("*Common Stock*"), of Bellicum Pharmaceuticals, Inc. (the "*Company*") by eligible employees, directors, consultants, and other service providers of the Company and its subsidiaries (hereinafter collectively referred to as the "*Company*") and to provide increased incentive for such employees, directors, consultants, and other service providers to render services and to exert maximum effort for the business success of the Company. Options granted under this Plan will be nonqualified options ("*Nonqualified Options*") which are options which do not qualify as incentive stock options pursuant to Section 422 of the Internal Revenue Code of 1986, as amended (the "*Code*") or options which are intended to qualify as incentive stock options ("*ISOs*").

SECTION 2. Administration of the Plan.

(a) Composition of Committee. The Plan shall be administered by the Board of Directors of the Company ("*Board*") or a committee designated by the Board which shall also designate the chairman of the committee. If the Company is subject to Section 16 of the Securities Exchange Act of 1934, as amended ("*Exchange Act*"), the committee shall be composed of not less than two Non-Employee Directors (within the meaning of such Rule 16b-3 promulgated by the Securities and Exchange Commission ("*Commission*") under the Exchange Act ("*Rule 16b-3*"), each of whom shall be an "outside director" for purposes of Section 162(m)(4) of the Code, and shall be appointed by and serve at the pleasure of the Board. The Board or the committee designated by the Board, both as administrators of the Plan, shall hereinafter be referred to as "*Committee*."

(b) Committee Action. The Committee shall hold its meetings at such times and places as it may determine. A majority of its members shall constitute a quorum, and all determinations of the Committee shall be made by not less than a majority of its members. Any decision or determination reduced to writing and signed by a majority of the members shall be fully effective as if it had been made by a majority vote of its members at a meeting duly called and held. The Committee may designate Company employees to assist the Committee in the administration of the Plan, and may grant authority to such persons to execute option agreements or other documents on behalf of the Committee and the Company.

(c) Committee Expenses. All expenses and liabilities incurred by the Committee in the administration of the Plan shall be borne by the Company. The Committee may employ attorneys, consultants, accountants or other persons.

SECTION 3. Stock Reserved for the Plan. Subject to adjustment as provided in Section 6(j) hereof, the aggregate number of shares of Common Stock that may be optioned under the Plan is 301,500 shares. The shares subject to the Plan shall consist of authorized but unissued shares of Common Stock or previously issued shares of Common Stock reacquired and held by

the Company and such number of shares shall be and is hereby reserved for sale for such purpose. Shares of Common Stock shall be deemed to have been issued under the Plan only to the extent actually issued and delivered pursuant to an option. To the extent that an option lapses or the rights of its Optionee terminate or the option is cashed-out, the Common Stock subject to an option shall again be available for grant of another option. Shares which may remain unsold and which are not subject to outstanding options at the termination of the Plan shall cease to be reserved for the purpose of the Plan, but until termination of the Plan or the termination of the last of the options granted under the Plan, whichever last occurs, the Company shall at all times reserve a sufficient number of shares to meet the requirements of the Plan.

SECTION 4. Eligibility. The persons eligible to participate in the Plan as a recipient of options ("*Optionee*") shall include employees, directors, consultants, and other service providers of the Company at the time the option is granted. An employee, director, consultant, or other service provider who has been granted an option hereunder may be granted an additional option or options, if the Committee shall so determine.

SECTION 5. Grant of Options.

(a) Committee Discretion. Except where the Committee has explicitly given the authority to some other individual, the Committee shall have sole and absolute discretionary authority (i) to determine, authorize, and designate those employees, directors, consultants, and other service providers of the Company who are to receive options under the Plan, (ii) to determine the number of shares of Common Stock to be covered by such options and the terms thereof, and (iii) to determine the type of option granted: ISO, Nonqualified Option or a combination of ISO and Nonqualified Options; provided that an Optionee must be an employee of the Company to receive any ISOs. If the Company is subject to Section 16 of the Exchange Act, the Committee shall specifically pre-approve each grant to each Optionee subject to Section 16(b) of the Exchange Act in accordance with Rule 16b-3 as amended, unless such grant is or will be otherwise exempt from Section 16(b) of the Exchange Act. The Committee shall thereupon grant options in accordance with such determinations as evidenced by a written option agreement. Subject to the express provisions of the Plan, the Committee shall have discretionary authority to prescribe, amend and rescind rules and regulations relating to the Plan, to interpret the Plan, to prescribe and amend the terms of the option agreements (which need not be identical) and to make all other determinations deemed necessary or advisable for the administration of the Plan.

(b) Stockholder Approval. All options granted under this Plan are subject to, and may not be exercised before, the approval of this Plan by the stockholders prior to the first anniversary date of the Board meeting held to approve the Plan, by the affirmative vote of the holders of a majority of the outstanding shares of the Company present, or represented by proxy, and entitled to vote thereat or by written consent in accordance with the laws of the State of Texas, provided that if such approval by the stockholders of the Company is not forthcoming, all options previously granted under this Plan shall be void.

(c) Limitation on Incentive Stock Options. The aggregate number of shares of Common Stock that may be optioned as ISOs under the Plan is 120,000. The aggregate fair market value (determined in accordance with Section 6(b) of this Plan at the time the option is granted) of the Common Stock with respect to which ISOs may be exercisable for the first time by any Optionee during any calendar year under all such plans of the Company and its parent and subsidiary corporations shall not exceed $100,000. To the extent that the aggregate fair market value (determined in accordance with Section 6(b) of this Plan at the time the option is granted) of Common Stock with respect to which ISOs are exercisable for the first time by an individual during any calendar year under all incentive stock option plans of the Company and its parent and subsidiary corporations exceeds $100,000, such ISOs shall be treated as Nonqualified Options as determined by the Committee. The Committee shall determine, in accordance with applicable provisions of the Code, Treasury Regulations and other administrative pronouncements, which of an Optionee's ISOs will not constitute ISOs because of such limitation and shall notify the Optionee of such determination as soon as practicable after such determination.

SECTION 6. Terms and Conditions. Each option granted under the Plan shall be evidenced by an agreement, in a form approved by the Committee, which shall be subject to the following express terms and conditions and to such other terms and conditions as the Committee may deem appropriate and include in such agreement.

(a) Option Period. The Committee shall promptly notify the Optionee of the option grant and a written agreement shall promptly be executed and delivered by and on behalf of the Company and the Optionee, provided that the option grant shall expire if a written agreement is not signed by said Optionee (or his agent or attorney) and returned to the Company within 60 days from date of receipt by the Optionee of such agreement. The date of grant shall be the date the option is actually granted by the Committee, even though the written agreement may be executed and delivered by the Company and the Optionee after that date. Each option agreement shall specify the period for which the option thereunder is granted ("*Option Period*"), which in no event shall exceed the tenth (10th) anniversary date of the date the option is granted.

(b) Option Price. The purchase price of each share of Common Stock subject to each option granted pursuant to the Plan shall be determined by the Committee at the time the option is granted and, in the case of both ISOs and Nonqualified Options, shall not be less than 100% of the fair market value of a share of Common Stock on the date the option is granted, as determined by the Committee. In the case of an ISO granted to an individual who, at the time of grant, owns stock possessing more than 10 percent of the total combined voting power of all classes of stock of the Company or its affiliate ("*Ten Percent Stockholder*"), the option price shall not be less than 110% of the fair market value of a share of Common Stock on the date the option is granted.

For all purposes under this Plan, the fair market value of a share of Common Stock on a particular date shall be equal to the closing sales price of the Common Stock on the exchange on which the Common Stock is traded on that date, or if no prices are reported on that date, on the last preceding date on which such prices of the

Common Stock are so reported. In the event the Common Stock is not publicly traded at the time a determination of its value is required to be made hereunder, the determination of its fair market value shall be made by the Committee in such manner as it deems appropriate, consistent with Treasury regulations and other formal Internal Revenue Service guidance under Code Section 409A so that options granted under this Plan shall not constitute deferred compensation subject to Code Section 409A.

(c) Vesting. Subject to the discretion of the Committee to provide otherwise, all options granted under the Plan shall be subject to mandatory vesting in accordance with the following schedule: 12/48 of the options shall vest on the one (l) year anniversary of the date of grant, and an additional 1/48 of the options shall vest on each subsequent one (1) month anniversary thereafter until all options are fully vested, provided that Optionee remain an eligible employee, director, consultant, or other service provider of the Company and/or its subsidiaries on all such dates. In the event of the termination of Optionee's employment or service with the Company, any options previously granted shall cease to vest on the date of termination and the provisions of Section 6 (g) or (h) shall apply.

(d) Exercise Period. The Committee may provide in the option agreement that an option may be exercised in whole, immediately, or is to be exercisable in increments. However, no portion of any option may be exercised by an Optionee prior to the approval of the Plan by the stockholders of the Company.

(e) Procedure for Exercise. Options shall be exercised by the delivery of (i) written notice to the President of the Company setting forth the number of shares with respect to which the option is being exercised, (ii) cash or cashier's check, bank draft, postal or express money order payable to the order of the Company, or at the option of the Committee, in Common Stock theretofore owned by such Optionee (or any combination of cash and Common Stock) and (iii) executed signature pages of the Shareholders Agreement, if applicable (defined in Section 6(o)), as required in Section 6(o). Notice and the executed signature pages of the Shareholders Agreement may be delivered by fax or telecopy provided that the purchase price of such shares is delivered to the Company via wire transfer on the same day the fax is received by the Company. The notice shall specify the address to which the certificates for such shares are to be mailed. An Optionee shall be deemed to be a stockholder with respect to shares covered by an option on the date the Company receives such written notice, such option payment and such executed signature pages of the Shareholders Agreement.

As promptly as practicable after receipt of such written notification, payment, and executed signature pages, the Company shall deliver to the Optionee certificates for the number of shares with respect to which such option has been so exercised, issued in the Optionee's name or such other name as Optionee directs; provided, however, that such delivery shall be deemed effected for all purposes when a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to the Optionee at the address specified pursuant to this Section 6(d).

(f) Cashless Exercise. In addition to and without limiting the rights of the Optionee under the terms hereof, the Optionee may elect to receive shares of Common Stock equal to the value of an option (or by surrender of the option at the principal office of the Company together with notice of such election in which event the Company shall issue to Optionee the number of the shares of Common Stock computed using the following formula:

$$X=\frac{Y(A-B)}{A}$$

Where

X - The number of shares of Common Stock to be issued to the Optionee on exercise of the options.

Y - The number of options to be exercised (all of which must have the same exercise price).

A - The fair market value of one share of Common Stock.

B - Exercise price of the option on the date of exercise.

No payment of any cash or other consideration to the Company shall be required from the Optionee in connection with any exercise of an option by surrender or exchange pursuant to this Section 6. Such exchange shall be effective upon the date of receipt by the Company of this option surrendered for cancellation and a written request from the Optionee that the exchange pursuant to this Section 6(e) be made, or at such later date as may be specified in such request. No fractional shares arising out of the above formula for determining the number of shares issuable on exercise shall be issued and the Company shall in lieu thereof make payment to the Optionee of cash in the amount of such fraction multiplied by the fair market value of one share of Common Stock.

For the purposes of this Section 6, "fair market value" of a share of Common Stock shall be determined in good faith by the Board in accordance with Code Section 409A.

(g) Termination of Employment or Service. Except to the extent the Committee approves an agreement containing different terms and conditions, the following terms and conditions shall apply:

(1) For Cause. If an Optionee's service with the Company is terminated during the Option Period "For Cause" (as defined below), all options granted to him hereunder, whether exercisable or not, shall thereupon expire. As used in this Plan, the term "*For Cause*" means the commission of an act involving the reckless disregard of one's duties to the Company or any of its subsidiaries, willful misconduct, fraud or the indictment for or conviction of any felony under any applicable United States federal, state or other statute.

(2) Voluntary Termination. If an Optionee voluntarily terminates his service ("*Voluntary Termination*") so that the Optionee no longer serves in any capacity as an employee, a director, a consultant, or a service provider, all options granted to him hereunder, whether exercisable or not, shall thereupon expire upon the 30th day following such Voluntary Termination.

(3) Involuntary Termination. If an Optionee ceases to be employed by the Company or the Company terminates an Optionee's services for any reason other than For Cause, Voluntary Termination, death, or disability ("*Involuntary Termination*"), then all options granted to such Optionee hereunder, whether exercisable or not, shall expire within three (3) months after the date of such Involuntary Termination.

(h) Death or Disability.

(1) In the event an Optionee's service with the Company terminates on account of the Optionee's death or disability so that the Optionee no longer serves in any capacity as an employee, a director, a consultant, or a service provider, then all options hereunder, whether exercisable or not, shall expire on such date which is one year after the date of the Optionee's termination of service on account of the Optionee's death or disability.

(2) An Optionee shall be deemed to be disabled if, in the opinion of a physician selected by the Committee, he is incapable of performing services for the Company of the kind he was performing at the time the disability occurred by reason of any medically determinable physical or mental impairment which can be expected to result in death or to be of long, continued and indefinite duration. The date of determination of disability for purposes hereof shall be the date of such determination by such physician.

(i) Assignability. An option shall not be assignable or otherwise transferable except by will or by the laws of descent. During the lifetime of an Optionee, an option shall be exercisable only by him.

(j) Incentive Stock Options. Each option agreement may contain such terms and provisions as the Committee may determine to be necessary or desirable in order to qualify an option designated as an incentive stock option.

(k) No Rights as Stockholder. No Optionee shall have any rights as a stockholder with respect to shares covered by an option until the option is exercised by the written notice and accompanied by payment as provided in clause (d) above.

(l) Extraordinary Corporate Transactions.

(1) The existence of outstanding options shall not affect in any way the right or power of the Company or its stockholders to make or authorize any or all adjustments, recapitalizations, reorganizations, exchanges, or other similar changes in the Company's capital structure or its business, or any merger or

consolidation of the Company, or any issuance of Common Stock or other securities or subscription rights thereto, or any issuance of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

(2) If the Company recapitalizes or otherwise changes its capital structure, or merges, consolidates, sells all of its assets or dissolves and such transaction is not a Change of Control as defined in Section 6(m) below (each of the foregoing a "*Fundamental Change*"), then thereafter upon any exercise of an option theretofore granted, the Optionee shall be entitled to purchase under such option, in lieu of the number of shares of Common Stock covered by such option, the number and class of shares of stock and securities to which the Optionee would have been entitled pursuant to the terms of the Fundamental Change if, immediately prior to such Fundamental Change, the Optionee had been the holder of record of the number of shares of Common Stock covered by the option.

(3) The issuance by the Company of any other class of securities which is not Common Stock or convertible into Common Stock shall not affect the number of shares of Common Stock subject to options theretofore granted or the purchase price per share, unless the Committee shall determine in its sole discretion than an adjustment is necessary to provide equitable treatment to Optionee.

(m) Change of Control. Each of the following events shall hereinafter be defined as a "*Change of Control*":

(1) the Company shall not be the surviving entity in any merger, consolidation or other reorganization (or survives only as a subsidiary of an entity other than a previously wholly-owned subsidiary of the Company); or

(2) the Company sells, leases, or exchanges all or substantially all of its assets to any other person or entity (other than a wholly-owned subsidiary of the Company); or

(3) the Company is to be dissolved or liquidated; or

(4) any person or entity, including a "group" as contemplated by Section 13(d)(3) of the 1934 Act, acquires or gains ownership or control (including, without limitation, power to vote) of more than 50% of the outstanding shares of the Company's voting stock (based upon voting power); or

(5) as a result of or in connection with a contested election of directors, the persons who were directors of the Company before such election shall cease to constitute a majority of the Board

(n) Occurrence of a Change of Control. Upon the occurrence of an event of Change of Control, all of the options shall immediately vest and become fully exercisable. Notwithstanding the foregoing, the rights of the Optionee to further payments pursuant to any other agreement with the Company following a Change of Control shall not be terminated.

(o) Changes in Company's Capital Structure. If the outstanding shares of Common Stock or other securities of the Company, or both, for which the option is then exercisable shall at any time be changed or exchanged by declaration of a stock dividend, stock split, or combination of shares, the number and kind of shares of Common Stock or other securities which are subject to the Plan or subject to any options theretofore granted, and the option prices, shall be appropriately and equitably adjusted so as to maintain the proportionate number of shares or other securities without changing the aggregate option price.

(p) Acceleration of Options. Notwithstanding anything to the contrary contained in this Plan, the Committee may in its sole discretion accelerate the vesting schedule of any option or the time at or periods in which any option may be exercised. With respect to the foregoing sentence, any Committee actions may vary among individual Optionees and may vary among options held by any individual Optionee.

(q) Stockholders Agreements. The Committee shall provide in the option agreement with respect to any shares of Common Stock purchased pursuant to an option granted under the Plan, that as a condition to and a requirement of receiving any shares of Common Stock upon the exercise of an option granted under this Plan, the Optionee (or the Optionee's representative upon the Optionee's death) shall execute a counterpart of any agreement among stockholders or any other similar agreement placing contractual obligations on shareholders of the Company, including but not limited to those which restrict the ability of such shareholders of the Company to transfer their shares of Common Stock ("*Shareholders Agreements*").

SECTION 7. Amendments or Termination. The Board may amend, alter or discontinue the Plan, but no amendment or alteration shall be made which would impair the rights of any Optionee, without his consent, under any option theretofore granted, or which, without the approval of the stockholders, would: (i) except as is provided in Sections 6(j), (k), (l) and (m) of the Plan, increase the total number of shares reserved for the purposes of the Plan, (ii) change the class of persons eligible to participate in the Plan as provided in Section 4 of the Plan, (iii) extend the applicable maximum option period provided for in Section 6(a) of the Plan, (iv) extend the expiration date of this Plan set forth in Section 13 of the Plan, (v) except as provided in Sections 6(j), (k), (l) and (m) of the Plan, decrease to any extent the option price of any option granted under the Plan or (vi) withdraw the administration of the Plan from the Committee.

SECTION 8. Compliance With Other Laws and Regulations. The Plan, the grant and exercise of options thereunder, and the obligation of the Company to sell and deliver shares under such options, shall be subject to all applicable federal and state laws, rules and regulations and to such approvals by any governmental or regulatory agency as may be required. The

Company shall not be required to issue or deliver any certificates for shares of Common Stock prior to the completion of any registration or qualification of such shares under any federal or state law or issuance of any ruling or regulation of any government body which the Company shall, in its sole discretion, determine to be necessary or advisable. Any adjustments provided for herein in Sections 6(j), (k), (l) and (m) shall be subject to any shareholder action required by Texas corporate law.

SECTION 9. Purchase for Investment. Unless the options and shares of Common Stock covered by this Plan have been registered under the Securities Act of 1933, as amended, or the Company has determined that such registration is unnecessary, each person exercising an option under this Plan may be required by the Company to give a representation in writing that he is acquiring such shares for his own account for investment and not with a view to, or for sale in connection with, the distribution of any part thereof.

SECTION 10. Taxes.

(a) The Company may make such provisions as it may deem appropriate for the withholding of any taxes which it determines is required in connection with any options granted under this Plan.

(b) Notwithstanding the terms of Paragraph 10(a), any portion of the taxes required to be withheld by the Company or paid by the Optionee in connection with the exercise of a Nonqualified Option may be made by the Company by withholding shares of Common Stock, or by the Optionee delivering previously owned shares of Common Stock, having a fair market value, determined in accordance with Section 6(b), equal to the amount required to be withheld or paid, provided that such tax withholding or stock delivery right is otherwise in accordance with Rule 16b-3. An Optionee must make the foregoing election on or before the date that the amount of tax to be withheld is determined ("*Tax Date*"). All such elections are irrevocable and subject to disapproval by the Committee.

SECTION 11. No Right to Employment, Directorship, or Consultant or Service Provider Relationship. An Optionee shall be considered to be in the employment of the Company, in service on the Board, a consultant to the Company or a service provider to the Company so long as he or she remains an employee, director, consultant, or service provider of the Company. Any questions as to whether and when there has been a termination of such employment or service on the Board or consultant or service provider relationship and the cause of such termination shall be determined by the Committee, and its determination shall be final. Nothing contained herein shall be construed as conferring upon Optionee the right to continue in the employ of the Company or to continue service on the Board or to continue in a consultant or service provider relationship, nor shall anything contained herein be construed or interpreted to limit the "employment at will" relationship between Optionee (if the Optionee is an employee) and the Company.

SECTION 12. Liability of Company. The Company which is in existence or hereafter comes into existence shall not be liable to an Optionee or other persons as to:

(a) The Non-Issuance of Shares. The non-issuance or sale of shares as to which the Company has been unable to obtain from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any shares hereunder; and

(b) Tax Consequences. Any tax consequence expected, but not realized, by any Optionee or other person due to the exercise of any option granted hereunder.

SECTION 13. Effectiveness and Expiration of Plan. The Plan shall be effective on the date of its approval and adoption by the Board ("*Effective Date*"). If the stockholders of the Company fail to approve the Plan within twelve months of the date the Board approved the Plan, the Plan shall terminate and all options previously granted under the Plan shall become void and of no effect. The Plan shall expire on the tenth (10th) anniversary date of the Effective Date.

SECTION 14. Non-Exclusivity of the Plan. Neither the adoption by the Board nor the submission of the Plan to the stockholders of the Company for approval shall be construed as creating any limitations on the power of the Board to adopt such other incentive arrangements as it may deem desirable, including without limitation. the granting of stock options otherwise than under the Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

SECTION 15. Governing Law. This Plan and any agreements hereunder shall be interpreted and construed in accordance with the laws of the State of Texas and applicable federal law.

IN WITNESS WHEREOF, and as conclusive evidence of the adoption of the foregoing by directors of the Company, Bellicum Pharmaceuticals, Inc. has caused these presents to be duly executed in its name and behalf by its proper officers thereunto duly authorized as of this 28th day of February, 2006.

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Kevin Slawin, M.D.

Name: Kevin Slawin, M.D.

Title: President

BELLICUM PHARMACEUTICALS, INC.

NONQUALIFIED STOCK OPTION AGREEMENT
(2006 Stock Option Plan)

This Nonqualified Stock Option Agreement ("Option Agreement") is between Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and *[employee]* (the "Optionee").

W I T N E S S E T H:

The Company has heretofore adopted the Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan (the "Plan") for the purpose of providing eligible employees, directors, consultants, and other service providers of the Company and its subsidiaries (collectively hereinafter referred to as the "Company") with increased incentive to render services and to exert maximum effort for the business success of the Company, and to encourage them to remain in the employ or service of the Company. The Company, acting through the Committee (as defined in the Plan), has determined that its interests will be advanced by the issuance to the Optionee of a nonqualified stock option under the Plan.

1. Option. Subject to the terms and conditions contained herein, the Company, effective as of *[date]* (the "Grant Date"), hereby irrevocably grants to the Optionee the right and option ("Option") to purchase from the Company *[number of shares]* shares of the Company's common stock, $0.01 par value ("Common Stock"), at a price of $*[price]* per share, which is not less than 100% of the fair market value of the Common Stock at the Grant Date.

2. Option Period. The Option herein granted may be exercised by the Optionee in whole or in part at any time during a ten year period (the "Option Period") beginning on the Grant Date, subject to the limitation that said Option shall not be exercisable for more than a portion of the aggregate number of shares offered by this Option determined by the Optionee's number of full years of employment or service with the Company from the Grant Date to the date of such exercise, in accordance with the following schedule: 12/48 of the options shall vest on the one (1) year anniversary of the Grant Date, and an additional 1/48 of the options shall vest on each subsequent one (1) month anniversary thereafter until all options are fully vested, provided that Optionee remains an eligible employee, director, consultant, or other service provider of the Company on all such dates. In the event of the termination of Optionee's employment or service with the Company, the shares offered by this Option shall cease to vest on the date of such termination.

Notwithstanding anything in this Option Agreement to the contrary, the Committee, in its sole discretion, may waive the foregoing schedule of vesting and upon written notice to the Optionee, accelerate the earliest date or dates on which the Option granted hereunder is exercisable.

3. Procedure for Exercise. The Option herein granted shall be exercised by the delivery of (i) written notice by the Optionee to the President of the Company setting forth the number of shares of Common Stock with respect to which the Option is to be exercised, (ii)

payment for the shares to be purchased, and (iii) executed signature pages of the Shareholders Agreement, if applicable (as defined in Section 6(q) of the Plan). Payment shall be by means of cash, or a cashier's check, bank draft, postal or express money order payable to the order of the Company, or at the option of the Committee, in Common Stock theretofore owned by the Optionee (or any combination of cash and such Common Stock). Notice and the executed signature pages of the Shareholders Agreement may be delivered by fax or telecopy provided that the exercise price of such shares is received by the Company via wire transfer on the same day the fax or telecopy transmission is received by the Company. The notice also shall specify the address to which the certificates for such shares are to be mailed. The Optionee shall be deemed to be a stockholder with respect to the number of shares for which the Option is being exercised on the date the Company receives such written notice, such option exercise price, and such executed signature pages of the Shareholders Agreement.

4. Termination of Employment or Service. If the Optionee's service with the Company is terminated during the Option Period "For Cause" (as defined in the Plan), the Option, whether exercisable or not, shall thereupon expire.

If the Optionee voluntarily terminates the Optionee's service ("Voluntary Termination") so that the Optionee no longer serves in any capacity as an employee, a director, a consultant, or a service provider, the Option, whether exercisable or not, shall expire upon the 30th day following such Voluntary Termination.

If the Optionee ceases to be employed by the Company or the Company terminates the Optionee's services for any reason other than For Cause, Voluntary Termination, death, or disability ("Involuntary Termination"), then the Option, whether exercisable or not, shall expire three (3) months after the date of such Involuntary Termination.

5. Death or Disability. In the event the Optionee's service with the Company terminates on account of the Optionee's death or disability so that the Optionee no longer serves in any capacity as an employee, a director, a consultant, or a service provider, then the Option, whether exercisable or not, shall expire on such date which is one year after the date of the Optionee's termination of service on account of the Optionee's death or disability. The Optionee shall be deemed to be disabled if, in the opinion of a physician selected by the Committee, the Optionee is incapable of performing services for the Company of the kind the Optionee was performing at the time the disability occurred by reason of any medically determinable physical or mental impairment which can be expected to result in death or to be of long, continued and indefinite duration. The date of determination of disability for purposes hereof shall be the date of such determination by such physician.

6. Transferability. The Option shall not be transferable by the Optionee otherwise than in accordance with the Plan. No such transfer of the Option to heirs or legatees of the Optionee shall be effective to bind the Company unless the Company shall have been furnished with written notice thereof and a copy of such evidence as the Committee may deem necessary to establish the validity of the transfer and the acceptance by the transferee or transferees of the terms and conditions hereof.

7. No Rights as Stockholder. The Optionee shall have no rights as a stockholder with respect to any shares of Common Stock covered by this Option Agreement until the Option is exercised by written notice and accompanied by payment as provided in Section 3 of this Option Agreement.

8. Extraordinary Corporate Transactions. The existence of this Option shall not affect in any way the right or power of the Company or its stockholders to make or authorize any or all adjustments, recapitalizations, reorganizations, exchanges, or other similar changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issuance of Common Stock or other securities or subscription rights thereto, or any issuance of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings, whether of a similar character or otherwise. If the Company goes through a "Fundamental Change" (as defined in the Plan), the Option granted hereunder shall be governed by Section 6 of the Plan.

9. Changes in Capital Structure. If the outstanding shares of Common Stock or other securities of the Company, or both, for which the Option is then exercisable shall at any time be changed or exchanged by declaration of a stock dividend, stock split, or combination of shares, the number and kind of shares of Common Stock or other securities subject to the Plan or subject to the Option, and the exercise price, shall be appropriately and equitably adjusted so as to maintain the proportionate number of shares or other securities without changing the aggregate exercise price.

10. Cashing Out Option. On receipt of written notice of exercise pursuant to Section 3, the Committee may elect to cash out all or part of the portion of the shares of Common Stock for which all or a portion of the Option is being exercised by paying the Optionee an amount, in cash or Common Stock, equal to (i) the excess of the fair market value of the Common Stock over the exercise price, times (ii) the number of shares of Common Stock for which the Option is being exercised on the effective date of such exercise.

11. Compliance with Securities Laws. Upon the acquisition of any shares pursuant to the exercise of the Option herein granted, the Optionee (or any person acting under Section 6) will enter into such written representations, warranties, and agreements as the Company may reasonably request in order to comply with applicable securities laws or with this Option Agreement.

12. Compliance with Laws. Notwithstanding any of the other provisions hereof, the Optionee agrees that the Optionee will not exercise the Option granted hereby, and that the Company will not be obligated to issue any shares pursuant to this Option Agreement, if the exercise of the Option or the issuance of such shares of Common Stock would constitute a violation by the Optionee or by the Company of any provision of any law or regulation of any governmental authority.

13. Purchase for Investment. The Optionee is acquiring shares under this Option for his or her own account for investment and not with a view to, or for sale in connection with, the distribution of any part thereof.

14. Withholding of Tax. To the extent that the exercise of this Option or the disposition of shares of Common Stock acquired by exercise of this Option results in compensation income to the Optionee for federal or state income tax purposes, the Optionee shall pay to the Company at the time of such exercise or disposition such amount of money as the Company may require to meet its obligation under applicable tax laws or regulations and, if the Optionee fails to do so, the Company is authorized to withhold from any cash remuneration then or thereafter payable to the Optionee, any tax required to be withheld by reason of such resulting compensation income or the Company may otherwise refuse to issue or transfer any shares otherwise required to be issued or transferred pursuant to the terms hereof. Payment of the withholding tax by the Optionee shall be made in accordance with Section 10 of the Plan.

15. No Right to Employment or Directorship. The Optionee shall be considered to be in the employment of the Company, in service as a director, a consultant to the Company or a service provider to the Company so long as he or she remains an employee, director, consultant, or service provider of the Company. Any questions as to whether and when there has been a termination of such employment or service as a director or consultant or service provider relationship and the cause of such termination shall be determined by the Committee, and its determination shall be final. Nothing contained herein shall be construed as conferring upon the Optionee the right to continue in the employ of the Company or to continue service as a director or to continue in a consultant or service provider relationship, nor shall anything contained herein be construed or interpreted to limit the “employment at will” relationship between the Optionee (if the Optionee is an employee) and the Company.

16. Resolution of Disputes. As a condition of the granting of the Option hereby, the Optionee and the Optionee’s heirs, personal representatives, and successors agree that any dispute or disagreement which may arise hereunder shall be determined by the Committee in its sole discretion and judgment, and that any such determination and any interpretation by the Committee of the terms of this Option Agreement shall be final and shall be binding and conclusive, for all purposes, upon the Company, the Optionee, and the Optionee’s heirs, personal representatives, and successors.

17. Legends on Certificate. The certificates representing the shares of Common Stock purchased by exercise of the Option will be stamped or otherwise imprinted with legends in such form as the Company or its counsel may require with respect to any applicable restrictions on sale or transfer and the stock transfer records of the Company will reflect stop-transfer instructions with respect to such shares.

18. Notices. Every notice hereunder shall be in writing and shall be given by registered or certified mail. All notices of the exercise of any Option hereunder shall be directed to Twelve Greenway Plaza, Suite 1380, Houston, Texas 77046, Attention: President. Any notice given by the Company to the Optionee directed to the Optionee at the address on file with the Company shall be effective to bind the Optionee and any other person who shall acquire rights hereunder. The Company shall be under no obligation whatsoever to advise the Optionee

of the existence, maturity or termination of any of the Optionee's rights hereunder and the Optionee shall be deemed to have familiarized himself or herself with all matters contained herein and in the Plan which may affect any of the Optionee's rights or privileges hereunder.

19. Construction and Interpretation. Whenever the term "Optionee" is used herein under circumstances applicable to any other person or persons to whom this award, in accordance with the provisions of Section 6 hereof, may be transferred, the word "Optionee" shall be deemed to include such person or persons. References to the masculine gender herein also include the feminine gender for all purposes.

20. Agreement Subject to Plan. This Option Agreement is subject to the Plan. The terms and provisions of the Plan (including any subsequent amendments thereto) are hereby incorporated herein by reference thereto. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan will govern and prevail. All definitions of words and terms contained in the Plan shall be applicable to this Option Agreement.

21. Binding Effect. This Option Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under the Optionee as provided herein.

IN WITNESS WHEREOF, this Nonqualified Stock Option Agreement has been executed as of the day of , .

BELLICUM PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

OPTIONEE

_____

BELLICUM PHARMACEUTICALS, INC.
2011 STOCK OPTION PLAN

SECTION 1. Purpose. The purpose of this Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan ("Plan") is to encourage ownership of common stock, $0.01 par value ("Common Stock"), of Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "Company"), by eligible employees, directors and consultants of the Company and its Affiliates (as defined below) and to provide increased incentive for such employees and directors to render services and to exert maximum effort for the business success of the Company. In addition, the Company expects that this Plan will further strengthen the identification of employees, directors and consultants with the shareholders. Certain options to be granted under this Plan are intended to qualify as incentive stock options ("ISOs") pursuant to Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), while other options granted under this Plan will be nonqualified options which are not intended to qualify as ISOs ("Nonqualified Options"), either or both as provided in the agreements evidencing the options as provided in Section 6 hereof. As used in this Plan, the term "Affiliates" means any "parent corporation" of the Company and any "subsidiary corporation" of the Company within the meaning of Code Sections 424(e) and (f), respectively.

SECTION 2. Administration.

(a) Board or Committee. The Plan shall be administered by the Board of Directors (the "Board") or a Compensation Committee designated by the Board which shall also designate the Chairman of the Compensation Committee. If the Company is subject to Section 16 of the Securities Exchange Act of 1934, as amended ("Exchange Act"), the Compensation Committee shall be composed entirely of not less than two (2) non-employee directors (within the meaning of Rule 16b 3 promulgated by the Securities and Exchange Commission under the Exchange Act ("Rule 16b-3")), each of whom shall be an "outside director" for purposes of Code Section 162(m)(4), and shall be appointed by and serve at the pleasure of the Board. The Board or the Compensation Committee as administrator of the Plan shall hereinafter be referred to as "Committee."

(b) Committee Action. The Committee shall hold its meetings at such times and places as it may determine. A majority of its members shall constitute a quorum, and all determinations of the Committee shall be made by not less than a majority of its members. Any decision or determination reduced to writing and signed by a majority of the members shall be fully effective as if it had been made by a majority vote of its members at a meeting duly called and held. The Committee may designate the Secretary of the Company or other Company employees to assist the Committee in the administration of this Plan, and may grant authority to such persons to execute award agreements or other documents on behalf of the Committee and the Company. Any duly constituted committee of the Board satisfying the qualifications of this Section 2 may be appointed as the Committee.

(c) Committee Expenses. All expenses and liabilities incurred by the Committee in the administration of this Plan shall be borne by the Company. The Committee may employ attorneys, consultants, accountants or other persons.

SECTION 3. Stock Reserved. Subject to adjustment as provided in Section 6 hereof, the maximum aggregate number of shares of Common Stock that may be issued under the Plan is 2,798,500, any or all of which may be issued through ISOs. The shares subject to this Plan shall consist of authorized but unissued shares of Common Stock or previously issued shares of Common Stock reacquired and held by the Company and such number of shares shall be and is hereby reserved for sale for such purpose. Shares of Common Stock shall be deemed to have been issued under the Plan only to the extent actually issued and delivered pursuant to the exercise of an option. To the extent that an option lapses or is canceled or the rights of its Optionee terminate or the option is cashed-out, any Common Stock subject to such option shall again be available for grant under an option. Any shares of Common Stock which may remain unsold and which are not subject to outstanding options at the termination of this Plan shall cease to be reserved for the purpose of this Plan, but until termination of this Plan or the termination of the last of the options granted under this Plan, whichever last occurs, the Company shall at all times reserve a sufficient number of shares to meet the requirements of this Plan. Any shares of Common Stock withheld in payment of the exercise price of an option or to satisfy federal, state or local tax liability shall not count against the share limit set forth above.

SECTION 4. Eligibility. A recipient of an option under the Plan shall be referred to as an "Optionee." Nonqualified Options may be granted to all employees, directors and consultants of the Company or its Affiliates, including Affiliates that become such after adoption of the Plan. ISOs may be granted to all employees of the Company, a "parent corporation" of the Company (within the meaning of Code Section 424(e)) or a "subsidiary corporation" of the Company (within the meaning of Code Section 424(f)), including an entity that becomes a parent corporation or a subsidiary corporation after adoption of the Plan. An Optionee must be an employee, director or consultant at the time the option is granted. An employee, director or consultant who has been granted an option hereunder may be granted an additional option or options, if the Committee shall so determine.

SECTION 5. Grant of Options.

(a) Committee Discretion. Except where the Committee has explicitly given the authority to some other individual, the Committee shall have sole and absolute discretionary authority (i) to select the employees, directors and consultants of the Company or its Affiliates who are to receive options under this Plan, (ii) to determine the number of shares of Common Stock to be covered by such options and the terms thereof, and (iii) to determine the type of option granted: ISOs, Nonqualified Options or a combination of ISOs and Nonqualified Options. If the Company is subject to Section 16 of the Exchange Act, the Committee shall specifically pre-approve each grant to each Optionee subject to Section 16(b) of the Exchange Act in accordance with Rule 16b-3 as amended, unless such grant is or will be otherwise exempt from Section 16(b) of the Exchange Act. The Committee shall thereupon grant options in accordance with such determinations as evidenced by a written option agreement. Subject to the express provisions of this Plan, the Committee shall have discretionary authority to prescribe, amend and rescind rules and regulations relating to this Plan, to interpret this Plan, to prescribe and amend the terms of the option agreements (which need not be identical) and to make all other determinations deemed necessary or advisable for the administration of this Plan.

(b) Shareholder Approval. All ISOs granted under this Plan are subject to, and may not be exercised before, the approval of this Plan by the shareholders prior to the first anniversary date of the Board meeting held to approve the Plan, by the affirmative vote of the holders of a majority of the shares of the Company present, or represented by proxy, and entitled to vote at a meeting at which a quorum is present, or by written consent in accordance with the laws of the United States and the State of Delaware, as may be applicable; provided that if such approval by the shareholders of the Company is not forthcoming, all ISOs previously granted under this Plan shall be void. Nonqualified Options that are granted by the Committee are not subject to the approval of this Plan by the shareholders of the Company and may be exercised in accordance with the terms of the stock option agreement pursuant to which they are granted.

(c) Limitation on Incentive Stock Options. Except as otherwise provided under the Code or applicable regulations, to the extent that the aggregate fair market value (determined in accordance with Section 6(b) of this Plan at the time the option is granted) of the Common Stock with respect to which ISOs (determined without regard to this paragraph) are exercisable for the first time by any Optionee during any calendar year under all plans of the Company and its "parent corporation" or "subsidiary corporations" exceeds $100,000, such options shall be treated as Nonqualified Options.

SECTION 6. Terms and Conditions. Each option granted under this Plan shall be evidenced by an agreement, in a form approved by the Committee, which shall be subject to the following express terms and conditions and to such other terms and conditions as the Committee may deem appropriate.

(a) Option Period. The Committee shall promptly notify the Optionee of the option grant and a written agreement shall promptly be executed and delivered by and on behalf of the Company and the Optionee, provided that the option grant shall expire if a written agreement is not signed by said Optionee (or his agent or attorney) and returned to the Company within 60 days from date of receipt by the Optionee of such agreement. The Committee may, in its discretion, waive or extend the 60-day requirement for a signed agreement. The date of grant shall be the date the option is actually granted by the Committee, even though the written agreement may be executed and delivered by the Company and the Optionee after that date. Each option agreement shall specify the period for which the option thereunder is granted (which in no event shall exceed ten years from the date of grant) and shall provide that the option shall expire at the end of such period. However, in the case of an ISO granted to an individual who, at the time of grant, owns stock possessing more than 10 percent of the total combined voting power of all classes of stock of the Company or its parent corporation or subsidiary corporation ("Ten Percent Stockholder"), such period shall not exceed five years from the date of grant.

(b) Exercise Price. The purchase price of each share of Common Stock subject to each option granted pursuant to this Plan ("exercise price") shall be determined by the Committee at the time the option is granted and shall never be less than 100% of the fair market value of a share of Common Stock on the date the option is granted. In the case of an ISO granted to a Ten Percent Stockholder, the exercise price shall not be less than 110% of the fair market value of a share of Common Stock on the date the option is granted.

For all purposes under this Plan, the fair market value of a share of Common Stock on a particular date shall be equal to the closing sales price of the Common Stock on the exchange on which the Common Stock is traded on that date, or if no prices are reported on that date, on the last preceding date on which such prices of the Common Stock are so reported. In the event the Common Stock is not publicly traded at the time a determination of its value is required to be made hereunder, the determination of its fair market value shall be made by the Committee in such manner as it deems appropriate, consistent with Treasury regulations and other formal Internal Revenue Service guidance under Code Section 409A so that options granted under this Plan shall not constitute deferred compensation subject to Code Section 409A.

(c) Exercise Period. The Committee may provide in the option agreement that an option may be exercised immediately or over the period of the grant and in whole or in increments. However, no portion of any ISO may be exercisable by an Optionee prior to the approval of this Plan by the shareholders of the Company.

(d) Procedure for Exercise. Options shall be exercised by the delivery by the Optionee of written notice to the Secretary of the Company setting forth the number of shares of Common Stock with respect to which the option is being exercised. The notice shall be accompanied by (i) cash, cashier's check, bank draft, or postal or express money order payable to the order of the Company, (ii) if allowed under the terms of the Option agreement, certificates representing shares of Common Stock theretofore owned by the Optionee duly endorsed for transfer to the Company, (iii) for a Nonqualified Option, if allowed under the terms of the Option agreement, an election by the Optionee to have the Company withhold the number of shares of Common Stock the fair market value of which is equal to the aggregate exercise price of the shares of Common Stock issuable upon exercise of the option, (iv) such other consideration as may be approved by the Committee from time to time to the extent permitted by applicable law, or (v) any combination of the preceding, equal in value to the full amount of the exercise price. Notice may also be delivered by telecopy provided that the exercise price of such shares is received by the Company via wire transfer on the same day the telecopy transmission is received by the Company. The notice shall specify the address to which the certificates for such shares are to be mailed. An option to purchase shares of Common Stock in accordance with this Plan shall be deemed to have been exercised immediately prior to the close of business on the date (i) written notice of such exercise and (ii) payment in full of the exercise price for the number of shares for which options are being exercised, are both received by the Company and the Optionee shall be treated for all purposes as the record holder of such shares of Common Stock as of such date.

As promptly as practicable after receipt of such written notice and payment, the Company shall deliver to the Optionee certificates for the number of shares with respect to which such option has been so exercised, issued in the Optionee's name or such other name as Optionee directs; provided, however, that such delivery shall be deemed effected for all purposes when a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to the Optionee at the address specified pursuant to this Section 6(d).

(e) Termination of Employment or Service. If, for any reason other than death or disability, an Optionee ceases to be employed by the Company or its Affiliates or ceases to serve on the Board or as a consultant, an option previously granted to the Optionee under the Plan may be exercised (to the extent the Optionee would have been entitled to do so at the date of termination of employment or cessation of serving on the Board or as a consultant) at any time and from time to time during the period prescribed in the option agreement; provided, however, that in the event no period is specified in the option agreement the exercise period shall be three months from the date of termination of employment or date of cessation of serving on the Board or as a consultant; and provided, further, that for an ISO the exercise period shall not exceed three months. In no event may any option be exercised after its expiration under the terms hereof or of the option agreement. Notwithstanding anything to the contrary contained herein or in any option agreement, if an Optionee's employment or service on the Board or as a consultant is terminated because of the Optionee's theft or embezzlement from the Company, disclosure of trade secrets of the Company or the commission of a willful, felonious act while in the employment of the Company or while in service on the Board or as a consultant, or for "cause" as such term is defined in any employment or consulting agreement to which such Optionee is a party, (such reasons shall hereinafter be collectively referred to as "for cause"), then any option granted under the Plan to said Optionee shall expire upon such termination of employment or cessation of serving on the Board or as a consultant; provided, however, the Committee, in its sole discretion, may allow an Optionee to exercise all or a portion of the options granted but unexercised for a period of time after the Optionee's termination of employment or cessation of serving on the Board or as a consultant.

In the event an Optionee dies while the Optionee is employed by the Company or its Affiliates or while the Optionee serves on the Board or as a consultant, or the Optionee's employment or service ceases because the Optionee is determined to be disabled, an option previously granted to the Optionee may be exercised (to the extent the Optionee would have been entitled to do so at the date of death or the termination of employment or service) at any time and from time to time during the period prescribed in the option agreement; provided, however, that in the event no period is specified in the option agreement the exercise period shall be one year from the date of death or termination of employment or cessation of serving on the Board or as a consultant. Notwithstanding the foregoing, for an ISO the exercise period shall not exceed three months after such death or termination of employment or service (after which period the option will expire). In no event may any option be exercised after its expiration under the terms of the option agreement. In the case of disability, the option may be exercised by the Optionee or his guardian or legal representative, and in the case of death by the executor or administrator of the Optionee's estate or by the person or persons to whom the Optionee's rights under the option shall pass by will or the laws of descent and distribution. An Optionee shall be deemed to be disabled if, in the opinion of a physician selected by the Committee, the Optionee is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.

(f) Transferability. An option granted pursuant to this Plan shall not be assignable or otherwise transferable by the Optionee otherwise than by Optionee's will or

by the laws of descent and distribution. During the lifetime of an Optionee, an option shall be exercisable only by such Optionee or his authorized legal representative. Any heir or legatee of the Optionee shall take rights granted herein and in the option agreement subject to the terms and conditions hereof and thereof. No such transfer of any option to heirs or legatees of the Optionee shall be effective to bind the Company unless the Company shall have been furnished with written notice thereof and a copy of such evidence as the Committee may deem necessary to establish the validity of the transfer and the acceptance by the transferee or transferees of the terms and conditions hereof.

(g) Incentive Stock Options. Each option agreement may contain such terms and provisions as the Committee may determine to be necessary or desirable in order to qualify under the Code an option designated as an ISO.

(h) No Rights as Shareholder. No Optionee shall have any rights as a shareholder with respect to shares covered by an option until the option is exercised by written notice and accompanied by payment as provided in Section 6(d) above.

(i) Extraordinary Corporate Transactions. The existence of outstanding options shall not affect in any way the right or power of the Company or its shareholders to make or authorize any or all adjustments, recapitalizations, reorganizations, exchanges, or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issuance of Common Stock or other securities or subscription rights thereto, or any issuance of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise. If the Company merges, consolidates, sells all of its assets or dissolves (each of the foregoing a "Fundamental Change"), then thereafter upon any exercise of an option theretofore granted the Optionee shall be entitled to purchase under such option, in lieu of the number of shares of Common Stock as to which such option shall then be exercisable, the number and class of shares of stock and securities to which the Optionee would have been entitled pursuant to the terms of the Fundamental Change if, immediately prior to such Fundamental Change, the Optionee had been the holder of record of the number of shares of Common Stock as to which such option is then exercisable. The provisions contained in this paragraph shall not terminate any rights of the Optionee to further payments pursuant to any other agreement with the Company following a Corporate Change.

(j) Changes in Capital Structure. If the outstanding shares of Common Stock or other securities of the Company, or both, for which an option is then exercisable shall at any time be changed or exchanged by declaration of a stock dividend, stock split, combination of shares, recapitalization or reorganization, the number and kind of shares of Common Stock or other securities which are subject to this Plan or subject to any options theretofore granted, and the exercise prices, shall be appropriately and equitably adjusted so as to maintain the proportionate number of shares or other securities without changing the aggregate exercise price.

(k) No Adjustment. Except as hereinbefore expressly provided, (i) the issuance by the Company of shares of stock or any class of securities convertible into shares of stock of any class, for cash, property, labor or services, upon direct sale, upon the exercise of rights or warrants to subscribe therefor, or upon conversion of shares or obligations of the Company convertible into such shares or other securities, (ii) the payment of a dividend in property other than Common Stock, or (iii) the occurrence of any similar transaction, and in any case whether or not for fair value, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number of shares of Common Stock subject to options theretofore granted or the purchase price per share, unless the Committee shall determine, in its sole discretion, that an adjustment is necessary to provide equitable treatment to Optionees.

(l) Acceleration of Options. Notwithstanding anything to the contrary contained in this Plan, the Committee may, in its sole discretion, accelerate the time at which any option may be exercised, including, but not limited to, upon the occurrence of the events specified in this Section 6.

SECTION 7. Amendments or Termination. The Board may amend, alter or discontinue this Plan, but no amendment or alteration shall be made which would impair the rights of any Optionee, without his consent, under any option theretofore granted. No amendment shall be effective unless approved by the shareholders of the Company to the extent shareholder approval is necessary to satisfy any applicable law, rule, regulation or securities exchange listing requirement (including, but not limited to, Rule 16b 3, any rule promulgated by the exchange on which Common Stock is tradable, or Section 422 of the Code or any successor provisions).

SECTION 8. Compliance With Other Laws and Regulations. This Plan, the grant and exercise of options thereunder, and the obligation of the Company to sell and deliver shares under such options, shall be subject to all applicable federal and state laws, rules and regulations and to such approvals by any governmental or regulatory agency as may be required. The Company shall not be required to issue or deliver any certificates for shares of Common Stock prior to the completion of any registration or qualification of such shares under any federal or state law or issuance of any ruling or regulation of any government body which the Company shall, in its sole discretion, determine to be necessary or advisable. Any adjustments provided for in Sections 6(i), (j) and (k) of this Plan shall be subject to any shareholder action required by Delaware corporate law.

SECTION 9. Purchase for Investment. Unless the options and shares of Common Stock covered by this Plan have been registered under the Securities Act of 1933, as amended, or the Company has determined that such registration is unnecessary, each person exercising an option under this Plan may be required by the Company to give a representation in writing that such person is acquiring such shares for his or her own account for investment and not with a view to, or for sale in connection with, the distribution of any part thereof.

SECTION 10. Taxes.

(a) The Company may make such provisions as it may deem appropriate for the withholding of any taxes which it determines is required in connection with any options granted under this Plan.

(b) Notwithstanding the terms of paragraph (a), any Optionee may pay all or any portion of the taxes required to be withheld by the Company or paid by him in connection with the exercise of a Nonqualified Option by electing to have the Company withhold shares of Common Stock, or by delivering previously owned shares of Common Stock, having a fair market value, determined in accordance with Section 6(b), equal to the amount required to be withheld or paid; provided that such tax withholding or stock delivery right was specifically pre-approved by the Committee as a feature of the option or is otherwise approved in accordance with Rule 16b-3, if applicable. An Optionee must make the foregoing election on or before the date that the amount of tax to be withheld is determined. All such elections are irrevocable and subject to disapproval by the Committee.

SECTION 11. Replacement of Options. The Committee from time to time may permit an Optionee under this Plan to surrender for cancellation any unexercised outstanding option and receive from the Company in exchange an option for such number of shares of Common Stock as may be designated by the Committee. The Committee may, with the consent of the person entitled to exercise any outstanding option, amend such option.

SECTION 12. No Right to Employment or Service. Optionees shall be considered to be in the employment of the Company or its Affiliates or in service on the Board or as a consultant so long as they remain employees or directors or consultants of the Company or its Affiliates. Any questions as to whether and when there has been a termination of such employment or service on the Board or as a consultant and the cause of such termination shall be determined by the Committee, and its determination shall be final. Nothing contained herein or as a result of any option granted pursuant to this Plan shall be construed as conferring upon the Optionee the right to continue in the employ of the Company or its Affiliates or to continue to serve on the Board or as a consultant, nor shall anything contained herein be construed or interpreted to limit the “employment at will” relationship between the Optionee and the Company or its Affiliates. The option agreements may contain such provisions as the Committee may approve with reference to the effect of approved leaves of absence.

SECTION 13. Liability of Company. The Company and any Affiliate which is in existence or hereafter comes into existence shall not be liable to an Optionee or other persons as to:

(a) The non issuance or sale of shares as to which the Company has been unable to obtain from any regulatory body having jurisdiction the authority deemed by the Company’s counsel to be necessary to the lawful issuance and sale of any shares hereunder; and

(b) Any tax consequence expected, but not realized, by any Optionee or other person due to the exercise of any option granted hereunder.

SECTION 14. Effectiveness and Expiration of Plan. This Plan shall be effective on the date of its approval and adoption by the Board. If the shareholders of the Company fail to approve this Plan within twelve months of the date of the Board adoption, this Plan shall terminate and all options previously granted under this Plan shall become void and of no effect. This Plan shall expire ten years after the date the Board adopts this Plan and thereafter no option shall be granted pursuant to this Plan.

SECTION 15. Non Exclusivity of this Plan. Neither the adoption by the Board nor the submission of the Plan to the stockholders of the Company for approval shall be construed as creating any limitations on the power of the Board to adopt such other incentive arrangements as it may deem desirable, including without limitation, the granting of restricted stock or stock options otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

SECTION 16. Governing Law. This Plan and any agreements hereunder shall be interpreted and construed in accordance with the laws of the State of Delaware and applicable federal law.

Signature Page Follows

IN WITNESS WHEREOF, and as conclusive evidence of the adoption of the foregoing by the directors of the Company, Bellicum Pharmaceuticals, Inc. has caused these presents to be duly executed in its name and on its behalf by its proper officers thereunto, duly authorized, as of this 9th day of November, 2011.

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

BELLICUM PHARMACEUTICALS, INC.

INCENTIVE STOCK OPTION AGREEMENT

This Incentive Stock Option Agreement ("Option Agreement") is between Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and ("Optionee"), who agree as follows:

(a) Introduction. The Company has heretofore adopted the Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan, as amended, (the "Plan") for the purpose of providing eligible employees, directors and consultants of the Company and its Affiliates (as defined in the Plan) with increased incentive to render services, to exert maximum effort for the business success of the Company and to strengthen the identification of such individuals with the shareholders. The Company, acting through the Committee (as defined in the Plan), has determined that its interests will be advanced by the issuance to Optionee of an incentive stock option under the Plan.

(b) Option. Subject to the terms and conditions contained herein, the Company hereby irrevocably grants to Optionee the right and option ("Option") to purchase from the Company shares of the Company's common stock, $0.01 par value ("Common Stock"), at a price of $ per share. The Option is intended to qualify as an incentive stock option pursuant to Section 422 of the Internal Revenue Code of 1986, as amended.

(c) Option Period. The Option herein granted may be exercised by Optionee in whole or in part at any time during a ten year period (the "Option Period") beginning on (the "Date of Grant"), to the extent vested in accordance with the terms of this Option Agreement. Optionee's Option shall vest in accordance with the following schedule: ***[Insert Vesting Schedule] [12/48 of the Optionee's Option shall vest on the one (1) year anniversary of the Date of Grant, and an additional 1/48 of the Optionee's Option shall vest on each subsequent one (1) month anniversary thereafter] [1/48 of the Optionee's Option shall vest on the one (1) month anniversary of the Date of Grant, and an additional 1/48 of the Optionee's Option shall vest on each subsequent one (1) month anniversary thereafter] [25% of the Optionee's Option shall vest on the Date of Grant, with an additional 25% on each anniversary thereafter]*** until the entire Option is fully vested, provided that Optionee remains an eligible employee of the Company on all such dates. In the event of the termination of Optionee's employment with the Company, the shares offered by this Option shall cease to vest on the date of such termination.

Notwithstanding anything in this Option Agreement to the contrary, the Committee, in its sole discretion, may waive the foregoing schedule of vesting and upon written notice to Optionee, accelerate the earliest date or dates on which any of the Options granted hereunder are exercisable.

(d) Procedure for Exercise. The Option herein granted may be exercised by the delivery by Optionee of written notice to the Secretary of the Company setting forth the number of shares of Common Stock with respect to which the Option is being exercised. The notice shall be accompanied by, at the election of Optionee, (1) cash, cashier's check, bank draft, or postal or express money order payable to the order of the Company, (2) certificates representing shares of Common Stock theretofore owned by Optionee duly endorsed for transfer

to the Company, (3) an election by Optionee to have the Company withhold the number of shares of Common Stock the fair market value of which is equal to the aggregate exercise price of the shares of Common Stock issuable upon exercise of the Option, or (4) any combination of the preceding, equal in value to the aggregate exercise price. Notice may also be delivered by telecopy provided that the exercise price of such shares is received by the Company via wire transfer on the same day the telecopy transmission is received by the Company. The notice shall specify the address to which the certificates for such shares are to be mailed. This Option shall be deemed to have been exercised immediately prior to the close of business on the date (1) written notice of such exercise and (2) payment in full of the exercise price for the number of share for which Options are being exercised, are both received by the Company and Optionee shall be treated for all purposes as the record holder of such shares of Common Stock as of such date.

As promptly as practicable after receipt of such written notice and payment, the Company shall deliver to Optionee certificates for the number of shares with respect to which such Option has been so exercised, issued in Optionee's name or such other name as Optionee directs; provided, however, that such delivery shall be deemed effected for all purposes when a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to Optionee at the address specified pursuant to this Section 4.

(e) Termination of Employment.

(1) If the Optionee's employment with the Company is terminated during the Option Period "for Cause" (as defined in the Plan), the Option, whether exercisable or not, shall thereupon expire.

(2) If the Optionee voluntarily terminates the Optionee's employment ("Voluntary Termination"), ***[other than for Good Reason (as such term is defined in the Optionee's employment agreement with the Company)]***, so that the Optionee no longer serves in any capacity as an employee, the Option, whether exercisable or not, shall expire upon the thirtieth (30th) day following such Voluntary Termination.

(3) If the Optionee ***[terminates her employment for Good Reason (as defined in the Optionee's employment agreement with the Company) or otherwise]*** ceases to be employed by the Company for any reason other than as a result of a termination for Cause, a Voluntary Termination, death, or disability ("Involuntary Termination"), then the Option, whether exercisable or not, shall expire three (3) months following the date of such termination.

(f) Death or Disability. In the event that Optionee dies or Optionee's employment ceases because Optionee is determined to be disabled, the Option may be exercised (to the extent Optionee would have been entitled to do so at the date of death or termination of employment) at any time and from time to time, within a three-month period after such death or termination of employment, by Optionee or her guardian or legal representative or, in the case of death, the executor or administrator of Optionee's estate or by the person or persons to whom Optionee's rights under this Option Agreement shall pass by will or the laws of descent and distribution (after which period the Option shall expire), but in no event may the Option be exercised after the expiration of the Option Period. Optionee shall be deemed to be disabled if, in the opinion of a physician selected by the Committee, Optionee is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months.

(g) Transferability. This Option shall not be transferable by Optionee otherwise than by Optionee's will or by the laws of descent and distribution. During the lifetime of Optionee, the Option shall be exercisable only by Optionee or her authorized legal representative. Any heir or legatee of Optionee shall take rights herein granted subject to the terms and conditions hereof. No such transfer of this Option Agreement to heirs or legatees of Optionee shall be effective to bind the Company unless the Company shall have been furnished with written notice thereof and a copy of such evidence as the Committee may deem necessary to establish the validity of the transfer and the acceptance by the transferee or transferees of the terms and conditions hereof.

(h) No Rights as Shareholder. Optionee shall have no rights as a shareholder with respect to any shares of Common Stock covered by this Option Agreement until the Option is exercised by written notice and accompanied by payment as provided in Section 4 of this Option Agreement.

(i) Extraordinary Corporate Transactions. The existence of outstanding Options shall not affect in any way the right or power of the Company or its shareholders to make or authorize any or all adjustments, recapitalizations, reorganizations, exchanges or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issuance of Common Stock or other securities or subscription rights thereto, or any issuance of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings, whether of a similar character or otherwise. If the Company goes through a "Fundamental Change" (as defined in the Plan), the Options granted hereunder shall be governed by Section 6 of the Plan.

(j) Change of Control. Upon the occurrence of an event of Change of Control, all of the Options covered by this Agreement shall immediately vest and become fully exercisable. Notwithstanding the foregoing, the rights of the Optionee to further payments pursuant to any other agreement with the Company following a Change of Control shall not be terminated. For the purposes of this Agreement, each of the following events shall hereinafter be defined as a "Change of Control":

(1) the Company shall not be the surviving entity in any merger, consolidation or other reorganization (or survives only as a subsidiary of an entity other than a previously wholly-owned subsidiary of the Company); or

(2) the Company sells, leases, or exchanges all or substantially all of its assets to any other person or entity (other than a wholly-owned subsidiary of the Company); or

(3) the Company is to be dissolved or liquidated; or

(4) any person or entity, including a "group" as contemplated by Section 13(d)(3) of the 1934 Act, acquires or gains ownership or control (including, without limitation, power to vote) of more than 50% of the outstanding shares of the Company's voting stock (based upon voting power); or

(5) as a result of or in connection with a contested election of directors, the persons who were directors of the Company before such election shall cease to constitute a majority of the Board.

(k) Changes in Capital Structure. If the outstanding shares of Common Stock or other securities of the Company, or both, for which the Option is then exercisable shall at any time be changed or exchanged by declaration of a stock dividend, stock split, combination of shares, recapitalization or reorganization, the number and kind of shares of Common Stock or other securities subject to the Plan or subject to the Option, and the exercise price, shall be appropriately and equitably adjusted so as to maintain the proportionate number of shares or other securities without changing the aggregate exercise price.

(l) Shareholder Agreement. Optionee, or Optionee's representative upon Optionee's death, prior to the exercise of an Option granted hereunder, agrees to enter into a form of shareholders agreement in a form requested by the Company to which other holders of Common Stock acquired through the exercise of an Option issued under the Plan are subject.

(m) Compliance With Securities Laws. Upon the acquisition of any shares pursuant to the exercise of the Option herein granted, Optionee (or any person acting under Section 7) will enter into such written representations, warranties and agreements as the Company may reasonably request in order to comply with applicable securities laws or with this Option Agreement.

(n) Compliance With Laws. Notwithstanding any of the other provisions hereof, Optionee agrees that he or she will not exercise the Option granted hereby, and that the Company will not be obligated to issue any shares pursuant to this Option Agreement, if the exercise of the Option or the issuance of such shares of Common Stock would constitute a violation by Optionee or by the Company of any provision of any law or regulation of any governmental authority.

(o) Withholding of Tax. To the extent that the exercise of this Option or the disposition of shares of Common Stock acquired by exercise of this Option results in compensation income to Optionee for federal or state income tax purposes, Optionee shall pay to the Company at the time of such exercise or disposition such amount of money as the Company may require to meet its obligation under applicable tax laws or regulations and, if Optionee fails to do so, the Company is authorized to withhold from any cash remuneration then or thereafter payable to Optionee, any tax required to be withheld by reason of such resulting compensation income or Company may otherwise refuse to issue or transfer any shares otherwise required to be issued or transferred pursuant to the terms hereof. Payment of the withholding tax by Optionee shall be made in accordance with Section 10 of the Plan.

(p) No Right to Employment. Optionee shall be considered to be in the employment of the Company or its Affiliates so long as she or she remains an employee of the Company or its Affiliates. Any questions as to whether and when there has been a termination of such employment and the cause of such termination shall be determined by the Committee, and its determination shall be final. Nothing contained herein shall be construed as conferring upon Optionee the right to continue in the employ of the Company or its Affiliates, nor shall anything contained herein be construed or interpreted to limit the "employment at will" relationship between Optionee and the Company or its Affiliates.

(q) Resolution of Disputes. As a condition of the granting of the Option hereby, Optionee and Optionee's heirs, personal representatives and successors agree that any dispute or disagreement which may arise hereunder shall be determined by the Committee in its sole discretion and judgment, and that any such determination and any interpretation by the Committee of the terms of this Option Agreement shall be final and shall be binding and conclusive, for all purposes, upon the Company, Optionee, and Optionee's heirs, personal representatives and successors.

(r) Legends on Certificate. The certificates representing the shares of Common Stock purchased by exercise of the Option will be stamped or otherwise imprinted with legends in such form as the Company or its counsel may require with respect to any applicable restrictions on sale or transfer and the stock transfer records of the Company will reflect stop transfer instructions with respect to such shares.

(s) Notices. Every notice hereunder shall be in writing and shall be given by registered or certified mail. All notices of the exercise of any Option hereunder shall be directed to Bellicum Pharmaceuticals, Inc., 2130 West Holcombe Boulevard, Suite 850, Houston, TX 77030, Attention: Secretary. Any notice given by the Company to Optionee directed to Optionee at the address on file with the Company shall be effective to bind Optionee and any other person who shall acquire rights hereunder. The Company shall be under no obligation whatsoever to advise Optionee of the existence, maturity or termination of any of Optionee's rights hereunder and Optionee shall be deemed to have familiarized himself or herself with all matters contained herein and in the Plan which may affect any of Optionee's rights or privileges hereunder.

(t) Construction and Interpretation. Whenever the term "Optionee" is used herein under circumstances applicable to any other person or persons to whom this award, in accordance with the provisions of Section 7 hereof, may be transferred, the word "Optionee" shall be deemed to include such person or persons.

(u) Agreement Subject to Plan. This Option Agreement is subject to the Plan. The terms and provisions of the Plan (including any subsequent amendments thereto) are hereby incorporated herein by reference thereto. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan will govern and prevail. All definitions of words and terms contained in the Plan shall be applicable to this Option Agreement.

(v) Binding Effect. This Option Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee as provided herein.

(w) Entire Agreement; Amendment. This Option Agreement and any other agreements and instruments contemplated by this Option Agreement contain the entire agreement of the parties, and this Option Agreement may be amended only in writing signed by both parties.

[Signature Page Follows]

IN WITNESS WHEREOF, this Stock Option Agreement has been executed as of the day of .

BELLICUM PHARMACEUTICALS, INC.

By: _____
Name: Thomas J. Farrell
Title: President & CEO

OPTIONEE

By: _____
Name:

BELLICUM PHARMACEUTICALS, INC.
NONQUALIFIED STOCK OPTION AGREEMENT

This Nonqualified Stock Option Agreement ("Option Agreement") is between Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and ("Optionee"), who agree as follows:

Section 1) Introduction. The Company has heretofore adopted the Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan (the "Plan") for the purpose of providing eligible employees, directors and consultants of the Company and its Affiliates (as defined in the Plan) with increased incentive to render services, to exert maximum effort for the business success of the Company and to strengthen the identification of such individuals with the shareholders. The Company, acting through the Committee (as defined in the Plan), has determined that its interests will be advanced by the issuance to Optionee of a nonqualified stock option under the Plan.

Section 2) Option. Subject to the terms and conditions contained herein, the Company hereby irrevocably grants to Optionee the right and option ("Option") to purchase from the Company shares of the Company's common stock, $0.01 par value ("Common Stock"), at a price of $ per share.

Section 3) Option Period. The Option herein granted may be exercised by Optionee in whole or in part at any time during a ten year period (the "Option Period") beginning on (the "Date of Grant") *[Insert Vesting Provisions] [Employment Based Vesting Schedule-, subject to the limitation that said Option shall not be exercisable for more than a percentage of the aggregate number of shares offered by this Option determined by the number of full years of employment with the Company or its Affiliates from the Date of Grant to the date of such exercise, in accordance with the following schedule:*

Number of Full Years	*[Percentage/Number] of Shares Purchasable]*

Notwithstanding anything in this Option Agreement to the contrary, the Committee, in its sole discretion, may waive the foregoing schedule of vesting and upon written notice to Optionee, accelerate the earliest date or dates on which any of the Options granted hereunder are exercisable.

Section 4) Procedure for Exercise. The Option herein granted may be exercised by the delivery by Optionee of written notice to the Secretary of the Company setting forth the number of shares of Common Stock with respect to which the Option is being exercised. The notice shall be accompanied by, at the election of Optionee, (i) cash, cashier's check, bank draft, or postal or express money order payable to the order of the Company, (ii) certificates representing shares of Common Stock theretofore owned by Optionee duly endorsed for transfer to the

Company, (iii) an election by Optionee to have the Company withhold the number of shares of Common Stock the fair market value of which is equal to the aggregate exercise price of the shares of Common Stock issuable upon exercise of the Option, or (iv) any combination of the preceding, equal in value to the aggregate exercise price. Notice may also be delivered by telecopy provided that the exercise price of such shares is received by the Company via wire transfer on the same day the telecopy transmission is received by the Company. The notice shall specify the address to which the certificates for such shares are to be mailed. This Option shall be deemed to have been exercised immediately prior to the close of business on the date (i) written notice of such exercise and (ii) payment in full of the exercise price for the number of share for which Options are being exercised, are both received by the Company and Optionee shall be treated for all purposes as the record holder of such shares of Common Stock as of such date.

As promptly as practicable after receipt of such written notice and payment, the Company shall deliver to Optionee certificates for the number of shares with respect to which such Option has been so exercised, issued in Optionee's name or such other name as Optionee directs; provided, however, that such delivery shall be deemed effected for all purposes when a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to Optionee at the address specified pursuant to this Section 4.

Section 5) Termination of Employment. If, for any reason other than death or disability, Optionee ceases to be employed by the Company or its Affiliates or ceases to serve as a director or consultant, the Option may be exercised (to the extent Optionee would have been entitled to do so at the date of termination of employment or cessation of serving as a director or consultant) during a *[three month* **(Note: or any other period – three months is the maximum allowable period for ISOs)** *period after such date (after which period the Option shall expire)]*, but in no event may the Option be exercised after the expiration of the Option Period; *provided, however, that if Optionee's employment or service as a director or consultant is terminated because of Optionee's theft or embezzlement from the Company, disclosure of trade secrets of the Company or the commission of a willful, felonious act while in the employment of the Company or while in service as a director (such reasons shall hereinafter be collectively referred to as "for cause"), then the Option or unexercised portion thereof shall expire upon such termination of employment or cessation of serving as a director or consultant.]* **OR** *[shall expire upon the date of such termination of employment or cessation of serving as a director or consultant; provided, however, the Committee, in its sole discretion, may allow Optionee to exercise all or a portion of the Option granted but unexercised for a period of time after Optionee's termination of employment or cessation of serving as a director or consultant]*.

In the event that Optionee dies or Optionee's employment or service ceases because Optionee is determined to be disabled, the Option may be exercised (to the extent Optionee would have been entitled to do so at the date of death or termination of employment) at any time and from time to time, within a *[one-year]* **[Note: or any other period – one year is the maximum period for ISOs]** period after such death or termination of employment, by Optionee or his guardian or legal representative or, in the case of death, the executor or administrator of

Optionee's estate or by the person or persons to whom Optionee's rights under this Option Agreement shall pass by will or the laws of descent and distribution (after which period the Option shall expire), but in no event may the Option be exercised after the expiration of the Option Period. Optionee shall be deemed to be disabled if, in the opinion of a physician selected by the Committee, Optionee is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.

Section 6) Transferability. This Option shall not be transferable by Optionee otherwise than by Optionee's will or by the laws of descent and distribution. During the lifetime of Optionee, the Option shall be exercisable only by Optionee or his authorized legal representative. Any heir or legatee of Optionee shall take rights herein granted subject to the terms and conditions hereof. No such transfer of this Option Agreement to heirs or legatees of Optionee shall be effective to bind the Company unless the Company shall have been furnished with written notice thereof and a copy of such evidence as the Committee may deem necessary to establish the validity of the transfer and the acceptance by the transferee or transferees of the terms and conditions hereof.

Section 7) No Rights as Shareholder. Optionee shall have no rights as a shareholder with respect to any shares of Common Stock covered by this Option Agreement until the Option is exercised by written notice and accompanied by payment as provided in Section 4 of this Option Agreement.

Section 8) Extraordinary Corporate Transactions. The existence of outstanding Options shall not affect in any way the right or power of the Company or its shareholders to make or authorize any or all adjustments, recapitalizations, reorganizations, exchanges or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issuance of Common Stock or other securities or subscription rights thereto, or any issuance of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings, whether of a similar character or otherwise. If the Company goes through a "Fundamental Change" (as defined in the Plan), the Options granted hereunder shall be governed by Section 6 of the Plan.

[Upon the occurrence of an event of Change of Control, all of the Options covered by this Agreemenet shall immediately vest and become fully exercisable. Notwithstanding the foregoing, the rights of the Optionee to further payments pursuant to any other agreement with the Company following a Change of Control shall not be terminated. For the purposes of this Agreement, each of the following events shall hereinafter be defined as a "Change of Control":

(1) the Company shall not be the surviving entity in any merger, consolidation or other reorganization (or survives only as a subsidiary of an entity other than a previously wholly-owned subsidiary of the Company); or

(2) the Company sells, leases, or exchanges all or substantially all of its assets to any other person or entity (other than a wholly-owned subsidiary of the Company); or

(3) the Company is to be dissolved or liquidated; or

(4) any person or entity, including a "group" as contemplated by Section 13(d)(3) of the 1934 Act, acquires or gains ownership or control (including, without limitation, power to vote) of more than 50% of the outstanding shares of the Company's voting stock (based upon voting power); or

(5) as a result of or in connection with a contested election of directors, the persons who were directors of the Company before such election shall cease to constitute a majority of the Board.]

Section 9) Changes in Capital Structure. If the outstanding shares of Common Stock or other securities of the Company, or both, for which the Option is then exercisable shall at any time be changed or exchanged by declaration of a stock dividend, stock split, combination of shares, recapitalization or reorganization, the number and kind of shares of Common Stock or other securities subject to the Plan or subject to the Option, and the exercise price, shall be appropriately and equitably adjusted so as to maintain the proportionate number of shares or other securities without changing the aggregate exercise price.

[Section 10) Shareholder Agreement. Optionee, or Optionee's representative upon Optionee's death, prior to the exercise of an Option granted hereunder, agrees to enter into the Company's Shareholders Agreement.]

Section 11) Compliance With Securities Laws. Upon the acquisition of any shares pursuant to the exercise of the Option herein granted, Optionee (or any person acting under Section 6) will enter into such written representations, warranties and agreements as the Company may reasonably request in order to comply with applicable securities laws or with this Option Agreement.

Section 12) Compliance With Laws. Notwithstanding any of the other provisions hereof, Optionee agrees that he or she will not exercise the Option granted hereby, and that the Company will not be obligated to issue any shares pursuant to this Option Agreement, if the exercise of the Option or the issuance of such shares of Common Stock would constitute a violation by Optionee or by the Company of any provision of any law or regulation of any governmental authority.

Section 13) Withholding of Tax. To the extent that the exercise of this Option or the disposition of shares of Common Stock acquired by exercise of this Option results in compensation income to Optionee for federal or state income tax purposes, Optionee shall pay to the Company at the time of such exercise or disposition such amount of money as the Company may require to meet its obligation under applicable tax laws or regulations and, if Optionee fails to do so, the Company is authorized to withhold from any cash remuneration then or thereafter

payable to Optionee, any tax required to be withheld by reason of such resulting compensation income or Company may otherwise refuse to issue or transfer any shares otherwise required to be issued or transferred pursuant to the terms hereof. Payment of the withholding tax by Optionee shall be made in accordance with Section 10 of the Plan.

Section 14) No Right to Employment or Directorship. Optionee shall be considered to be in the employment of the Company or its Affiliates or in service as a director or consultant so long as he or she remains an employee, director or consultant of the Company or its Affiliates. Any questions as to whether and when there has been a termination of such employment or service as a director or consultant and the cause of such termination shall be determined by the Committee, and its determination shall be final. Nothing contained herein shall be construed as conferring upon Optionee the right to continue in the employ of the Company or its Affiliates or to continue service as a director or consultant, nor shall anything contained herein be construed or interpreted to limit the "employment at will" relationship between Optionee and the Company or its Affiliates.

Section 15) Resolution of Disputes. As a condition of the granting of the Option hereby, Optionee and Optionee's heirs, personal representatives and successors agree that any dispute or disagreement which may arise hereunder shall be determined by the Committee in its sole discretion and judgment, and that any such determination and any interpretation by the Committee of the terms of this Option Agreement shall be final and shall be binding and conclusive, for all purposes, upon the Company, Optionee, and Optionee's heirs, personal representatives and successors.

Section 16) Legends on Certificate. The certificates representing the shares of Common Stock purchased by exercise of the Option will be stamped or otherwise imprinted with legends in such form as the Company or its counsel may require with respect to any applicable restrictions on sale or transfer and the stock transfer records of the Company will reflect stop-transfer instructions with respect to such shares.

Section 17) Notices. Every notice hereunder shall be in writing and shall be given by registered or certified mail. All notices of the exercise of any Option hereunder shall be directed to Bellicum Pharmaceuticals, Inc., 6400 Fannin Street, Suite 2300, Houston, TX 77030, Attention: Secretary. Any notice given by the Company to Optionee directed to Optionee at the address on file with the Company shall be effective to bind Optionee and any other person who shall acquire rights hereunder. The Company shall be under no obligation whatsoever to advise Optionee of the existence, maturity or termination of any of Optionee's rights hereunder and Optionee shall be deemed to have familiarized himself or herself with all matters contained herein and in the Plan which may affect any of Optionee's rights or privileges hereunder.

Section 18) Construction and Interpretation. Whenever the term "Optionee" is used herein under circumstances applicable to any other person or persons to whom this award, in accordance with the provisions of Section 6 hereof, may be transferred, the word "Optionee" shall be deemed to include such person or persons.

Section 19) Agreement Subject to Plan. This Option Agreement is subject to the Plan. The terms and provisions of the Plan (including any subsequent amendments thereto) are hereby incorporated herein by reference thereto. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan will govern and prevail. All definitions of words and terms contained in the Plan shall be applicable to this Option Agreement.

Section 20) Binding Effect. This Option Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee as provided herein.

Section 21) Entire Agreement; Amendment. This Option Agreement and any other agreements and instruments contemplated by this Option Agreement contain the entire agreement of the parties, and this Option Agreement may be amended only in writing signed by both parties.

IN WITNESS WHEREOF, this Nonqualified Stock Option Agreement has been executed as of the day of , .

BELLICUM PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

OPTIONEE

_____

Exhibit 10.6

BELLICUM PHARMACEUTICALS, INC.

SECOND AMENDED & RESTATED EMPLOYMENT AGREEMENT

This SECOND AMENDED & RESTATED EMPLOYMENT AGREEMENT, dated as of November 9, 2011, is by and between Bellicum Pharmaceuticals, Inc. a Delaware corporation (the "**Company**"), having an office at 6400 Fannin Street, Suite 2300, Houston, Texas 77030 ("**Company Premises**") and Thomas J. Farrell, an individual, residing at 910 Barton Creek Blvd, Austin, Texas 78746 ("**Executive**").

WHEREAS, the Executive is currently employed by the Company as its Chief Executive Officer pursuant to an Amended and Restated Employment Agreement dated as of June 1, 2008, and the Company desires to continue employment of the Executive as its Chief Executive Officer and the Executive agrees to be retained by the Company in such capacity;

WHEREAS, the Company desires to retain the Executive as its President and the Executive agrees to be retained by the Company in such additional capacity;

WHEREAS, the Company and Executive desire to enter into this Second Amended and Restated Employment Agreement (the "**Agreement**" or "**Employment Agreement**") in order to memorialize the amended terms and conditions of the Executive's employment by the Company;

WHEREAS, Executive's agreement to and compliance with the provisions in Sections 9 through 11 of this Agreement are a material factor, material inducement and material condition to the Company's entering into this Employment Agreement. Moreover, Executive acknowledges that a substantial portion of the value of the employment of the Executive is Executive's promises to refrain from competing with the Company as identified in Sections 9 through 11 of this Agreement;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the parties agree as follows:

1. **Term of Employment**. Except for earlier termination as provided in Section 6 hereof, Executive's employment under this Agreement shall be for an additional term of one year beginning on the date of this Employment Agreement, and the term of this Employment Agreement shall automatically be extended for one additional year unless either the Company or Executive gives written notice to the other at least thirty (30) days before such extension would otherwise occur of the Company's or Executive's election not to extend the term; provided, further, that notwithstanding anything to the contrary set forth in this Agreement, this Agreement may be terminated earlier as provided in Section 6. "**Employment Term**" as used herein shall mean the term of this Agreement, without giving effect to any extensions thereof not yet effected.

2. **Position**. During the Employment Term, Executive shall serve as the President ("**President**") and Chief Executive Officer ("**CEO**") of the Company. Executive's duties under this Agreement shall be to serve as President and CEO with the responsibilities, rights, authority and duties pertaining to such offices as are established from time to time by the Board of Directors of the Company (the "**Board**"), and Executive shall report to the Board. Executive

shall also act as an officer and/or director and/or manager of such Affiliates of the Company as may be designated by the Board from time to time, commensurate with Executive's office, all without further compensation, other than as provided in this Agreement. As used herein, "**Affiliate**" means any entity that directly or indirectly controls, is controlled by, or is under common control with, the Company.

3. **Commitment**. Executive will devote substantially all of his business time and best efforts to the performance of his duties hereunder, and shall spend at least six days per month in Houston, Texas, at the Company Premises; provided, however, that Executive shall be allowed, to the extent that such activities do not interfere with the performance of his duties and responsibilities hereunder and do not conflict with the financial, fiduciary or other interests of the Company (or its affiliates), as determined in the sole discretion of the Board, to manage his passive personal investments and to serve on corporate, civic, charitable and industry boards or committees, and to provide support to PTV Sciences for as long as PTV Sciences provides an office for the Company's use in Austin, Texas, such support not to exceed eight hours per month. Notwithstanding the foregoing, the Executive agrees that he shall only serve on for-profit boards of directors or for-profit advisory committees if such service is approved in advance in the sole discretion of the Board.

4. **Compensation**.

(a) Base Salary. During the Executive's employment with the Company, the Company shall pay Executive a base salary at the annual rate of THREE HUNDRED FIFTY THOUSAND AND NO/100 DOLLARS ($350,000.00) ("**Base Salary**"), which, when paid as provided for under Section 4(b), shall be payable in accordance with the standard payroll practices of the Company.

(b) Annual Performance Bonus. For each calendar year beginning in 2011, the Executive shall be eligible to receive an annual performance bonus ("**Annual Performance Bonus**") from the Company, which shall be determined and paid in accordance with the terms of Exhibit A, attached hereto. Payment of the Annual Performance Bonus shall be expressly conditioned upon the Executive's employment with the Company on the date that the Annual Performance Bonus is otherwise payable; provided however, in the event the Executive's employment is terminated by the Company without Cause as defined in Section 6(c) or the Executive terminates his employment for Good Reason as defined in Section 6(e), the Annual Performance Bonus shall be prorated and paid notwithstanding the fact that Executive is not employed with the Company on the date that the Annual Performance Bonus is otherwise payable. The Annual Performance Bonus shall be payable within ninety (90) days after the end of the calendar year for which it is payable. The amount, if any, of the Annual Performance Bonus shall be determined by the Board acting within its sole discretion, but based on the parameters set forth on Exhibit A.

(c) Option Award. On the same day this Agreement is executed, the Company has awarded options to the Executive pursuant to the Option Grant Agreement attached as Exhibit B.

(d) Reimbursement of Business Expenses. The Company shall reimburse Executive for reasonable travel and other business expenses incurred by Executive in the performance of

his duties hereunder, in accordance with the Company's policies as in effect from time to time. Company shall reimburse Executive for Executive's reasonable travel costs from Austin to Houston and reasonable accommodation costs in Houston related to the Executive's work for the Company.

5. **Benefits**. During the Employment Term and subject to applicable eligibility requirements, Executive shall be entitled to participate in all benefit plans and arrangements and fringe benefits and programs that may be provided to senior executives of the Company in the future. Executive is entitled to participate in personal time off and holiday benefits, with personal time off to be not less than twenty-seven (27) days on an annual basis, accruing at nine (9) hours per twice monthly pay period. Ten (10) days of personal time off may be carried over to the next year.

6. **Termination**.

(a) Termination. The employment of Executive under this Agreement shall terminate prior to the expiration of the Employment Term upon the earliest to occur of any of the following events:

(i) the death of the Executive;

(ii) the termination of the Executive's employment by the Company due to the Executive's Disability pursuant to Section 6(b) hereof;

(iii) the termination of the Executive's employment by the Executive other than for Good Reason (as hereinafter defined); however, Executive is required to provide 30 (thirty) days written notice to the Board of Executive's intention to terminate Executive's employment;

(iv) the termination of the Executive's employment by the Company without Cause;

(v) the termination of the Executive's employment by the Company for Cause pursuant to Section 6(c); or

(vi) the termination by the Executive of the Executive's employment for Good Reason (as hereinafter defined) pursuant to Section 6(e).

(b) Disability. The Company may terminate Executive's employment for Disability at any time upon thirty (30) days written notice provided to Executive. For purposes of this Agreement, "**Disability**" means that Executive has been unable, for ninety (90) consecutive days, or for periods aggregating one hundred and twenty (120) business days in any period of twelve consecutive months, to perform Executive's duties under this Agreement, as a result of physical or mental impairment, illness or injury, as determined in good faith by the Board. A termination of Executive's employment for Disability shall be communicated to Executive by written notice, and shall be effective on the 10th day after sending such notice to Executive (the "**Disability Effective Date**"), unless Executive returns to performance of Executive's duties before the Disability Effective Date.

(c) Cause. Subject to the notification provision of Section 6(d) below, Executive's employment hereunder may be terminated by the Company for Cause. For purposes of this Agreement, the term "**Cause**" shall mean (i) Executive's willful misconduct which is demonstrably and materially injurious to the Company's reputation, financial condition, or business relationships; (ii) the failure of Executive to attempt in good faith to follow the legal written direction of the Board; (iii) the failure by the Executive to attempt in good faith to perform the duties required of him hereunder (other than any such failure resulting from incapacity due to physical or mental illness) after a written demand for substantial performance is delivered to the Executive by the Board which specifically identifies the manner in which it is believed that the Executive has failed to attempt to perform his duties hereunder; (iv) the Executive being convicted of, indicted for, or pleading guilty or nolo contendere to, a felony or any crime involving dishonesty, fraud or moral turpitude; (v) the Executive's dishonesty with regard to the Company or in the performance of his duties hereunder, which in either case has a material adverse effect on the Company; (vi) the Executive's material breach of this Agreement unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach; or, (vii) Executive's failure to comply in any material respect with the Company's policies and/or procedures, unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach.

(d) Notice of Termination for Cause. A Notice of Termination for Cause shall mean a notice that shall indicate the specific termination provision in Section 6(c) relied upon and shall set forth in reasonable detail the facts and circumstances which provide a basis for Termination for Cause.

(e) Termination by the Executive for Good Reason. The Executive may terminate this Agreement for Good Reason. The term "**Good Reason**" shall mean the occurrence, without the Executive's prior written consent, of any one or more of the following: (i) any reduction in Executive's compensation as set forth in Section 4 hereof; (ii) a material adverse change in any of the terms of this Agreement, including Executive's title, status, authority, duties and responsibilities; (iii) the failure by the Company to obtain a satisfactory agreement from any successor of the Company requiring such successor to assume and agree to perform the Company's obligations under this Agreement; or (iv) the failure by the Company to comply with any material provision of this Agreement.

No resignation for Good Reason shall be effective unless the Executive shall, within ninety (90) days of sufficient facts known to the Executive to constitute Good Reason, give written notice to the Chairman of the Board of Directors of the Company or its representative setting forth in reasonable detail the material facts constituting Good Reason and the reasonable steps the Executive believes necessary to cure, and thereafter the Company shall have thirty (30) business days from the date of such notice to cure any such occurrence otherwise constituting Good Reason, provided that no such notice and opportunity to cure is required if the Executive has previously given the Company notice and opportunity to cure the same conduct.

7. **Consequences of Termination of Employment**. If Executive's employment is terminated (a) by reason of Executive's death, (b) by reason of Executive's Disability, (c) by Executive for any reason other than Good Reason, or (d) by the Company for Cause, the Employment Term shall terminate without further obligations to Executive, or in the case of the

Executive's death to Executive's legal representatives, under this Agreement except for: (i) any Base Salary earned, but unpaid; and, (ii) any unreimbursed business expenses payable pursuant to Section 5 hereof and any accrued but unused personal time off benefits (collectively "**Accrued Amounts**"), which amounts shall be promptly paid in a lump sum to Executive, or in the case of Executive's death to Executive's estate. If Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, or if Company ever elects not to renew this Agreement pursuant to Section 1 above, this Agreement, except for Sections 9 through 11, shall terminate without further obligations to or by the Executive, except for Accrued Amounts, plus the Company shall continue to pay the Executive his Base Salary, any applicable prorated Annual Performance Bonus and reimbursement for continuation of healthcare benefits for twelve (12) months following the date of termination. When Executive terminates his employment for any reason, the Company may elect to waive notice from Executive and designate the Executive's last day of employment, provided the Company provides the Executive all applicable compensation and benefits through the Executive's notice period. Executive's rights under any equity grants shall be determined in accordance with the Company's Restricted Stock Purchase Agreement or agreements governing the grant of options under Company's 2011 Stock Option Plan, as amended and as the same may be modified in accordance with the terms of the Option Grant Agreement attached as Exhibit B.

8. **Confidential Information**. "**Confidential Information**" as used in this Agreement, includes but is not limited to, specialized training received by Executive; products already developed or that will be developed in the field of cancer immunotherapy, including but not limited to metastatic castrate resistant prostate cancer and graft versus host disease; research and development materials related to the manipulation of dendritic cell signaling pathways to enhance the immune response; research and development materials, electronic databases; computer programs and technologies; marketing and/or scientific studies and analysis; product and pricing knowledge; manufacturing methods; supplier lists and information; any and all information concerning past, present and future customers, referral sources or vendors; contracts and licenses; management structure, company ownership, personnel information (including the performance, skills, abilities and payment of employees); purchasing, accounting and business systems; short and long range business planning; data regarding the Company's past, current and future financial performance, sales performance, and current and/or future plans to increase the Company's market share by targeting specific medical issues, demographic and/or geographic markets; standard operating procedures; financial information; trade secrets, copyrights, derivative works, patents, inventions, know-how, and other intellectual property; business policies; submissions to government or regulatory agencies and related information; methods of operation; implementation strategies; promotional information and techniques; marketing presentations; price lists; files or other information; pricing strategies; computer files; samples; customer originals; or any other confidential information concerning the business and affairs of the Company. The Company's Confidential Information is also comprised of the personal information received from third parties and/or confidential and proprietary information regarding research, products, or clinical trials received from third parties, but only if such confidential information is reduced to writing and marked "Confidential" by the third party. All information obtained by Executive, whether in writing, any other tangible form of expression or disclosed orally or through visual means or otherwise, and regardless of whether such information bears a confidential or proprietary legend, will be presumed to be Confidential Information. Executive acknowledges that the Confidential Information is vital, valuable, sensitive, confidential and

proprietary to Company and provides Company with a competitive advantage. Executive further acknowledges that Company's Confidential Information is dynamic, and constantly changes in nature and/or quantity, given that Company continues to refine its Confidential Information. The obligations specified in this Section 8 shall not apply, and Executive shall have no further obligations under this Agreement with respect to any Confidential Information that: a) is available to the public at the time of disclosure to Executive or becomes publicly known through no breach of the undertakings hereunder by Executive or to the knowledge of the Executive, any third party; b) becomes known to Executive through disclosure by sources other than the Parties involved in this agreement, said sources being under no obligation of confidentiality to Company with respect to such Confidential Information; c) is approved by Company for release; or d) has been independently developed by Executive without benefit of the Confidential Information.

9. **Non-Competition; Non-Solicitation, Etc**.

(a) Company Promises.

(i) This Agreement is entered into pursuant to Executive's agreement to these non-compete and non-solicitation provisions. Executive's agreement to the provisions in Sections 9 through 11 is a material condition of the Company's entering into the Agreement and employment of Executive.

(ii) The Company agrees to provide Executive with access to Confidential Information and in a greater quantity and/or expanded nature than any such Confidential Information that may have already been provided to Executive and with additional opportunities to broaden the Company's services and develop the Company's customers in a manner not previously available to Executive including, but not limited to, information regarding the Company's business plan; research results; information supporting patent applications; and Company standard operating procedures related to the manipulation of dendritic cell signaling pathways to enhance immune response.

(iii) The Company promises that during Executive's employment with the Company, the Company will provide Executive with the opportunity to develop goodwill and establish rapport with the customer contacts in a greater quantity and/or expanded nature than any such opportunities that may have already been provided to Executive.

(iv) The Company promises that Executive will continue to receive and have access to Confidential Information throughout Executive's employment with the Company.

(b) Executive's Promises. In exchange for the Company's promises listed above and all other consideration provided pursuant to this Agreement, to which these promises are ancillary, Executive promises as follows:

(i) Executive will not, during or after Executive's employment with the Company, use, copy, remove, disclose or disseminate to any person or entity, the Company's Confidential Information, except (i) as required in the course of performing Executive's duties with the Company, for the benefit of the Company, or (ii) when required to do so by a court of law, by any governmental agency having supervisory authority over the business of the Company or by any administrative or legislative body (including a committee thereof) with

apparent jurisdiction to order Executive to divulge, disclose or make accessible such information, it being understood that Executive will promptly notify the Company of such requirement so that the Company may seek to obtain a protective order.

(ii) Following employment termination, Executive will immediately return to the Company all materials created, received or utilized in any way in conjunction with Executive's work performed with the Company that in any way incorporates, reflects or constitutes Company's Confidential Information.

(iii) Executive acknowledges that the market for the Company's products, services, and activities is global, and that the products, services and/or activities can be provided anywhere in the world where cancer therapies are utilized. Executive recognizes that the Company draws its customers and/or clients from around the world because it will seek to file patents and run clinical trials in countries around the world, and sell its product to consumers around the world and/or pharmaceutical companies located around the world. Moreover, Executive recognizes that the Company's customers may be contacted by telephone, in person, or in writing (including e-mail via the Internet). Executive further acknowledges that due to the international scope of the Company's customer and client base, the following non-solicitation/non-competition restriction is necessary.

(iv) Executive agrees and acknowledges that Company will not be provided access to Confidential Information, as defined in Section 8, from or belonging to a third party that Executive was exposed to or received from said third party prior to the execution date of this Agreement and that is the subject of any confidentiality requirement of any kind between Executive and said third party. **EXECUTIVE ALSO AGREES TO INDEMNIFY, REIMBURSE, AND HOLD HARMLESS THE COMPANY FOR ALL ATTORNEY FEES, EXPENSES, COSTS, HARM, OR RELATED COSTS TO COMPANY ARISING FROM OR. AS A RESULT OF ANY ACTUAL CAUSE OF ACTION OR CLAIM BROUGHT AGAINST COMPANY OR EXECUTIVE RELATED TO ANY ACTUAL BREACH OF THIS SECTION BY EXECUTIVE**. Company agrees that: (A) Executive shall be allowed to participate fully in the defense of any such action against Company and in any settlement negotiations, and (B) any payment to Company by Executive under this Section shall be only after any settlement has been consummated or judicial action has become final and non-appealable.

(c) Non-Compete. Ancillary to the consideration reflected within this Agreement, the Company and Executive agree to the following non-competition provisions. Executive agrees that during the Executive's employment with the Company Employment Term and for a period of twelve (12) months following the termination of his employment ("**Non-Compete Period**"):

(i) Executive shall not, directly or indirectly, engage in or participate (including, without limitation, as an investor, officer, employee, director, agent, or consultant (any such capacity, being a "Participant")) in or on behalf of any entity engaging in the "Company's Business", said Company's Business being defined as: (A) genetically modified cell products for the treatment of cancer; and (B) other genetically modified products for which the Company has an active development program at the termination or expiration of the Employment Term (the "Non-Compete Obligations"), provided, however, that nothing herein shall prevent him from investing as a less than 5% shareholder in securities of any company listed on a national securities exchange or quoted on an automated quotation system.

(ii) Geographic Limitation. The geographic limitation for the Non-Compete Obligations is North America, Europe and Japan,

(iii) During Executive's employment with the Company and for a period of twelve (12) months after Executive's employment has ended, Employee will not directly or indirectly become employed or otherwise associated with any of the following entities, which are direct competitors of the Company, in any geographic region:

Dendreon Corporation	3005 First Avenue Seattle, WA 98121
Argos Therapeutics, Inc	4233 Technology Drive Durham, NC 27704
Athersys, Inc.	3201 Carnegie Avenue Cleveland, OH
Bavarian Nordic	Hejreskovvej 10A Kvistgaard 3490 Denmark
Intrexon Corporation	1872 Pratt Drive Blacksburg, VA
Kiadis Pharma B.V.	Entrada 231-234 1096 EG Amsterdam The Netherlands
Mesoblast Limited	275 Madison Avenue New York, NY 10016
MolMed S.p.A.	Via Olgettina, 58 20132 Milan, Italy
Northwest Biotherapeutics, Inc.	4800 Montgomery Lane, Suite 800 Bethesda, MD 20814
Progenies Pharmaceuticals, Inc.	777 Old Saw Mill River Rd. Tarrytown, NY 10591

The Executive and the Company agree that with respect to the foregoing entities such names are the common names of such entities. Executive and the Company agree that the restrictions contained in this Agreement are binding whether or not the Executive and the Company have used the correct legal name, affiliated entity, or new owner of such entity, however, if said new owner of such entity has other divisions that are not involved in carrying out the work of the acquired listed entity, then Executive may be employed or otherwise associated with these other divisions.

(iv) Executive agrees that Executive's work for any third party engaged in the Company's Business during the Non-Compete Period inevitably would lead to Executive's unauthorized use of Company's Confidential Information, even if such use is unintentional. Because it would be impossible, as a practical matter, to monitor, restrain, or police Executive's use of such Confidential Information other than by Executive's not working for such third party, and because the Company's Business is highly specialized, the competitors are identifiable, the

market for the Company's product, services, and activities is global, and the Company's customers are located throughout the world, Executive agrees that restricting such employment as set forth in this Agreement is the narrowest way to protect Company's legitimate business interests, and the narrowest way of enforcing Executive's consideration for the receipt of Company's Consideration, (namely, Executive's promise not to use or disclose that Confidential Information/specialized training).

(d) Nonsolicitation of Employees. Executive agrees that during the Non-Compete Period, Executive will not, directly or indirectly, (i) induce or solicit any person who was an employee, consultant or independent contractor of the Company or any of its Affiliates during the course of Executive's employment with the Company, to terminate such individual's employment or service with the Company or any of its Affiliates, (ii) hire or retain the services of any such person, regardless of whether such person had been solicited for employment, or (iii) assist any other person or entity in such activities.

(e) Extension of Non-Solicitation/Non-Competition and Non-Recruitment Periods. If Executive is found by a court of competent jurisdiction to have breached any promise made in Section 9 of this Agreement, the periods specified in Section 9(c) of this Agreement shall be extended by one month for every month in which Executive was in breach so that the Company has the full benefit of the time period Section 9(c).

10. **Injunction**. Executive recognizes that Executive's services hereunder are of a special, unique, unusual, extraordinary and intellectual character giving them a peculiar value, the loss of which cannot be reasonably or adequately compensated for in damages. Executive acknowledges that if Executive were to leave the employ of the Company for any reason and compete, directly or indirectly, with the Company, or solicit the Company's employees, or use or disclose, directly or indirectly, the Company's Confidential Information (whether in tangible form or memorized), that such competition, solicitation, use and/or disclosure would cause the Company irreparable harm and injury for which no adequate remedy at law exists. Executive agrees this Agreement is the narrowest way to protect the Company's interests. Therefore, in the event of the breach or threatened breach of the provisions of this Agreement by Executive, the Company shall be entitled to obtain injunctive relief to enjoin such breach or threatened breach, in addition to all other remedies and alternatives that may be available at law or in equity. Executive acknowledges that the remedies contained in this Agreement for violation of this Agreement are not the exclusive remedies that the Company may pursue.

11. **Inventions**.

(a) Inventions Retained and Licensed. Executive has attached hereto as Exhibit C, a list describing all inventions, original works of authorship, derivative works, developments, improvements and trade secrets that (i) were made by Executive prior to his employment with the Company, (ii) belong to Executive, (iii) relate to the Company's proposed business, products or research and development and (iv) are not assigned to the Company hereunder (collectively, "**Prior Inventions**"); or, if no such list is attached, Executive represents that there are no such Prior Inventions. Executive agrees that Executive will not incorporate, or permit to be incorporated, any Prior Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent.

Nevertheless, if, in the course of Executive's employment with the Company, Executive incorporates into a Company product, process or service a Prior Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Prior Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

(b) Assignment of Inventions. Executive agrees that Executive will promptly make full written disclosure to the Company, will hold in trust for the sole right and benefit of the Company, and hereby assign to the Company, or its designee, all Executive's right, title, and interest in and to any and all inventions, original works of authorship, derivative works, developments, concepts, modifications, improvements (including improvements to Confidential Information), designs, discoveries, ideas, know-how, trademarks, trade dress, trade secrets or other intellectual property, whether or not patentable or registrable under copyright or similar laws, which Executive may solely or jointly conceive or develop or reduce to practice, or cause to be conceived or developed or reduced to practice, whether or not reduced to drawings, written descriptions, documentation or other tangible form, as applicable, during the period of time Executive is employed by the Company (collectively, "**Inventions**"), except as provided in Section 11(f) below. Executive further acknowledges that all original works of authorship which are made by Executive (solely or jointly with others) within the scope of and during the period of Executive's employment with the Company and which are protectible by copyright are "works made for hire" as that term is defined in the United States Copyright Act. Executive understands and agrees that the decision whether or not to commercialize or market any Invention is within the Company's sole discretion and for the Company's sole benefit and that no royalty will be due to Executive as a result of the Company's efforts to commercialize or market any such Invention,

(c) Inventions Assigned to the United States. Executive agrees to assign to the United States government all Executive's right, title, and interest in and to any and all Inventions whenever such full title is required to be in the United States by a contract between the Company and the United States or any of its agencies.

(d) Maintenance of Records. Executive agrees to keep and maintain adequate and current written records of all Inventions during the term of Executive's employment with the Company. The records will be in the form of notes, sketches, drawings and any other format that may be specified by the Board. The records will be available to and remain the Company's sole property at all times.

(e) Patent and Copyright Registrations. Executive agrees to assist the Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in any Inventions and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including, but not limited to, the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, declarations, assignments and all other instruments that the Company deems necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such Inventions, and any copyrights, patents, mask work rights or other

intellectual property rights relating thereto. Executive further agrees that Executive's obligations to execute or cause to be executed, when it is in Executive's power to do so, any such instrument or papers shall continue after the termination of this Agreement. If the Company is unable because of Executive's mental or physical incapacity or for any other reason to secure Executive's signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering any Inventions or original works of authorship assigned to the Company as above, then Executive hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Executive's agent and attorney in fact, to act for and in Executive's behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of letters patent or copyright registrations thereon with the same legal force and effect as if executed by Executive.

(f) Exception to Assignments. Executive understands that the provisions of this Agreement requiring assignment of Inventions to the Company does not apply to any Invention that Executive has developed entirely on Executive's own time without using the Company's equipment, supplies, facilities, trade secret information or Confidential Information (an "**Other Invention**") except for those Other Inventions that either (i) relate in any way at the time of conception or reduction to practice of such Other Invention to the Company's Business or (ii) result from any work that Executive performed for the Company. Executive will advise the Company promptly in writing, under a confidentiality agreement, of any Invention that Executive believes constitutes an Other Invention and is not otherwise disclosed on Exhibit C. Executive agrees that Executive will not incorporate, or permit to be incorporated, any Other Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent. Notwithstanding the foregoing sentence, if, in the course of Executive's employment with the Company, Executive incorporates into a Company product, process or service an Other Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Other Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

12. **Disputes**. Any dispute or controversy between the Company and Executive, arising out of or relating to this Agreement, the breach of this Agreement, or otherwise, shall be settled by arbitration in Houston, Texas administered by the American Arbitration Association in accordance with its Employment Arbitration Rules then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitrator shall have the authority to award any remedy or relief that a court of competent jurisdiction could order or grant, including, without limitation, the issuance of an injunction. However, either party may, without inconsistency with this arbitration provision, apply to any court having jurisdiction over such dispute or controversy and seek interim provisional, injunctive or other equitable relief until the arbitration award is rendered or the controversy is otherwise resolved. Except as necessary in court proceedings to enforce this arbitration provision or an award rendered hereunder, or to obtain interim relief, neither a party nor an arbitrator may disclose the existence, content or results of any arbitration hereunder without the prior written consent of the Company and Executive. Each party shall bear its or his costs and expenses in any arbitration hereunder and one-half of the arbitrator's fees and costs; provided, however, that the arbitrator shall have the discretion to award the prevailing party reimbursement of its or his reasonable attorney's fees and costs.

13. **Notices**. All notices given under this Agreement shall be in writing and shall be deemed to have been duly given (a) when delivered personally, (b) three business days after being mailed by first class certified mail, return receipt requested, postage prepaid, (c) one business day after being sent by a reputable overnight delivery service, postage or delivery charges prepaid, or (d) on the date on which a facsimile is transmitted to the parties at their respective addresses stated below. Any party may change its address for notice and the address to which copies must be sent by giving notice of the new addresses to the other parties in accordance with this Section 13, except that any such change of address notice shall not be effective unless and until received.

If to the Company:

6400 Fannin Street, Suite 2300
Houston, Texas 77030
Attention: Dr. Kevin Slawin

with a copy (which shall not constitute notice) to:

Bracewell & Giuliani LLP
711 Louisiana, Suite 2300
South Tower Pennzoil Place
Houston, Texas 77002
Attention: William D. Gutermuth

If to Executive, to Executive's address set forth above

with a copy (which shall not constitute notice) to;

Judy Osborn, Attorney at Law
2705 Bee Cave Road, Suite 225
Austin, Texas 78746.

14. **Miscellaneous**.

(a) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to principles of conflict of laws.

(b) Entire Agreement/Amendments. This Agreement and the instruments contemplated herein contain the entire understanding of the parties with respect to the employment of Executive by the Company from and after the Commencement Date and supersede any prior agreements between the Company and Executive. There are no restrictions, agreements, promises, warranties, covenants or undertakings between the parties with respect to the subject matter herein other than those expressly set forth herein and therein. This Agreement may not be altered, modified, or amended except by written instrument signed by the parties hereto.

(c) No Waiver. The failure of a party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such party's rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. Any such waiver must be in writing and signed by Executive or an authorized officer of the Company, as the case may be.

(d) Assignment. This Agreement shall be binding upon and inure to the benefit of the Company and the Executive and their successors, assigns, executors and administrators. This Agreement shall not be assignable by Executive.

(e) Representation. Executive represents that the Executive's employment by the Company and the performance by the Executive of his obligations under this Agreement do not, and shall not, breach any agreement, including, but not limited to, any agreement that obligates him to keep in confidence any trade secrets or confidential or proprietary information of his or of any other party, to write or consult to any other party or to refrain from competing, directly or indirectly, with the business of any other party. The Executive shall not disclose to the Company or use any trade secrets or confidential or proprietary information of any other party.

(f) Successors; Binding Agreement; Third Party Beneficiaries. This Agreement shall inure to the benefit of and be binding upon the personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees legatees and permitted assignees of the parties hereto.

(g) Withholding Taxes. The Company may withhold from any and all amounts payable under this Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

(h) Survivorship. The respective rights and obligations of the parties hereunder, including without limitation Sections 9 through 11 hereof, shall survive any termination of Executive's employment to the extent necessary to the agreed preservation of such rights and obligations.

(i) Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

(j) Headings. The headings of the sections contained in this Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

Signature Page Follows

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

By: Bellicum Pharmaceuticals, Inc.

By: /s/ Dr. Kevin Slawin
Dr. Kevin Slawin,
Chairman

/s/ Thomas J. Farrell
Thomas J. Farrell

EXHIBIT A

ANNUAL PERFORMANCE BONUS

Any Annual Performance Bonus shall be based on achievement of qualitative strategic goals established in writing by the Board, after consultation with the Executive. Within ninety (90) days after the first day of each calendar year, the Board, after consultation with the Executive, shall establish, in writing, the required improvement in the qualitative strategic goals over the prior calendar year necessary to achieve the target bonus. The target and maximum Annual Performance Bonus shall be thirty (30) percent of the Executive's Salary.

The Annual Performance Bonus shall be adjusted from the target bonus amount based on a determination in the sole discretion of the Board of whether Executive has achieved the qualitative strategic goals.

EXHIBIT B

OPTION GRANT AGREEMENT

See attached.

EXHIBIT C

INVENTIONS

None

BELLICUM PHARMACEUTICALS, INC.

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (this "**Agreement**"), made effective as of November 28, 2011 (the "**Effective Date**"), is by and between Bellicum Pharmaceuticals, Inc. a Delaware corporation (the "**Company**"), having an office at 6400 Fannin Street, Suite 2300, Houston, Texas 77030 and David M. Spencer, Ph.D., an individual, residing at 2811 Prescott St., Houston, Texas 77025 ("**Executive**"). The Company and Executive are referred to herein individually as a "**Party**" and collectively as the "**Parties**". As used herein, "**Affiliate**" means any entity that directly or indirectly controls, is controlled by, or is under common control with, the Company.

WHEREAS, the Company desires to retain Executive as its Chief Scientific Officer and Executive agrees to be retained by the Company in such capacity;

WHEREAS, the Company and Executive desire to enter into this Agreement in order to memorialize the terms and conditions of the Executive's employment by the Company;

WHEREAS, Executive's agreement to and compliance with the provisions in Sections 9 through 11 of this Agreement is a material factor, material inducement and material condition to the Company's entering into this Agreement. Moreover, Executive acknowledges that a substantial portion of the value of the employment of the Executive is Executive's promises to refrain from competing with the Company as identified in Sections 9 through 11 of this Agreement;

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein and for other good and valuable consideration, the Parties agree as follows:

1. **Term of Employment**. Executive's employment under this Agreement shall be for an initial term of one (1) year beginning on the Effective Date, subject to earlier termination as provided in Section 6 hereof. This Agreement will be automatically renewed for successive one (1) year terms following the initial term unless either Party (a) gives the other Party no less than thirty (30) days written notice prior to the expiration of the term of such Party's intent not to renew, or (b) the term is earlier terminated as provided in Section 6 hereof. "**Employment Term**" as used herein shall mean the term of this Agreement, without giving effect to any extensions thereof not yet effected. If the Agreement is renewed, then each renewal year term shall be included in Employment Term.

2. **Position**. During the Employment Term, Executive shall serve as the Chief Scientific Officer of the Company. Executive's duties under this Agreement shall be to serve as Chief Scientific Officer with the responsibilities, rights, authority and duties customarily associated with such position, as well as additional duties as are established from time to time by the Board of Directors of the Company (the "**Board**"), and Executive shall report to the Chief Executive Officer. Executive's duties are more fully described on Exhibit C attached hereto.

3. **Commitment**. Executive will devote substantially all of his business time and his best efforts to the performance of his duties hereunder. Executive shall be allowed, to the extent that such activities do not interfere with the performance of his duties and responsibilities hereunder and do not conflict with the financial, fiduciary or other interests of the Company (or its Affiliates), as determined in the sole discretion of the Board, to serve as a visiting professor with Baylor College of Medicine, manage his passive personal investments and to serve on corporate, civic, charitable and industry boards or committees. Notwithstanding the foregoing, the Executive agrees that he shall only serve on for-profit boards of directors or for-profit advisory committees if such service is approved in advance in the sole discretion of the Board.

4. **Compensation**.

(a) Base Salary. During the Executive's employment with the Company, the Company shall pay Executive a base salary at the annual rate of TWO HUNDRED AND FIFTY THOUSAND NO/100 DOLLARS ($250,000.00) ("**Base Salary**"), payable in twice-monthly installments of Ten Thousand Four Hundred and Sixteen and No/100 Dollars ($10,416.00), subject to the terms and conditions of this Agreement.

(b) Annual Performance Bonus. For each calendar year beginning in 2012, the Executive may be eligible to receive an annual performance bonus targeted to equal twenty-five percent (25%) of Executive's Base Salary ("**Annual Performance Bonus**") from the Company, which shall be based on the formula determined by the Company, in its sole discretion, for that year. Payment of the Annual Performance Bonus shall be expressly conditioned upon the Executive's employment with the Company on the date that the Annual Performance Bonus is otherwise payable; provided however, in the event the Executive's employment is terminated by the Company without Cause, as defined in Section 6(c)(i), or the Executive terminates his employment for Good Reason, as defined in Section 6(d)(i), the Annual Performance Bonus shall be prorated and paid notwithstanding the fact that Executive is not employed with the Company on the date that the Annual Performance Bonus is otherwise payable. The Annual Performance Bonus shall be payable within ninety (90) days after the end of the calendar year for which it is payable. The amount, if any, of the Annual Performance Bonus shall be determined by the Board acting within its sole discretion, but based on the parameters set forth on Exhibit A.

(c) Option Award. Immediately following and conditioned upon the Company's 2011 Stock Option Plan becoming effective, the Company will award options to the Executive pursuant to the Option Grant Agreement attached as Exhibit D.

(d) Reimbursement of Business Expenses. The Company shall reimburse Executive for reasonable travel and other business expenses incurred by Executive in the performance of his duties hereunder, in accordance with the Company's policies as in effect from time to time.

5. **Benefits**. During the Employment Term and subject to applicable eligibility requirements, Executive shall be entitled to participate in all benefit plans and arrangements and fringe benefits and programs that may be provided to senior executives of the Company in the future. Executive is entitled to participate in personal time off and holiday benefits, with personal time off to be not less than twenty-seven (27) days on an annual basis, accruing at 9 hours per twice monthly pay period.

6. **Termination**.

(a) Termination. The employment of Executive under this Agreement shall terminate prior to the expiration of the Employment Term upon the earliest to occur of any of the following events:

(i) the death of the Executive;

(ii) the termination of the Executive's employment by the Company due to the Executive's Disability pursuant to Section 6(b) hereof;

(iii) the termination of the Executive's employment by the Executive other than for Good Reason (as hereinafter defined); however, Executive is required to provide 30 (thirty) days written notice to the Board of Executive's intention to terminate Executive's employment;

(iv) the termination of the Executive's employment by the Company without Cause;

(v) the termination of the Executive's employment by the Company for Cause pursuant to Section 6(c); or

(vi) the termination by the Executive of the Executive's employment for Good Reason (as hereinafter defined) pursuant to Section 6(d).

(b) Disability. The Company may terminate Executive's employment for Disability at any time upon thirty (30) days written notice provided to Executive. For purposes of this Agreement, "**Disability**" means that Executive has been unable, for ninety (90) consecutive days, or for periods aggregating one hundred and twenty (120) business days in any period of twelve consecutive months, to perform Executive's duties under this Agreement, as a result of physical or mental impairment, illness or injury, as determined in good faith by the Board. A termination of Executive's employment for Disability shall be communicated to Executive by written notice, and shall be effective on the 10th day after sending such notice to Executive (the "**Disability Effective Date**"), unless Executive returns to performance of Executive's duties before the Disability Effective Date.

(c) Termination for Cause.

(i) *Cause Defined*. Subject to the notification provision of Section 6(c)(ii) below, Executive's employment hereunder may be terminated by the Company for Cause. For purposes of this Agreement, the term "**Cause**" shall mean (A) Executive's willful misconduct which is demonstrably and materially injurious to the Company's reputation, financial condition, or business relationships; (B) the failure of Executive to attempt in good faith to follow the legal written direction of the Board; (C) the failure by the Executive to attempt in good faith to perform the duties required of him hereunder (other than any such failure resulting from incapacity due to physical or mental illness) after a written demand for substantial performance is delivered to the Executive by the Board which specifically identifies the manner in which it is believed that the Executive has failed to attempt to perform his duties hereunder; (D) the

Executive being convicted of, indicted for, or pleading guilty or nolo contendere to, a felony or any crime involving dishonesty, fraud or moral turpitude; (E) the Executive's dishonesty with regard to the Company or in the performance of his duties hereunder, which in either case has a material adverse effect on the Company; (F) the Executive's material breach of this Agreement unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach; or, (G) Executive's failure to comply in any material respect with the Company's material policies and/or procedures which has a material adverse effect on the Company, unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach.

(ii) *Notice of Termination for Cause*. A Notice of Termination for Cause shall mean a notice that shall indicate the specific termination provision in Section 6(c)(i) relied upon and shall set forth in reasonable detail the facts and circumstances which provide a basis for Termination for Cause.

(d) Termination by the Executive for Good Reason.

(i) *Good Reason Defined*. The Executive may terminate this Agreement for Good Reason. The term "Good Reason" shall mean the occurrence, without the Executive's prior written consent, of any one or more of the following: (A) any reduction in Executive's compensation as set forth in Section 4 hereof; (B) a material adverse change in Executive's title, status, authority, duties and responsibilities; (C) the failure by the Company to obtain a satisfactory agreement from any successor of the Company requiring such successor to assume and agree to perform the Company's obligations under this Agreement; (D) the failure by the Company to comply with any material provision of this Agreement; or (E) the relocation of Executive's principal office to a location that is outside of the Houston, Texas metropolitan area.

(ii) *Notice of Termination for Good Reason*. No resignation for Good Reason shall be effective unless the Executive shall, within ninety (90) days of sufficient facts known to the Executive to constitute Good Reason, give written notice to the Chairman of the Board of Directors of the Company or its representative setting forth in reasonable detail the material facts constituting Good Reason and the reasonable steps the Executive believes necessary to cure, and thereafter the Company shall have thirty (30) days from the date of such notice to cure any such occurrence otherwise constituting Good Reason, provided that no such notice and opportunity to cure is required if the Executive has previously given the Company notice and opportunity to cure the same conduct.

7. **Consequences of Termination of Employment**. If Executive's employment is terminated (a) by reason of Executive's death, (b) by reason of Executive's Disability, (c) by Executive for any reason other than Good Reason, or (d) by the Company for Cause, the Employment Term shall terminate without further obligations to Executive, or in the case of the Executive's death to Executive's legal representatives, under this Agreement except for: (i) any Base Salary earned, but unpaid; and, (ii) any unreimbursed business expenses payable pursuant to Section 5 hereof and any accrued but unused personal time off benefits (collectively "**Accrued Amounts**"), which amounts shall be promptly paid in a lump sum to Executive, or in the case of Executive's death to Executive's estate. If Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, or if Company ever elects not to

renew this Agreement pursuant to Section 1 above, this Agreement, except for Sections 9 through 11, shall terminate without further obligations to or by the Executive, except for Accrued Amounts, plus the Company shall continue to pay the Executive his Base Salary, any applicable prorated Annual Performance Bonus and reimbursement for continuation of healthcare benefits for twelve (12) months following the date of termination. When Executive terminates his employment for any reason, the Company may elect to waive notice from Executive and designate the Executive's last day of employment, provided the Company provides the Executive all applicable compensation and benefits through the Executive's notice period. Executive's rights under any equity grants shall be determined in accordance with the Company's Restricted Stock Purchase Agreement or agreements governing the grant of options under Company's 2011 Stock Option Plan, as amended and as the same may be modified in accordance with the terms of the Option Grant Agreement attached as Exhibit D.

8. **Confidential Information**. "**Confidential Information**" as used in this Agreement, includes but is not limited to, specialized training received by Executive; products already developed or that will be developed in the field of cancer immunotherapy, including but not limited to metastatic castrate resistant prostate cancer and graft versus host disease; research and development materials related to the manipulation of dendritic cell signaling pathways to enhance the immune response; research and development materials, electronic databases; computer programs and technologies; marketing and/or scientific studies and analysis; product and pricing knowledge; manufacturing methods; supplier lists and information; any and all information concerning past, present and future customers, referral sources or vendors; contracts and licenses; management structure, company ownership, personnel information (including the performance, skills, abilities and payment of employees); purchasing, accounting and business systems; short and long range business planning; data regarding the Company's past, current and future financial performance, sales performance, and current and/or future plans to increase the Company's market share by targeting specific medical issues, demographic and/or geographic markets; standard operating procedures; financial information; trade secrets, copyrights, derivative works, patents, inventions, know-how, and other intellectual property; business policies; submissions to government or regulatory agencies and related information; methods of operation; implementation strategies; promotional information and techniques; marketing presentations; price lists; files or other information; pricing strategies; computer files; samples; customer originals; or any other confidential information concerning the business and affairs of the Company. The Company's Confidential Information is also comprised of the personal information received from third parties and/or confidential and proprietary information regarding research, products, or clinical trials received from third parties, but only if such confidential information is reduced to writing and marked "Confidential" by the third party. All information obtained by Executive, whether in writing, any other tangible form of expression or disclosed orally or through visual means or otherwise, and regardless of whether such information bears a confidential or proprietary legend, will be presumed to be Confidential Information. Executive acknowledges that the Confidential Information is vital, valuable, sensitive, confidential and proprietary to Company and provides Company with a competitive advantage. Executive further acknowledges that Company's Confidential Information is dynamic, and constantly changes in nature and/or quantity, given that Company continues to refine its Confidential Information. The obligations of Executive under this Agreement shall survive until such time as all Confidential Information becomes publicly known and made generally available through no action or inaction of Executive. The obligation to hold information in confidence as required by this Section 8,

shall survive any termination or expiration of this Agreement. The obligations specified in this Section 8 shall not apply, and Executive shall have no further obligations under this Agreement with respect to any Confidential Information that: (a) is available to the public at the time of disclosure to Executive or becomes publicly known through no breach of the undertakings hereunder by Executive or to the knowledge of the Executive, any third party; (b) becomes known to Executive through disclosure by sources other than the Parties involved in this agreement, said sources being under no obligation of confidentiality to Company with respect to such Confidential Information; (c) is approved by Company for release; or d) has been independently developed by Executive without benefit of the Confidential Information.

9. **Non-Competition; Non-Solicitation, Etc**.

(a) Company Promises.

(i) This Agreement is entered into pursuant to Executive's agreement to these non-compete and non-solicitation provisions. Executive's agreement to the provisions in Sections 9 through 11 is a material condition of the Company's entering into the Agreement and employment of Executive.

(ii) The Company agrees to provide Executive with access to Confidential Information and in a greater quantity and/or expanded nature than any such Confidential Information that may have already been provided to Executive and with additional opportunities to broaden the Company's services and develop the Company's customers in a manner not previously available to Executive including, but not limited to, information regarding the Company's business plan; research results; information supporting patent applications; and Company standard operating procedures related to the manipulation of dendritic cell signaling pathways to enhance immune response.

(iii) The Company promises that during Executive's employment with the Company, the Company will provide Executive with the opportunity to develop goodwill and establish rapport with the customer contacts in a greater quantity and/or expanded nature than any such opportunities that may have already been provided to Executive.

(iv) The Company promises that Executive will continue to receive and have access to Confidential Information throughout Executive's employment with the Company.

(b) Executive's Promises. In exchange for the Company's promises listed above and all other consideration provided pursuant to this Agreement, to which these promises are ancillary, Executive promises as follows:

(i) Executive will not, during or after Executive's employment with the Company, use, copy, remove, disclose or disseminate to any person or entity, the Company's Confidential Information, except (A) as required in the course of performing Executive's duties with the Company, for the benefit of the Company, or (B) when required to do so by a court of law, by any governmental agency having supervisory authority over the business of the Company or by any administrative or legislative body (including a committee thereof) with apparent jurisdiction to order Executive to divulge, disclose or make accessible such information, it being understood that Executive will promptly notify the Company of such requirement so that the Company may seek to obtain a protective order.

(ii) Following employment termination, Executive will immediately return to the Company all materials created, received or utilized in any way in conjunction with Executive's work performed with the Company that in any way incorporates, reflects or constitutes Company's Confidential Information.

(iii) Executive acknowledges that the market for the Company's products, services, and activities is global, and that the products, services and/or activities can be provided anywhere in the world where cancer therapies are utilized. Executive recognizes that the Company draws its customers and/or clients from around the world because it will seek to file patents and run clinical trials in countries around the world, and sell its product to consumers around the world and/or pharmaceutical companies located around the world. Moreover, Executive recognizes that the Company's customers may be contacted by telephone, in person, or in writing (including e-mail via the Internet). Executive further acknowledges that due to the international scope of the Company's customer and client base, the following non-solicitation/non-competition restriction is necessary.

(iv) Executive agrees and acknowledges that Company will not be provided access to Confidential Information, as defined in Section 8, from or belonging to a third party that Executive was exposed to or received from said third party prior to the execution date of this Agreement and that is the subject of any confidentiality requirement of any kind between Executive and said third party. **EXECUTIVE ALSO AGREES TO INDEMNIFY, REIMBURSE, AND HOLD HARMLESS THE COMPANY FOR ALL ATTORNEY FEES, EXPENSES, COSTS, HARM, OR RELATED COSTS TO COMPANY ARISING FROM OR AS A RESULT OF ANY ACTUAL CAUSE OF ACTION OR CLAIM BROUGHT AGAINST COMPANY OR EXECUTIVE RELATED TO ANY ACTUAL BREACH OF THIS SECTION BY EXECUTIVE**. Company agrees that: (A) Executive shall be allowed to participate fully in the defense of any such action against Company and in any settlement negotiations, and (B) any payment to Company by Executive under this paragraph shall be only after any settlement has been consummated or judicial action has become final and non-appealable.

(c) Non-Compete. Ancillary to the consideration reflected within this Agreement, the Company and Executive agree to the following non-competition provisions. Executive agrees that during the Employment Term and for a period of twelve (12) months following the termination of his employment ("**Non-Compete Period**"):

(i) Executive shall not, directly or indirectly, engage in or participate (including, without limitation, as an investor, officer, employee, director, agent, or consultant (any such capacity, being a "**Participant**")) in or on behalf of any entity engaging in the "**Company's Business**", said Company's Business being defined as: (A) genetically modified cell products for the treatment of cancer; and (B) other genetically modified products for which the Company has an active development program at the termination or expiration of the Employment Term (the "**Non-Compete Obligations**"), provided, however, that nothing herein shall prevent him from investing as a less than 5% shareholder in securities of any company listed on a national securities exchange or quoted on an automated quotation system.

(ii) *Geographic Limitation*. The geographic limitation for the Non-Compete Obligations is North America, Europe and Japan.

(iii) During the Non-Compete Period, Executive will not directly or indirectly become employed or otherwise associated with any of the following entities, which are direct competitors of the Company, in any geographic region:

Dendreon Corporation	3005 First Avenue Seattle, WA 98121
Argos Therapeutics, Inc	4233 Technology Drive Durham, NC 27704
Athersys, Inc.	3201 Carnegie Avenue Cleveland, OH
Bavarian Nordic	Hejreskovvej 10A Kvistgaard 3490 Denmark
Intrexon Corporation	1872 Pratt Drive Blacksburg, VA
Kiadis Pharma B.V.	Entrada 231-234 1096 EG Amsterdam The Netherlands
Mesoblast Limited	275 Madison Avenue New York, NY 10016
MolMed S.p.A.	Via Olgettina, 58 20132 Milan, Italy
Northwest Biotherapeutics, Inc.	4800 Montgomery Lane, Suite 800 Bethesda, MD 20814
Progenies Pharmaceuticals, Inc.	777 Old Saw Mill River Rd. Tarrytown, NY 10591

The Executive and the Company agree that with respect to the foregoing entities such names are the common names of such entities. Executive and the Company agree that the restrictions contained in this Agreement are binding whether or not the Executive and the Company have used the correct legal name, affiliated entity, or new owner of such entity; however, if said new owner of such entity has other divisions that are not involved in carrying out the work of the acquired listed entity, then Executive may be employed or otherwise associated with these other divisions.

(iv) Executive agrees that Executive's work for any third party engaged in the Company's Business during the Non-Compete Period inevitably would lead to Executive's unauthorized use of Company's Confidential Information, even if such use is unintentional. Because it would be impossible, as a practical matter, to monitor, restrain, or police Executive's use of such Confidential Information other than by Executive's not working for such third party, and because the Company's Business is highly specialized, the competitors are identifiable, the market for the Company's product, services, and activities is global, and the Company's

customers are located throughout the world, Executive agrees that restricting such employment as set forth in this Agreement is the narrowest way to protect Company's legitimate business interests, and the narrowest way of enforcing Executive's consideration for the receipt of Company's Consideration, (namely, Executive's promise not to use or disclose that Confidential Information/specialized training).

(d) Nonsolicitation of Employees. Executive agrees that during the Non-Compete Period, Executive will not, directly or indirectly, (i) induce or solicit any person who was an employee, consultant or independent contractor of the Company or any of its Affiliates during the course of Executive's employment with the Company, to terminate such individual's employment or service with the Company or any of its Affiliates, (ii) hire or retain the services of any such person, regardless of whether such person had been solicited for employment, or (iii) assist any other person or entity in such activities.

(e) Extension of Non-Solicitation/Non-Competition and Non-Recruitment Periods. If Executive is found by a Court of competent jurisdiction to have breached any promise made in Section 9 of this Agreement, the periods specified in Section 9(c) of this Agreement shall be extended by one month for every month in which Executive was in breach so that the Company has the full benefit of the time period set forth in Section 9(c).

10. **Injunction**. Executive recognizes that Executive's services hereunder are of a special, unique, unusual, extraordinary and intellectual character giving them a peculiar value, the loss of which cannot be reasonably or adequately compensated for in damages. Executive acknowledges that if Executive were to leave the employ of the Company for any reason and compete, directly or indirectly, with the Company, or solicit the Company's employees, or use or disclose, directly or indirectly, the Company's Confidential Information (whether in tangible form or memorized), that such competition, solicitation, use and/or disclosure would cause the Company irreparable harm and injury for which no adequate remedy at law exists. Executive agrees this Agreement is the narrowest way to protect the Company's interests. Therefore, in the event of the breach or threatened breach of the provisions of this Agreement by Executive, the Company shall be entitled to obtain injunctive relief to enjoin such breach or threatened breach, in addition to all other remedies and alternatives that may be available at law or in equity. Executive acknowledges that the remedies contained in this Agreement for violation of this Agreement are not the exclusive remedies that the Company may pursue.

11. **Inventions**.

(a) Inventions Retained and Licensed. Executive has attached hereto as Exhibit B, a list describing all inventions, original works of authorship, derivative works, developments, improvements and trade secrets that (i) were made by Executive prior to his employment with the Company, (ii) belong to Executive, (iii) relate to the Company's proposed business, products or research and development and (iv) are not assigned to the Company hereunder (collectively, "**Prior Inventions**"); or, if no such list is attached, Executive represents that there are no such Prior Inventions. Executive agrees that Executive will not incorporate, or permit to be incorporated, any Prior Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent. Nevertheless, if, in the course of Executive's employment with the Company, Executive

incorporates into a Company product, process or service a Prior Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Prior Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

(b) Assignment of Inventions. Executive agrees that Executive will promptly make full written disclosure to the Company, will hold in trust for the sole right and benefit of the Company, and hereby assign to the Company, or its designee, all Executive's right, title, and interest in and to any and all inventions, original works of authorship, derivative works, developments, concepts, modifications, improvements (including improvements to Confidential Information), designs, discoveries, ideas, know-how, trademarks, trade dress, trade secrets or other intellectual property, whether or not patentable or registrable under copyright or similar laws, which Executive may solely or jointly conceive or develop or reduce to practice, or cause to be conceived or developed or reduced to practice, whether or not reduced to drawings, written descriptions, documentation or other tangible form, as applicable, during the period of time Executive is employed by the Company (collectively, "**Inventions**"), except as provided in Section 11(f) below. Executive further acknowledges that all original works of authorship which are made by Executive (solely or jointly with others) within the scope of and during the period of Executive's employment with the Company and which are protectible by copyright are "works made for hire" as that term is defined in the United States Copyright Act. Executive understands and agrees that the decision whether or not to commercialize or market any Invention is within the Company's sole discretion and for the Company's sole benefit and that no royalty will be due to Executive as a result of the Company's efforts to commercialize or market any such Invention.

(c) Inventions Assigned to the United States. Executive agrees to assign to the United States government all Executive's right, title, and interest in and to any and all Inventions whenever such full title is required to be in the United States by a contract between the Company and the United States or any of its agencies.

(d) Maintenance of Records. Executive agrees to keep and maintain adequate and current written records of all Inventions during the term of Executive's employment with the Company. The records will be in the form of notes, sketches, drawings and any other format that may be specified by the Board. The records will be available to and remain the Company's sole property at all times.

(e) Patent and Copyright Registrations. Executive agrees to assist the Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in any Inventions and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including, but not limited to, the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, declarations, assignments and all other instruments that the Company deems necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such Inventions, and any copyrights, patents, mask work rights or other intellectual property rights relating thereto. Executive further agrees that Executive's obligations

to execute or cause to be executed, when it is in Executive's power to do so, any such instrument or papers shall continue after the termination of this Agreement. If the Company is unable because of Executive's mental or physical incapacity or for any other reason to secure Executive's signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering any Inventions or original works of authorship assigned to the Company as above, then Executive hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Executive's agent and attorney in fact, to act for and in Executive's behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of letters patent or copyright registrations thereon with the same legal force and effect as if executed by Executive.

(f) Exception to Assignments. Executive understands that the provisions of this Agreement requiring assignment of Inventions to the Company does not apply to any Invention that Executive has developed entirely on Executive's own time without using the Company's equipment, supplies, facilities, trade secret information or Confidential Information (an "**Other Invention**") except for those Other Inventions that either (i) relate in any way at the time of conception or reduction to practice of such Other Invention to the Company's Business or (ii) result from any work that Executive performed for the Company. Executive will advise the Company promptly in writing, under a confidentiality agreement, of any Invention that Executive believes constitutes an Other Invention and is not otherwise disclosed on Exhibit B. Executive agrees that Executive will not incorporate, or permit to be incorporated, any Other Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent. Notwithstanding the foregoing sentence, if, in the course of Executive's employment with the Company, Executive incorporates into a Company product, process or service an Other Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Other Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

12. **Disputes**. Any dispute or controversy between the Company and Executive, arising out of or relating to this Agreement, the breach of this Agreement, or otherwise, shall be settled by arbitration in Houston, Texas administered by the American Arbitration Association in accordance with its Employment Arbitration Rules then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitrator shall have the authority to award any remedy or relief that a court of competent jurisdiction could order or grant, including, without limitation, the issuance of an injunction. However, either Party may, without inconsistency with this arbitration provision, apply to any court having jurisdiction over such dispute or controversy and seek interim provisional, injunctive or other equitable relief until the arbitration award is rendered or the controversy is otherwise resolved. Except as necessary in court proceedings to enforce this arbitration provision or an award rendered hereunder, or to obtain interim relief, neither a party nor an arbitrator may disclose the existence, content or results of any arbitration hereunder without the prior written consent of the Company and Executive. Each Party shall bear its or his costs and expenses in any arbitration hereunder and one-half of the arbitrator's fees and costs; provided, however, that the arbitrator shall have the discretion to award the prevailing party reimbursement of its or his reasonable attorney's fees and costs.

13. **Notices**. All notices given under this Agreement shall be in writing and shall be deemed to have been duly given (a) when delivered personally, (b) three business days after being mailed by first class certified mail, return receipt requested, postage prepaid, (c) one business day after being sent by a reputable overnight delivery service, postage or delivery charges prepaid, or (d) on the date on which a facsimile is transmitted to the Parties at their respective addresses stated below. Any Party may change its address for notice and the address to which copies must be sent by giving notice of the new addresses to the other parties in accordance with this Section 13, except that any such change of address notice shall not be effective unless and until received.

If to the Company:

6400 Fannin Street, Suite 2300
Houston, Texas 77030
Attention: Thomas J. Farrell

with a copy (which shall not constitute notice) to:

Bracewell & Giuliani LLP
711 Louisiana, Suite 2300
South Tower Pennzoil Place
Houston, Texas 77002
Attention: William D. Gutermuth

If to Executive, to Executive's address set forth above.

14. **Miscellaneous**.

(a) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to principles of conflict of laws.

(b) Entire Agreement/Amendments. This Agreement and the instruments contemplated herein contain the entire understanding of the Parties with respect to the employment of Executive by the Company from and after the Commencement Date and supersede any prior agreements between the Company and Executive. There are no restrictions, agreements, promises, warranties, covenants or undertakings between the Parties with respect to the subject matter herein other than those expressly set forth herein and therein. This Agreement may not be altered, modified, or amended except by written instrument signed by the Parties hereto.

(c) No Waiver. The failure of a Party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such Party's rights or deprive such Party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. Any such waiver must be in writing and signed by Executive or an authorized officer of the Company, as the case may be.

(d) Assignment. This Agreement shall be binding upon and inure to the benefit of the Company and the Executive and their successors, assigns, executors and administrators. This Agreement shall not be assignable by Executive.

(e) Representation. Executive represents that the Executive's employment by the Company and the performance by the Executive of his obligations under this Agreement do not, and shall not, breach any agreement, including, but not limited to, any agreement that obligates him to keep in confidence any trade secrets or confidential or proprietary information of his or of any other party, to write or consult to any other party or to refrain from competing, directly or indirectly, with the business of any other party. The Executive shall not disclose to the Company or use any trade secrets or confidential or proprietary information of any other party.

(f) Successors; Binding Agreement; Third Party Beneficiaries. This Agreement shall inure to the benefit of and be binding upon the personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees legatees and permitted assignees of the Parties hereto.

(g) Withholding Taxes. The Company may withhold from any and all amounts payable under this Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

(h) Survivorship. The respective rights and obligations of the Parties hereunder, including without limitation Sections 9 through 11 hereof, shall survive any termination of Executive's employment to the extent necessary to the agreed preservation of such rights and obligations.

(i) Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

(j) Headings. The headings of the sections contained in this Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement as of the Effective Date.

COMPANY:

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

EXECUTIVE:

By: /s/ David M. Spencer
Name: David M. Spencer, Ph.D.

EXHIBIT A

ANNUAL PERFORMANCE BONUS

Any Annual Performance Bonus shall be based on achievement of qualitative strategic and operational goals established in writing by the Board, after consultation with the Executive. Within ninety (90) days after the first day of each calendar year, the Board, after consultation with the Executive, shall establish, in writing, the required improvement in the qualitative strategic goals over the prior calendar year necessary to achieve the target bonus. The target and maximum Annual Performance Bonus shall be twenty-five (25) percent of the Executive's Salary.

The Annual Performance Bonus shall be adjusted from the target bonus amount based on a determination in the sole discretion of the Board of whether Executive has achieved the qualitative strategic goals.

EXHIBIT B

INVENTIONS

PRE-BCM:

1. Regulated transcription of targeted genes and other biological events.

U.S. Patent No. **5,830,462**, Issued: 10/3/98; **5,869,337**, Issued: 2/9/99; **5,871,753**, Issued: 2/16/99; **6,011,018**, Issued: 1/4/00; **6,043,082**, Issued: 3/28/00; **6,046,047**, Issued: 4/4/00.

Canadian Patent No. 2,155,728, Issued: 4/25/00

2. Regulated apoptosis.

U.S. Patent No. **5,834,266**, Issued: 10/10/98; **5,994,313**, Issued: 11/30/99; **6,054,436**, Issued: 4/25/00; Australian patent #696991, Issued: 9/24/98

AT BCM (filed):

3. Induced Activation in Dendritic Cells.

U.S. Patent No 7,404,950, Issued: 07/29/08; (continuation: 12/165,360, published: 10/30/08)

Disclosures and provisional filings:

OTA # 97-13/P01934US1/09800937: Regulated apoptosis using chemically induced dimerization of apoptosis factors. (09/647,418, 10/247,019)

OTA # 98-66/P01934US1: A gene therapeutic approach to inducing apoptosis using conditional proteins. *Filed: 3/98*

OTA# 00-77: Akt-based inducible survival switch for gene therapy (60/342,155)BLG 00-077: 10/324,985 (Akt-based inducible survival switch)

OTA 01-85/HO-P02165WO0: Induced activation in Dendritic cells

BLG 05-058: “An improved constitutive Akt for extended cell viability”

Modified Dendritic Cells having enhanced survival and immunogenicity and related compositions and methods.

International patent application: WO 2007/137300 (issued 06/19/08)

BLG 05-044, -056, Docket No.: HO-P03124WO0, P03124US1

Title: Genetic Markers associated with benign prostatic hyperplasia, filed 1/25/06 as 60/646,841

Title: Genetic markers of modulated by drug treatment as diagnostic, therapeutic, and response targets for BPH. BLG 05-055, HO-P03125US0 Provisional Application No. 60/803,025

Title: Modified Dendritic Cells Having Enhanced Survival And lmmunogenicity And Related Compositions And Methods (12/563,991; Prov. App. 61/099,163, Filed: September 21, 2009)

Title: Methods and compositions for generating an immune response by inducing CD40 and pattern recognition receptor adapters.

Other disclosures to BCMT:

a) Human kallikrein 2-based promoter

c) Inducible FGFR1-based novel prostate cancer model

d) Developed prostate reporter mice called EZC-Prostate

f) Improved constitutive Myr-Akt, BLG 05-058

g) Development of Low Basal Activity Inducible Murine Caspase-9, OTA-04-023, 12/03

h) Chimeric CD27 receptors for redirecting T cells to CD70-positive malignancies, 9/6/07

i) Development of iLRP for regulatable ß-catenin signaling, OTA-05-076

j) Inducible TLR and composite costimulatory receptors for unified, broadly applicable immunotherapy, BLG-06-028

Trademarks and inventions: “EZC-PROSTATE” (*issued:* January 31, 2006), Registration No. 3,056,079

EXHIBIT C

DUTIES

The Chief Scientific Officer will lead the scientific efforts of the company, managing scientific partnerships for research and discovery, and providing scientific support of clinical research. The role of the CSO will be to manage the product discovery and support translational and clinical development programs.

- Understand needs and trends, globally, in immunotherapeutics.
- Derive a science strategy that underpins Bellicum's business strategy to become a leader in immunotherapeutics. Gain agreement with the CEO and board on this strategy.
- Be an active participant in the creation of projects for Bellicum.
- Articulate the company's science premise and strategy in a compelling and inspirational manner, both internally and externally.
- Provide scientific advice to the CEO, the board, and the company as a whole.
- Identify opportunities and lead collaboration with outside bodies. Form strategic partnerships and research collaborations as appropriate.
- Identify, pursue and secure grant funding opportunities.
- Recruit and oversee scientific staff appropriate to the company's overall goals and development plans
- Maintain awareness of emerging changes in the regulatory landscape.
- In clinical and product technology aspects, identify and propose areas for new product/technology development and innovation; ensure up-to-date methodology in offerings and manufacturing. Maintain the highest standards of scientific rigor. Provide advice on and evaluate new technologies in immunotherapeutics.
- Support Bellicum's commercial efforts by evaluating external business development opportunities from a scientific perspective.

EXHIBIT D

OPTION GRANT AGREEMENT

See attached.

BELLICUM PHARMACEUTICALS, INC.

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (this "**Agreement**"), made effective as of October 17, 2011 (the "Effective Date"), is by and between Bellicum Pharmaceuticals, Inc. a Delaware corporation (the "**Company**"), having an office at 6400 Fannin Street, Suite 2300, Houston, Texas 77030 ("**Company Premises**") and Annemarie Moseley, M.D., Ph.D., an individual, residing at 7913 Brightman Lane, Austin, Texas 78733 ("**Executive**"). The Company and Executive are referred to herein individually as a "**Party**" and collectively as the "**Parties**". As used herein, "**Affiliate**" means any entity that directly or indirectly controls, is controlled by, or is under common control with, the Company.

WHEREAS, the Company desires to retain Executive as its Senior Vice President, Clinical Development & Regulatory Affairs and Executive agrees to be retained by the Company in such capacity;

WHEREAS, the Company and Executive desire to enter into this Agreement in order to memorialize the terms and conditions of the Executive's employment by the Company;

WHEREAS, Executive's agreement to and compliance with the provisions in Sections 9 through 11 of this Agreement are a material factor, material inducement and material condition to the Company's entering into this Agreement. Moreover, Executive acknowledges that a substantial portion of the value of the employment of the Executive is Executive's promises to refrain from competing with the Company as identified in Sections 9 through 11 of this Agreement;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the Parties agree as follows:

1. **Term of Employment**. Executive's employment under this Agreement shall be for an initial term of one (1) year beginning on the Effective Date, subject to earlier termination as provided in Section 6 hereof. This Agreement will be automatically renewed for successive one (1) year terms following the initial term unless either Party (a) gives the other Party no less than thirty (30) days written notice prior to the expiration of the term of such Party's intent not to renew, or (b) the term is earlier terminated as provided in Section 6 hereof. "**Employment Term**" as used herein shall mean the term of this Agreement, without giving effect to any extensions thereof not yet effected. If the Agreement is renewed, then each renewal year term shall be included in Employment Term.

2. **Position**. During the Employment Term, Executive shall serve as the Senior Vice President, Clinical Development & Regulatory Affairs ("**Senior Vice President**") of the Company. Executive's duties under this Agreement shall be to serve as Senior Vice President with the responsibilities, rights, authority and duties as are established from time to time by the Board of Directors of the Company (the "**Board**"), and Executive shall report to the Board. Executive's duties are more fully described on Exhibit C attached hereto.

3. **Commitment**. Executive will devote substantially all of her business time and her best efforts to the performance of her duties hereunder, and will be present for typically three consecutive days per week, for a total of at least twelve working days per month, subject to weather and other circumstances beyond Executive's reasonable control, at the Company Premises. If Executive travels on Company business to locations other than Houston or Austin, the days spent on such travel shall count against the twelve working days per month at the Company Premises. Executive shall be allowed, to the extent that such activities do not interfere with the performance of her duties and responsibilities hereunder and do not conflict with the financial, fiduciary or other interests of the Company (or its Affiliates), as determined in the sole discretion of the Board, to manage her passive personal investments and to serve on corporate, civic, charitable and industry boards or committees. Notwithstanding the foregoing, the Executive agrees that she shall only serve on for-profit boards of directors or for-profit advisory committees if such service is approved in advance in the sole discretion of the Board.

4. **Compensation**.

(a) Base Salary. During the Executive's employment with the Company, the Company shall pay Executive a base salary at the annual rate of THREE HUNDRED THOUSAND AND NO/100 DOLLARS ($300,000.00) ("**Base Salary**"), payable in twice-monthly installments of Twelve Thousand and Five Hundred Dollars ($12,500).

(b) Signing Bonus. Executive will be entitled to a signing bonus of TWO THOUSAND AND FIVE HUNDRED AND NO/100 DOLLARS ($2,500), payable at the end of the first month of employment; provided, however, in the event that Executive voluntarily ceases her employment with the Company within the first six months after the Effective Date, such signing bonus shall be repayable to the Company.

(c) Annual Performance Bonus. For each calendar year beginning in 2011, the Executive may be eligible to receive an annual performance bonus of up to twenty-five percent (25%) of Executive's Base Salary ("**Annual Performance Bonus**") from the Company, which shall be based on the formula determined by the Company, in its sole discretion, for that year. Payment of the Annual Performance Bonus shall be expressly conditioned upon the Executive's employment with the Company on the date that the Annual Performance Bonus is otherwise payable; provided however, in the event the Executive's employment is terminated by the Company without Cause, as defined in Section 6(c)(i), or the Executive terminates her employment for Good Reason, as defined in Section 6(d)(i), the Annual Performance Bonus shall be prorated and paid notwithstanding the fact that Executive is not employed with the Company on the date that the Annual Performance Bonus is otherwise payable. The Annual Performance Bonus shall be payable within ninety (90) days after the end of the calendar year for which it is payable. The amount, if any, of the Annual Performance Bonus shall be determined by the Board acting within its sole discretion, but based on the parameters set forth on Exhibit A.

(d) Option Award. Immediately following and conditioned upon the Company's 2011 Stock Option Plan becoming effective, the Company will award options to the Executive pursuant to the Option Grant Agreement attached as Exhibit D.

(e) Reimbursement of Business Expenses. The Company shall reimburse Executive for reasonable travel and other business expenses incurred by Executive in the performance of her duties hereunder, in accordance with the Company's policies as in effect from time to time.

5. **Benefits**. During the Employment Term and subject to applicable eligibility requirements, Executive shall be entitled to participate in all benefit plans and arrangements and fringe benefits and programs that may be provided to senior executives of the Company in the future. Executive is entitled to participate in personal time off and holiday benefits, with personal time off to be not less than twenty seven days on an annual basis, accruing at 9 hours per twice monthly pay period. Ten days of personal time off may be carried over to the next year.

6. **Termination**.

(a) Termination. The employment of Executive under this Agreement shall terminate prior to the expiration of the Employment Term upon the earliest to occur of any of the following events:

(i) the death of the Executive;

(ii) the termination of the Executive's employment by the Company due to the Executive's Disability pursuant to Section 6(b) hereof;

(iii) the termination of the Executive's employment by the Executive other than for Good Reason (as hereinafter defined); however, Executive is required to provide 30 (thirty) days written notice to the Board of Executive's intention to terminate Executive's employment;

(iv) the termination of the Executive's employment by the Company without Cause;

(v) the termination of the Executive's employment by the Company for Cause pursuant to Section 6(c); or

(vi) the termination by the Executive of the Executive's employment for Good Reason (as hereinafter defined) pursuant to Section 6(d).

(b) Disability. The Company may terminate Executive's employment for Disability at any time upon thirty (30) days written notice provided to Executive. For purposes of this Agreement, "**Disability**" means that Executive has been unable, for ninety (90) consecutive days, or for periods aggregating one hundred and twenty (120) business days in any period of twelve consecutive months, to perform Executive's duties under this Agreement, as a result of physical or mental impairment, illness or injury, as determined in good faith by the Board. A termination of Executive's employment for Disability shall be communicated to Executive by written notice, and shall be effective on the 10th day after sending such notice to Executive (the "**Disability Effective Date**"), unless Executive returns to performance of Executive's duties before the Disability Effective Date.

(c) Termination for Cause.

(i) *Cause Defined*. Subject to the notification provision of Section 6(c)(ii) below, Executive's employment hereunder may be terminated by the Company for Cause. For purposes of this Agreement, the term "**Cause**" shall mean (A) Executive's willful misconduct which is demonstrably and materially injurious to the Company's reputation, financial condition, or business relationships; (B) the failure of Executive to attempt in good faith to follow the legal written direction of the Board; (C) the failure by the Executive to attempt in good faith to perform the duties required of her hereunder (other than any such failure resulting from incapacity due to physical or mental illness) after a written demand for substantial performance is delivered to the Executive by the Board which specifically identifies the manner in which it is believed that the Executive has failed to attempt to perform her duties hereunder; (D) the Executive being convicted of, indicted for, or pleading guilty or nolo contendere to, a felony or any crime involving dishonesty, fraud or moral turpitude; (E) the Executive's dishonesty with regard to the Company or in the performance of her duties hereunder, which in either case has a material adverse effect on the Company; (F) the Executive's material breach of this Agreement unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach; or, (G) Executive's failure to comply in any material respect with the Company's policies and/or procedures, unless corrected by Executive within ten (10) days of the Company's written notification to Executive of such breach.

(ii) *Notice of Termination for Cause*. A Notice of Termination for Cause shall mean a notice that shall indicate the specific termination provision in Section 6(c)(i) relied upon and shall set forth in reasonable detail the facts and circumstances which provide a basis for Termination for Cause.

(d) Termination by the Executive for Good Reason.

(i) *Good Reason Defined*. The Executive may terminate this Agreement for Good Reason. The term "Good Reason" shall mean the occurrence, without the Executive's prior written consent, of any one or more of the following: (A) any reduction in Executive's compensation as set forth in Section 4 hereof; (B) a material adverse change in any of the terms of this Agreement, including Executive's title, status, authority, duties and responsibilities; (C) the failure by the Company to obtain a satisfactory agreement from any successor of the Company requiring such successor to assume and agree to perform the Company's obligations under this Agreement; or (D) the failure by the Company to comply with any material provision of this Agreement.

(ii) *Notice of Termination for Good Reason*. No resignation for Good Reason shall be effective unless the Executive shall, within ninety (90) days of sufficient facts known to the Executive to constitute Good Reason, give written notice to the Chairman of the Board of Directors of the Company or its representative setting forth in reasonable detail the material facts constituting Good Reason and the reasonable steps the Executive believes necessary to cure, and thereafter the Company shall have thirty (30) business days from the date of such notice to cure any such occurrence otherwise constituting Good Reason, provided that no such notice and opportunity to cure is required if the Executive has previously given the Company notice and opportunity to cure the same conduct.

7. **Consequences of Termination of Employment**. If Executive's employment is terminated (a) by reason of Executive's death, (b) by reason of Executive's Disability, (c) by Executive for any reason other than Good Reason, or (d) by the Company for Cause, the Employment Term shall terminate without further obligations to Executive, or in the case of the Executive's death to Executive's legal representatives, under this Agreement except for: (i) any Base Salary earned, but unpaid; and, (ii) any unreimbursed business expenses payable pursuant to Section 5 hereof and any accrued but unused personal time off benefits (collectively "**Accrued Amounts**"), which amounts shall be promptly paid in a lump sum to Executive, or in the case of Executive's death to Executive's estate. If Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, or if Company ever elects not to renew this Agreement pursuant to Section 1 above, this Agreement, except for Sections 9 through 11, shall terminate without further obligations to or by the Executive, except for Accrued Amounts, plus the Company shall continue to pay the Executive her Base Salary, any applicable prorated Annual Performance Bonus and reimbursement for continuation of healthcare benefits for twelve (12) months following the date of termination. When Executive terminates her employment for any reason, the Company may elect to waive notice from Executive and designate the Executive's last day of employment, provided the Company provides the Executive all applicable compensation and benefits through the Executive's notice period. Executive's rights under any equity grants shall be determined in accordance with the Company's Restricted Stock Purchase Agreement or agreements governing the grant of options under Company's 2011 Stock Option Plan, as amended and as the same may be modified in accordance with the terms of the Option Grant Agreement attached as Exhibit D.

8. **Confidential Information**. "**Confidential Information**" as used in this Agreement, includes but is not limited to, specialized training received by Executive; products already developed or that will be developed in the field of cancer immunotherapy, including but not limited to metastatic castrate resistant prostate cancer and graft versus host disease; research and development materials related to the manipulation of dendritic cell signaling pathways to enhance the immune response; research and development materials, electronic databases; computer programs and technologies; marketing and/or scientific studies and analysis; product and pricing knowledge; manufacturing methods; supplier lists and information; any and all information concerning past, present and future customers, referral sources or vendors; contracts and licenses; management structure, company ownership, personnel information (including the performance, skills, abilities and payment of employees); purchasing, accounting and business systems; short and long range business planning; data regarding the Company's past, current and future financial performance, sales performance, and current and/or future plans to increase the Company's market share by targeting specific medical issues, demographic and/or geographic markets; standard operating procedures; financial information; trade secrets, copyrights, derivative works, patents, inventions, know-how, and other intellectual property; business policies; submissions to government or regulatory agencies and related information; methods of operation; implementation strategies; promotional information and techniques; marketing presentations; price lists; files or other information; pricing strategies; computer files; samples; customer originals; or any other confidential information concerning the business and affairs of the Company. The Company's Confidential Information is also comprised of the personal information received from third parties and/or confidential and proprietary information regarding research, products, or clinical trials received from third parties, but only if such confidential information is reduced to writing and marked "Confidential" by the third party. All information

obtained by Executive, whether in writing, any other tangible form of expression or disclosed orally or through visual means or otherwise, and regardless of whether such information bears a confidential or proprietary legend, will be presumed to be Confidential Information. Executive acknowledges that the Confidential Information is vital, valuable, sensitive, confidential and proprietary to Company and provides Company with a competitive advantage. Executive further acknowledges that Company's Confidential Information is dynamic, and constantly changes in nature and/or quantity, given that Company continues to refine its Confidential Information. The obligations specified in this Section 8 shall not apply, and Executive shall have no further obligations under this Agreement with respect to any Confidential Information that: a) is available to the public at the time of disclosure to Executive or becomes publicly known through no breach of the undertakings hereunder by Executive or to the knowledge of the Executive, any third party; b) becomes known to Executive through disclosure by sources other than the Parties involved in this agreement, said sources being under no obligation of confidentiality to Company with respect to such Confidential Information; c) is approved by Company for release; or d) has been independently developed by Executive without benefit of the Confidential Information.

9. **Non-Competition; Non-Solicitation, Etc.**

(a) Company Promises.

(i) This Agreement is entered into pursuant to Executive's agreement to these non-compete and non-solicitation provisions. Executive's agreement to the provisions in Sections 9 through 11 is a material condition of the Company's entering into the Agreement and employment of Executive.

(ii) The Company agrees to provide Executive with access to Confidential Information and in a greater quantity and/or expanded nature than any such Confidential Information that may have already been provided to Executive and with additional opportunities to broaden the Company's services and develop the Company's customers in a manner not previously available to Executive including, but not limited to, information regarding the Company's business plan; research results; information supporting patent applications; and Company standard operating procedures related to the manipulation of dendritic cell signaling pathways to enhance immune response.

(iii) The Company promises that during Executive's employment with the Company, the Company will provide Executive with the opportunity to develop goodwill and establish rapport with the customer contacts in a greater quantity and/or expanded nature than any such opportunities that may have already been provided to Executive.

(iv) The Company promises that Executive will continue to receive and have access to Confidential Information throughout Executive's employment with the Company.

(b) Executive's Promises. In exchange for the Company's promises listed above and all other consideration provided pursuant to this Agreement, to which these promises are ancillary, Executive promises as follows:

(i) Executive will not, during or after Executive's employment with the Company, use, copy, remove, disclose or disseminate to any person or entity, the Company's

Confidential Information, except (A) as required in the course of performing Executive's duties with the Company, for the benefit of the Company, or (B) when required to do so by a court of law, by any governmental agency having supervisory authority over the business of the Company or by any administrative or legislative body (including a committee thereof) with apparent jurisdiction to order Executive to divulge, disclose or make accessible such information, it being understood that Executive will promptly notify the Company of such requirement so that the Company may seek to obtain a protective order.

(ii) Following employment termination, Executive will immediately return to the Company all materials created, received or utilized in any way in conjunction with Executive's work performed with the Company that in any way incorporates, reflects or constitutes Company's Confidential Information.

(iii) Executive acknowledges that the market for the Company's products, services, and activities is global, and that the products, services and/or activities can be provided anywhere in the world where cancer therapies are utilized. Executive recognizes that the Company draws its customers and/or clients from around the world because it will seek to file patents and run clinical trials in countries around the world, and sell its product to consumers around the world and/or pharmaceutical companies located around the world. Moreover, Executive recognizes that the Company's customers may be contacted by telephone, in person, or in writing (including e-mail via the Internet). Executive further acknowledges that due to the international scope of the Company's customer and client base, the following non-solicitation/non-competition restriction is necessary.

(iv) Executive agrees and acknowledges that Company will not be provided access to Confidential Information, as defined in Section 8, from or belonging to a third party that Executive was exposed to or received from said third party prior to the execution date of this Agreement and that is the subject of any confidentiality requirement of any kind between Executive and said third party. **EXECUTIVE ALSO AGREES TO INDEMNIFY, REIMBURSE, AND HOLD HARMLESS THE COMPANY FOR ALL ATTORNEY FEES, EXPENSES, COSTS, HARM, OR RELATED COSTS TO COMPANY ARISING FROM OR AS A RESULT OF ANY ACTUAL CAUSE OF ACTION OR CLAIM BROUGHT AGAINST COMPANY OR EXECUTIVE RELATED TO ANY ACTUAL BREACH OF THIS SECTION BY EXECUTIVE**. Company agrees that: (A) Executive shall be allowed to participate fully in the defense of any such action against Company and in any settlement negotiations, and (B) any payment to Company by Executive under this paragraph shall be only after any settlement has been consummated or judicial action has become final and non-appealable.

(c) Non-Compete. Ancillary to the consideration reflected within this Agreement, the Company and Executive agree to the following non-competition provisions. Executive agrees that during the Executive's employment with the Company Employment Term and for a period of twelve (12) months following the termination of her employment ("**Non-Compete Period**"):

(i) Executive shall not, directly or indirectly, engage in or participate (including, without limitation, as an investor, officer, employee, director, agent, or consultant (any such capacity, being a "**Participant**")) in or on behalf of any entity engaging in the

"**Company's Business**", said Company's Business being defined as: (A) genetically modified cell products for the treatment of cancer; and (B) other genetically modified products for which the Company has an active development program at the termination or expiration of the Employment Term (the "**Non-Compete Obligations**"), provided, however, that nothing herein shall prevent her from investing as a less than 5% shareholder in securities of any company listed on a national securities exchange or quoted on an automated quotation system.

(ii) *Geographic Limitation*. The geographic limitation for the Non-Compete Obligations is North America, Europe and Japan.

(iii) During the Non-Compete Period, Executive will not directly or indirectly become employed or otherwise associated with any of the following entities, which are direct competitors of the Company, in any geographic region:

Dendreon Corporation	3005 First Avenue Seattle, WA 98121
Argos Therapeutics, Inc	4233 Technology Drive Durham, NC 27704
Athersys, Inc.	3201 Carnegie Avenue Cleveland, OH
Bavarian Nordic	Hejreskovvej 10A Kvistgaard 3490 Denmark
Intrexon Corporation	1872 Pratt Drive Blacksburg, VA
Kiadis Pharma B.V.	Entrada 231-234 1096 EG Amsterdam The Netherlands
Mesoblast Limited	275 Madison Avenue New York, NY 10016
MolMed S.p.A.	Via Olgettina, 58 20132 Milan, Italy
Northwest Biotherapeutics, Inc.	4800 Montgomery Lane, Suite 800 Bethesda, MD 20814
Progenics Pharmaceuticals, Inc.	777 Old Saw Mill River Rd. Tarrytown, NY 10591

The Executive and the Company agree that with respect to the foregoing entities such names are the common names of such entities. Executive and the Company agree that the restrictions contained in this Agreement are binding whether or not the Executive and the Company have used the correct legal name, affiliated entity, or new owner of such entity; however, if said new owner of such entity has other divisions that are not involved in carrying out the work of the acquired listed entity, then Executive may be employed or otherwise associated with these other divisions.

(iv) Executive agrees that Executive's work for any third party engaged in the Company's Business during the Non-Compete Period inevitably would lead to Executive's unauthorized use of Company's Confidential Information, even if such use is unintentional. Because it would be impossible, as a practical matter, to monitor, restrain, or police Executive's use of such Confidential Information other than by Executive's not working for such third party, and because the Company's Business is highly specialized, the competitors are identifiable, the market for the Company's product, services, and activities is global, and the Company's customers are located throughout the world, Executive agrees that restricting such employment as set forth in this Agreement is the narrowest way to protect Company's legitimate business interests, and the narrowest way of enforcing Executive's consideration for the receipt of Company's Consideration, (namely, Executive's promise not to use or disclose that Confidential Information/specialized training).

(d) Nonsolicitation of Employees. Executive agrees that during the Non-Compete Period, Executive will not, directly or indirectly, (i) induce or solicit any person who was an employee, consultant or independent contractor of the Company or any of its Affiliates during the course of Executive's employment with the Company, to terminate such individual's employment or service with the Company or any of its Affiliates, (ii) hire or retain the services of any such person, regardless of whether such person had been solicited for employment, or (iii) assist any other person or entity in such activities.

(e) Extension of Non-Solicitation/Non-Competition and Non-Recruitment Periods. If Executive is found by a Court of competent jurisdiction to have breached any promise made in Section 9 of this Agreement, the periods specified in Section 9(c) of this Agreement shall be extended by one month for every month in which Executive was in breach so that the Company has the full benefit of the time period Section 9(c).

10. **Injunction**. Executive recognizes that Executive's services hereunder are of a special, unique, unusual, extraordinary and intellectual character giving them a peculiar value, the loss of which cannot be reasonably or adequately compensated for in damages. Executive acknowledges that if Executive were to leave the employ of the Company for any reason and compete, directly or indirectly, with the Company, or solicit the Company's employees, or use or disclose, directly or indirectly, the Company's Confidential Information (whether in tangible form or memorized), that such competition, solicitation, use and/or disclosure would cause the Company irreparable harm and injury for which no adequate remedy at law exists. Executive agrees this Agreement is the narrowest way to protect the Company's interests. Therefore, in the event of the breach or threatened breach of the provisions of this Agreement by Executive, the Company shall be entitled to obtain injunctive relief to enjoin such breach or threatened breach, in addition to all other remedies and alternatives that may be available at law or in equity. Executive acknowledges that the remedies contained in this Agreement for violation of this Agreement are not the exclusive remedies that the Company may pursue.

11. **Inventions**.

(a) Inventions Retained and Licensed. Executive has attached hereto as Exhibit B, a list describing all inventions, original works of authorship, derivative works, developments, improvements and trade secrets that (i) were made by Executive prior to her employment with

the Company, (ii) belong to Executive, (iii) relate to the Company's proposed business, products or research and development and (iv) are not assigned to the Company hereunder (collectively, "**Prior Inventions**"); or, if no such list is attached, Executive represents that there are no such Prior Inventions, Executive agrees that Executive will not incorporate, or permit to be incorporated, any Prior Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent. Nevertheless, if, in the course of Executive's employment with the Company, Executive incorporates into a Company product, process or service a Prior Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Prior Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

(b) Assignment of Inventions. Executive agrees that Executive will promptly make full written disclosure to the Company, will hold in trust for the sole right and benefit of the Company, and hereby assign to the Company, or its designee, all Executive's right, title, and interest in and to any and all inventions, original works of authorship, derivative works, developments, concepts, modifications, improvements (including improvements to Confidential Information), designs, discoveries, ideas, know-how, trademarks, trade dress, trade secrets or other intellectual property, whether or not patentable or registrable under copyright or similar laws, which Executive may solely or jointly conceive or develop or reduce to practice, or cause to be conceived or developed or reduced to practice, whether or not reduced to drawings, written descriptions, documentation or other tangible form, as applicable, during the period of time Executive is employed by the Company (collectively, "**Inventions**"), except as provided in Section 11(f) below. Executive further acknowledges that all original works of authorship which are made by Executive (solely or jointly with others) within the scope of and during the period of Executive's employment with the Company and which are protectible by copyright are "works made for hire" as that term is defined in the United States Copyright Act. Executive understands and agrees that the decision whether or not to commercialize or market any Invention is within the Company's sole discretion and for the Company's sole benefit and that no royalty will be due to Executive as a result of the Company's efforts to commercialize or market any such Invention.

(c) Inventions Assigned to the United States. Executive agrees to assign to the United States government all Executive's right, title, and interest in and to any and all Inventions whenever such full title is required to be in the United States by a contract between the Company and the United States or any of its agencies.

(d) Maintenance of Records. Executive agrees to keep and maintain adequate and current written records of all Inventions during the term of Executive's employment with the Company. The records will be in the form of notes, sketches, drawings and any other format that may be specified by the Board. The records will be available to and remain the Company's sole property at all times.

(e) Patent and Copyright Registrations. Executive agrees to assist the Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in any Inventions and any copyrights, patents, mask work rights or other intellectual property rights

relating thereto in any and all countries, including, but not limited to, the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, declarations, assignments and all other instruments that the Company deems necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such Inventions, and any copyrights, patents, mask work rights or other intellectual property rights relating thereto. Executive further agrees that Executive's obligations to execute or cause to be executed, when it is in Executive's power to do so, any such instrument or papers shall continue after the termination of this Agreement. If the Company is unable because of Executive's mental or physical incapacity or for any other reason to secure Executive's signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering any Inventions or original works of authorship assigned to the Company as above, then Executive hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Executive's agent and attorney in fact, to act for and in Executive's behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of letters patent or copyright registrations thereon with the same legal force and effect as if executed by Executive.

(f) Exception to Assignments. Executive understands that the provisions of this Agreement requiring assignment of Inventions to the Company does not apply to any Invention that Executive has developed entirely on Executive's own time without using the Company's equipment, supplies, facilities, trade secret information or Confidential Information (an "**Other Invention**") except for those Other Inventions that either (i) relate in any way at the time of conception or reduction to practice of such Other Invention to the Company's Business or (ii) result from any work that Executive performed for the Company. Executive will advise the Company promptly in writing, under a confidentiality agreement, of any Invention that Executive believes constitutes an Other Invention and is not otherwise disclosed on Exhibit B. Executive agrees that Executive will not incorporate, or permit to be incorporated, any Other Invention owned by Executive or in which Executive has an interest into a Company product, process or service without the Company's prior written consent. Notwithstanding the foregoing sentence, if, in the course of Executive's employment with the Company, Executive incorporates into a Company product, process or service an Other Invention owned by Executive or in which Executive has an interest, Executive hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Other Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

12. **Disputes**. Any dispute or controversy between the Company and Executive, arising out of or relating to this Agreement, the breach of this Agreement, or otherwise, shall be settled by arbitration in Houston, Texas administered by the American Arbitration Association in accordance with its Employment Arbitration Rules then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof The arbitrator shall have the authority to award any remedy or relief that a court of competent jurisdiction could order or grant, including, without limitation, the issuance of an injunction. However, either Party may, without inconsistency with this arbitration provision, apply to any court having jurisdiction over such dispute or controversy and seek interim provisional, injunctive or other equitable relief

until the arbitration award is rendered or the controversy is otherwise resolved. Except as necessary in court proceedings to enforce this arbitration provision or an award rendered hereunder, or to obtain interim relief, neither a party nor an arbitrator may disclose the existence, content or results of any arbitration hereunder without the prior written consent of the Company and Executive. Each Party shall bear its or her costs and expenses in any arbitration hereunder and one-half of the arbitrator's fees and costs; provided, however, that the arbitrator shall have the discretion to award the prevailing party reimbursement of its or her reasonable attorney's fees and costs.

13. **Notices**. All notices given under this Agreement shall be in writing and shall be deemed to have been duly given (a) when delivered personally, (b) three business days after being mailed by first class certified mail, return receipt requested, postage prepaid, (c) one business day after being sent by a reputable overnight delivery service, postage or delivery charges prepaid, or (d) on the date on which a facsimile is transmitted to the Parties at their respective addresses stated below. Any Party may change its address for notice and the address to which copies must be sent by giving notice of the new addresses to the other parties in accordance with this Section 13, except that any such change of address notice shall not be effective unless and until received.

If to the Company:

6400 Fannin Street, Suite 2300
Houston, Texas 77030
Attention: Thomas J. Farrell

with a copy (which shall not constitute notice) to:

Bracewell & Giuliani LLP
711 Louisiana, Suite 2300
South Tower Pennzoil Place
Houston, Texas 77002
Attention: William D. Gutermuth

If to Executive, to Executive's address set forth above.

14. **Miscellaneous**.

(a) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to principles of conflict of laws.

(b) Entire Agreement/Amendments. This Agreement and the instruments contemplated herein contain the entire understanding of the Parties with respect to the employment of Executive by the Company from and after the Commencement Date and supersede any prior agreements between the Company and Executive. There are no restrictions, agreements, promises, warranties, covenants or undertakings between the Parties with respect to the subject matter herein other than those expressly set forth herein and therein. This Agreement may not be altered, modified, or amended except by written instrument signed by the Parties hereto.

(c) No Waiver. The failure of a Party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such Party's rights or deprive such Party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. Any such waiver must be in writing and signed by Executive or an authorized officer of the Company, as the case may be.

(d) Assignment. This Agreement shall be binding upon and inure to the benefit of the Company and the Executive and their successors, assigns, executors and administrators. This Agreement shall not be assignable by Executive.

(e) Representation. Executive represents that the Executive's employment by the Company and the performance by the Executive of her obligations under this Agreement do not, and shall not, breach any agreement, including, but not limited to, any agreement that obligates her to keep in confidence any trade secrets or confidential or proprietary information of hers or of any other party, to write or consult to any other party or to refrain from competing, directly or indirectly, with the business of any other party. The Executive shall not disclose to the Company or use any trade secrets or confidential or proprietary information of any other party.

(f) Successors; Binding Agreement; Third Party Beneficiaries. This Agreement shall inure to the benefit of and be binding upon the personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees legatees and permitted assignees of the Parties hereto.

(g) Withholding Taxes. The Company may withhold from any and all amounts payable under this Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

(h) Survivorship. The respective rights and obligations of the Parties hereunder. including without limitation Sections 9 through 11 hereof, shall survive any termination of Executive's employment to the extent necessary to the agreed preservation of such rights and obligations.

(i) Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

(j) Headings. The headings of the sections contained in this Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement as of the Effective Date.

COMPANY:

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

EXECUTIVE:

By: /s/ Annemarie Moseley
Name: Annemarie Moseley, M.D., Ph.D.

EXHIBIT A

ANNUAL PERFORMANCE BONUS

Any Annual Performance Bonus shall be based on achievement of qualitative strategic and operational goals established in writing by the Board, after consultation with the Executive. Within ninety (90) days after the first day of each calendar year, the Board, after consultation with the Executive, shall establish, in writing, the required improvement in the qualitative strategic goals over the prior calendar year necessary to achieve the target bonus. The target and maximum Annual Performance Bonus shall be twenty-five (25) percent of the Executive's Salary.

The Annual Performance Bonus shall be adjusted from the target bonus amount based on a determination in the sole discretion of the Board of whether Executive has achieved the qualitative strategic goals.

EXHIBIT B

INVENTIONS

None.

EXHIBIT C

DUTIES

The Senior Vice President, Clinical Development and Regulatory Affairs reports directly to the CEO with a “dotted” line to the CMO and is accountable for all aspects of clinical and product development of the Bellicum programs from the point at which a clinical candidate is designated and approved by the Board, through commercialization, including regulatory submissions and product approval.

General Duties include but not limited to:

- Assemble high performing teams for clinical operations, and regulatory affairs and medical monitoring/clinical science as relevant and lead in daily activities in support of the company’s clinical and regulatory strategic goals
- Provide direction in planning the overall strategy for clinical drug product development; lead and coordinate cross-functional ND and BLA filing activities as well as planning, oversight and review of Clinical Study Reports, regulatory updates and submissions
- Develop and maintain successful relationships with investigators, key opinion leaders, and joint development partners and external stakeholders
- Stay informed about the latest industry trends and new technologies by attending conferences and seminars. Represent the company in public forums (e.g., scientific conferences, advisory committees)
- Work effectively with internal stakeholders (e.g., Research, Preclinical, CMC, Quality) and external stakeholders (e.g. Investigators, Regulatory Agencies, NCI, etc.) to ensure efficient execution of the programs
- Support Corporate Development in partnering activities, as needed

Clinical Responsibilities include but not limited to

- Establish Clinical Operations team, and lead internal activities in clinical trial support and development including CROs, investigators and contract laboratories
- Work with CSO to establish appropriate in-house assays where necessary
- Assist Manufacturing with product logistics
- Work with investigators, CMO and CSO to publish study data and present study data at professional conferences. Represent the organization as subject matter experts and serve as the primary medical contact with academic experts, collaborators and opinion leaders
- Provide guidance in the design, development, preparation, and initiation of clinical study protocols and required documentation in compliance with federal regulations
- Provide 1) guidance and direction in the selection of clinical investigators, 2) proper investigator profile for study, and 3) direction and participation in operations activities (i.e., visit selected sites to trouble-shoot, train/retrain staff, if needed)
- Provide medical and scientific input to review of clinical data, patient medical safety data, and laboratory values; maintain an ongoing assessment of the safety profile and efficacy data
- Provide medical surveillance on Serious Adverse Event (SAE) reporting and follow-ups, as needed

- Perform the role of product leader for Bellicum's CaspaClDe products.
- Work with QA function to perform audits of clinical trials and create clinical processes and methodologies related to achieving / supporting GCP and FDA compliance

Regulatory Responsibilities include but not limited to

Responsible for leading the activities of the Regulatory Affairs department, with emphasis on strategic content and timing of regulatory submissions and providing regulatory support for product development.

Manage and direct the company's global regulatory strategies and programs

- Assist in interaction and management of external partners, contractors and vendors to assure regulatory compliance
- Work with Regulatory Affairs Director to ensure consistent and effective communication with regulatory authorities
- Oversee and assist as necessary in the management of regulatory submissions and coordinating drafting, editing, and preparation of regulatory submissions (including routine correspondence, INDs, BLAs, NDAs, DMFs, Annual Reports, Amendments, Supplements, Orphan Drug Applications, etc.)
- Advise senior management, project teams and others on issues related to regulatory strategy and areas of potential concern, and new governmental/regulatory developments
- Negotiate, interact with, and supervise CROs and consultants in preparation of regulatory submissions, as necessary
- Oversee and assist Director as necessary in review of study protocols to ensure regulatory compliance, submission of study protocols to FDA and interface with FDA when necessary regarding these issues
- In conjunction with CSO and others, evaluation of data obtained in animal studies to assist in planning future studies or assessing impact of data on human studies; includes discussions with FDA regarding said data
- Oversee and assist Director as necessary in review and submission of all required CMC information to FDA or other regulatory bodies

Act as **Interim Head of Quality**, reporting to the CEO and assisting the Director of Quality in establishing a robust GMP quality program.

EXHIBIT D

OPTION GRANT AGREEMENT

Exhibit D

Exhibit 10.9

AMENDMENT 1 TO EMPLOYMENT AGREEMENT

This Amendment 1 ("Amendment") to the Employment Agreement ("Agreement") dated October 17, 2011, between Bellicum Pharmaceuticals, Inc., ("Company") and Annemarie Moseley, M.D., Ph.D., ("Executive") is made effective November 26, 2012. The Company and Executive are referred to herein individually as a "Party" and collectively as the "Parties".

WHEREAS, the Executive has served since October 17, 2011 as Senior Vice President, Clinical Development & Regulatory Affairs of the Company;

WHEREAS, as of the effective date of this Amendment the Company desires to promote Executive to Chief Operating Officer with the Company and Executive agrees to be retained by the Company in such capacity;

WHEREAS, the only terms of the Agreement that are changed by this Amendment are those expressly set forth in this Amendment;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the Parties agree as follows:

In the first paragraph of the Agreement, the Company's address is changed to 2130 West Holcombe Blvd., Suite 850, Houston, Texas 77030.

Section 2 is amended to read in its entirety:

2. Position. During the Employment Term from October 17, 2011 through November 25, 2012, Executive shall serve as the Senior Vice President, Clinical Development & Regulatory Affairs ("Senior Vice President") of the Company. During the Employment Term from November 26, 2012 forward, Executive shall serve as the Chief Operating Officer ("COO") and Senior Vice President, Clinical Development & Regulatory Affairs of the Company. Executive's duties under this Agreement shall be to serve with the responsibilities, rights, authority and duties as are established from time to time by the Chief Executive Officer of the Company (the "CEO"), and Executive shall report to the CEO. Executive's duties are more fully described on Exhibit C attached hereto.

Section 4 (a) is amended as follows:

(a) Base Salary. During the Executive's employment with the Company, the Company shall pay Executive a base salary at the annual rate of THREE HUNDRED THOUSAND AND NO/100 DOLLARS ($300,000.00) ("Base Salary"), payable in twice-monthly installments of Twelve Thousand Five Hundred Dollars ($12,500). Effective November 26, 2012, the Base Salary shall be THREE HUNDRED TWENTY THOUSAND AND NO/100 DOLLARS ($320,000.00), payable in twice-monthly installments of Thirteen Thousand Three Hundred Thirty Three and 33/100 Dollars ($13,333.33).

Section 4 (c) is amended by adding the following sentence at the end of section 4(c):

Effective November 26, 2012, the target and maximum Annual Performance Bonus shall be thirty (30) percent of the Base Salary.

Section 4 (d) is amended to read in its entirety:

(a) Option Award. Immediately following and conditioned upon the Company's 2011 Stock Option Plan becoming effective, the Company will award 150,000 stock options to the Executive pursuant to the Option Grant Agreement attached as Exhibit D. An additional 100,000 options will be awarded to the Executive pursuant to the Stock Option Agreement attached as Exhibit E upon the closing of the second tranche of the Series B Financing, as defined in the Series B Preferred Stock Purchase Agreement dated November 9, 2011.

Section 4 (e) is amended by adding the following sentence at the end of section 4(e):

Beginning December 1, 2012, the Company shall additionally reimburse Executive up to $3,000.00 per three month period for commuting travel.

Section 13 is amended by replacing the Fannin Street address with the Company's new address: 2130 West Holcombe Blvd., Suite 850, Houston, Texas 77030.

Exhibit A is amended by adding the following sentence at the end of the first paragraph:

Effective November 26, 2012, the target and maximum Annual Performance Bonus shall be thirty (30) percent of the Base Salary.

Exhibit C is amended as follows:

1. The first paragraph is amended to read in its entirety:

The Chief Operating Officer ("COO") reports directly to the CEO and is accountable for all aspects of clinical and product development of the Bellicum programs from the point at which a clinical candidate is designated and approved by the Board, through commercialization, including regulatory submissions and product approval. The COO also is responsible for manufacturing of Bellicum's product candidates, including process and analytical method development and validation, manufacturing of drug substance and drug product for clinical trials, and preparation for commercial manufacturing; and for the Company's quality assurance programs. The Senior Vice President, Clinical Development & Regulatory Affairs' clinical and regulatory responsibilities include global oversight of all clinical activities to ensure compliance with cGMP, and all regulatory activities to comply with FDA guidances, timing and strategy of filings, including orphan and registration activities in US and Europe. Activities include data management and oversight as well as safety monitoring.

2. After the Clinical Responsibilities section, add the following new section:

Manufacturing Responsibilities include but are not limited to

Overseeing and working closely with the manufacturing department and includes management of CMOs, product and process development, COGs

3. The last sentence of Exhibit C is amended to read:

As Head of Quality, reports to the CEO and assists the Director of Quality in establishing a robust GMP quality program, including establishment and maintenance of corporate quality systems, and establishment of quality product manufacturing through enforcement of QAA agreements with CMOs.

Exhibit E Incentive Stock Option Agreement is added.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Amendment effective as of November 26, 2012.

COMPANY:

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

EXECUTIVE:

By: /s/ Annemarie Moseley
Name: Annemarie Moseley, M.D., Ph.D.

EXHIBIT E

Stock Option Agreement

Exhibit 10.10

EXECUTION VERSION

BELLICUM PHARMACEUTICALS, INC.

THIRD AMENDED AND RESTATED CONSULTING AGREEMENT

This THIRD AMENDED AND RESTATED CONSULTING AGREEMENT, dated as of November 9, 2011, is by and between Bellicum Pharmaceuticals, Inc. a Delaware corporation (the "**Company**"), having an office at 6400 Fannin Street, Suite 2300, Houston, Texas 77030 ("**Company Premises**"), and Kevin M. Slawin, M.D., an individual, residing at 2336 Underwood Street, Houston, Texas 77030 ("**Consultant**").

WHEREAS, the Consultant is currently retained as a consultant by the Company pursuant to a Second Amended and Restated Consulting Agreement effective as of February 1, 2010 (the "**Existing Consulting Agreement**"), and the Company desires to expand the role Consultant performs to the Company to include, among other things, service as its Executive Chairman and Chief Medical Officer and the Consultant agrees to be retained by the Company in such capacities;

WHEREAS, the Company and Consultant desire to amend and restate the Existing Consulting Agreement and enter into this amended and restated consulting agreement (the "**Agreement**" or "**Consulting Agreement**") in order to memorialize the revised terms and conditions of Consultant's engagement by the Company;

WHEREAS, Consultant's agreement to and compliance with the provisions in Sections 9 through 12 of this Agreement are a material factor, material inducement and material condition to the Company's entering into this Consulting Agreement. Moreover, Consultant acknowledges that a substantial portion of the value of the engagement by the Company of Consultant is Consultant's promise to refrain from competing with the Company, and to assign inventions to the Company, as identified in Sections 9 through 12 of this Agreement;

WHEREAS, the parties desire to assure that Consultant will not become subject to obligations to assign certain inventions he makes to the University of Texas or another institution employing Consultant (in either case, the "Employer"), in any way that conflicts with Consultant's obligations to assign inventions to Company;

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein and for other good and valuable consideration, the parties agree as follows:

1. Term of Retention. The Company and Consultant hereby amend and restate the Existing Consulting Agreement with the terms of this Consulting Agreement. Except for earlier termination as provided in Section 7 hereof, Consultant's engagement under this Agreement shall be for a term of three years beginning on the date of this Consulting Agreement and ending on November 8, 2014 (the "**Initial Term**"). This Consulting Agreement will be automatically renewed for two successive one (1) year terms following the Initial Term (each a "**Renewal Term**" and collectively with the Initial Term, the "**Term**") unless either the Company or Consultant gives written notice to the other at least 30 days before such' renewal would otherwise occur of the Company's or Consultant's election not to renew this Consulting

Agreement; provided, further, that notwithstanding anything to the contrary set forth in this Consulting Agreement, this Consulting Agreement may be terminated earlier as provided in Section 7.

2. Services Provided. During the Term, Consultant shall serve as the Executive Chairman of the Board of Directors ("**Chairman**") and Chief Medical Officer ("**CMO**") of the Company, with the responsibilities, rights, authority and duties customarily associated with such positions, as well as additional duties as are established from time to time by the Board, and as further listed in Exhibit E. Consultant shall report to the Board. Consultant shall also act as an officer and/or, director and/or manager of such Affiliates of the Company as may be designated by the Board from time to time commensurate with Consultant's titles, all without further compensation, other than as provided in this Agreement. As used herein, "**Affiliate**" means any entity that directly or indirectly controls, is controlled by, or is under common control with, the Company.

3. Commitment. Consultant will diligently perform his duties as outlined in Exhibit E; provided, however, that Consultant shall be allowed, to the extent that such activities do not materially interfere with the performance of his duties and responsibilities hereunder and do not materially conflict with the financial, fiduciary or other interests of the Company (or its Affiliates), as determined in the sole discretion of the Board, to (a) continue in his current roles listed on Exhibit C, (b) manage his passive personal investments and (c) serve on corporate, civic, charitable and industry boards or committees. Notwithstanding the foregoing, Consultant shall be permitted at all times to practice medicine in private practice and/or as an employee of a group practice or an academic institution to the extent not inconsistent with the terms of this Consulting Agreement or in a manner that prevents Consultant from performing his duties hereunder. It is understood that some of Consultant's obligations to the Company may be discharged during nonbusiness hours. Notwithstanding the foregoing, Consultant agrees that he shall only serve on additional for-profit boards of directors or additional for-profit advisory committees if such service is approved in advance in the sole discretion of the Board.

4. Consulting Fee.

(a) *Base Consulting Fee*. During Consultant's engagement by the Company, the Company shall pay Consultant a base consulting fee of TWO HUNDRED FIFTY THOUSAND DOLLARS NO/100 ($250,000.00) annually ("**Base Fee**"), which shall be payable in equal bi-monthly installments. The Base Fee will commence on the first day of the month following the completion of the "First Equity Financing" (as defined below).

(b) *Annual Performance Bonus*. For each calendar year beginning in 2011, the Consultant shall be eligible to receive an annual performance bonus ("**Annual Performance Bonus**") from the Company, which shall be determined and paid in accordance with the terms of Exhibit A, attached hereto. Payment of the Annual Performance Bonus shall be expressly conditioned upon this Agreement being in force and effect on the date that the Annual Performance Bonus is otherwise payable; provided however, in the event this Agreement is terminated by the Company without Cause (as defined in Section 7(c)) or by Consultant for Good Reason (as defined in Section 7(e)), the Annual Performance Bonus shall be prorated and paid notwithstanding the fact that this Agreement is not in full force and effect on the date that the Annual Performance Bonus is otherwise payable. The Annual Performance Bonus shall be

payable within ninety (90) days after the end of the calendar year for which it is payable. The amount, if any, of the Annual Performance Bonus shall be determined by the Board acting within its sole discretion but without the participation of Consultant in his role as a director.

(c) *Common Stock Options*.

(i) Consultant is hereby issued an additional 440,000 common stock options upon execution of this agreement, as further detailed in the Option Agreement of even date herewith. These common stock options will have the expiration terms and vesting provisions further detailed in the Option Agreement attached hereto as Exhibit D.

(ii) The Company further agrees to issue to Consultant an additional 600,000 common stock options immediately following the earlier of (A) the closing of the second tranche of the Company's Series B 6% Cumulative Convertible Participating Preferred Stock (the "**Second Tranche**"), or (B) the consummation by the Company of an equity financing resulting in gross proceeds to the Company of not less than the committed amount to be funded in the Second Tranche. When issued, the additional 600,000 common stock options will be issued pursuant to an Option Agreement with the Company that will provide, among other things, for (1) the immediate vesting on issuance of 200,000 common stock options and the vesting of an additional 200,000 common stock options on each of the first and second anniversaries of the issuance date, (2) an exercise price equal to the fair market value of a share of common stock on the date of issuance, and (3) other terms and conditions not inconsistent with the foregoing contained in the form of Option Agreement attached hereto as Exhibit D.

(d) Any stock options granted pursuant to Section 4(c) shall be granted at an exercise price of no less than 100% of the fair market value of the underlying common stock on the date of grant (as determined in accordance with Section 409A of the Internal Revenue Code of 1986, as amended (the "Code") and related Treasury Regulations). As of the date of this Agreement, the Company has determined the fair market value of a share of common stock to be no greater than $1.50 per share.

5. Reimbursement of Business Expenses. The Company shall reimburse Consultant for reasonable travel and other business expenses incurred by Consultant in the performance of his duties hereunder, in accordance with the Company's policies as in effect from time to time.

6. Benefits. The Company and Consultant agree that Consultant will receive no Company-sponsored benefits from the Company.

7. Termination.

(a) *Termination*. The engagement of Consultant under this Agreement shall terminate prior to the expiration of the Term upon the earliest to occur of any of the following events:

(i) the death of Consultant;

(ii) the termination by the Company of Consultant's engagement due to the Consultant's Disability pursuant to Section 7(b) hereof;

(iii) the termination by the Consultant of Consultant's engagement other than for Good Reason (as hereinafter defined); provided, however, that Consultant is required to provide 30 (thirty) days written notice to the Board of Consultant's intention to terminate Consultant's engagement;

(iv) the termination by the Company of Consultant's engagement without Cause;

(v) the termination by the Company of Consultant's engagement for Cause pursuant to Section 7(c); or

(vi) the termination by Consultant of Consultant's engagement for Good Reason (as hereinafter defined) pursuant to Section 7(e).

(b) *Disability*. The Company may terminate Consultant's engagement for Disability at any time upon thirty (30) days written notice provided to Consultant in accordance with Section 15 hereof. For purposes of this Agreement, "**Disability**" means that Consultant has been unable, for ninety (90) consecutive days, or for periods aggregating one hundred and twenty (120) business days in any period of twelve consecutive months, to perform Consultant's duties under this Agreement, as a result of physical or mental impairment, illness or injury, as determined in good faith by the Board. A termination of Consultant's engagement for Disability shall be communicated to Consultant by written notice, and shall be effective on the 10th day after sending such notice to Consultant (the "**Disability Effective Date**"), unless Consultant returns to performance of Consultant's duties before the Disability Effective Date.

(c) *Cause*. Subject to the notification provision of Section 7(d) below, Consultant's engagement hereunder may be terminated by the Company for Cause. For purposes of this Agreement, the term "**Cause**" shall mean the (i) Consultant's willful misconduct which is demonstrably and materially injurious to the Company's reputation, financial condition, or business relationships; (ii) the failure of Consultant to attempt in good faith to follow the legal written direction of the Board; (iii) the failure by Consultant to attempt in good faith to perform the duties required of him hereunder (other than any such failure resulting from incapacity due to physical or mental illness) after a written demand for substantial performance is delivered to the Consultant by the Board which specifically identifies the manner in which it is believed that Consultant has failed to attempt to perform his duties hereunder; (iv) Consultant being convicted of, or pleading guilty or nolo contendere to, a felony or any crime involving dishonesty, fraud or moral turpitude; (v) Consultant's dishonesty with regard to the Company or in the performance of his duties hereunder, which in either case has a material adverse effect on the Company; or (vi) Consultant's material breach of this Agreement. Prior to termination for Cause, the Company must give Consultant written notice of its intent to terminate for Cause providing the details of the basis for such termination. Consultant shall have ten (10) days after receiving such notice in which to cure the breach or action that is described as the basis for the termination for Cause, or if cure cannot reasonably be effected in such period, to commence and diligently

complete such cure. The determination of whether Cause exists must be made by a resolution duly adopted by the affirmative vote of not less than a majority of the entire membership of the Board (excluding Consultant, if he is then a member of the Board) at a meeting of the Board that was called for the purpose of considering such termination finding, in the good faith opinion of the Board, that Cause existed and specifying the particulars thereof in detail. Consultant, together with Consultant's counsel, shall be given an opportunity to be heard by the Board before the Board's decision.

(d) *Notice of Termination for Cause*. A Notice of Termination for Cause shall mean a notice that shall indicate the specific termination provision in Section 7(c) relied upon and shall set forth in reasonable detail the facts and circumstances which provide a basis for Termination for Cause. No termination for Cause shall be effective unless the Company shall, within ninety (90) days of sufficient facts known to the Company to constitute Cause, give the Notice of Termination to Consultant.

(e) *Termination by the Consultant for Good Reason*. Consultant may terminate this Agreement for Good Reason. The term "**Good Reason**" shall mean the occurrence, without the Consultant's prior written consent, of any one or more of the following: (i) any reduction in Consultant's compensation as set forth in Section 4 hereof; (ii) a material adverse change in Consultant's title, status, authority, duties or responsibilities; (iii) the failure by the Company to obtain a satisfactory agreement from any successor of the Company requiring such successor to assume and agree to perform the Company's obligations under this Agreement; or (iv) the failure by the Company to comply with any material provision of this Agreement.

No resignation for Good Reason shall be effective unless Consultant shall, within ninety (90) days of sufficient facts known to Consultant to constitute Good Reason, give written notice to the Chief Executive Officer of the Company or its representative setting forth in reasonable detail the material facts constituting Good Reason and the reasonable steps Consultant believes necessary to cure, and thereafter the Company shall have thirty (30) business days from the date of such notice to cure any such occurrence otherwise constituting Good Reason, provided that no such notice and opportunity to cure is required if Consultant has previously given the Company notice and opportunity to cure the same conduct.

8. Consequences of Termination of Consulting Engagement. If Consultant's engagement is terminated (i) by reason of Consultant's death, (ii) by reason of Consultant's Disability, (iii) by Consultant for any reason other than Good Reason or (iv) by the Company for Cause, this Consulting Agreement shall terminate without further obligations to Consultant (or in the case of Consultant's death or Disability to Consultant's legal representatives), under this Agreement except for: (i) any Base Consulting Fee earned, but unpaid; and (ii) any unreimbursed business expenses payable pursuant to Section 5 hereof (collectively "**Accrued Amounts**"), which amounts shall be promptly paid in a lump sum to Consultant, or in the case of Consultant's death or Disability to Consultant's estate. If Consultant's engagement is terminated by the Company without Cause or by Consultant for Good Reason, this Consulting Agreement shall terminate without further obligations to Consultant, except for Accrued Amounts and the Company shall continue to pay Consultant his Base Consulting Fee (exclusive of bonus or other compensation) for twelve (12) months following termination. When Consultant terminates his engagement for any reason other than Good Reason, the Company may waive notice from Consultant and designate Consultant's last day of his engagement. Consultant's rights under any equity grants shall be determined in accordance with the Option Agreements and the Company's 2011 Stock Option Plan.

9. Confidential Information. "**Confidential Information**" as used in this Agreement, means information that has been created, discovered, developed, or otherwise become known to the Company and/or in which property rights have been assigned or otherwise conveyed to the Company, which information has commercial value in the business in which the Company is or may be engaged; "Confidential Information" includes but is not limited to, information provided in specialized training received by Consultant in the performance of his duties hereunder; information about Company products already developed or that will be developed in the field of cancer immunotherapy, including but not limited to metastatic castrate resistant prostate cancer and graft versus host disease; research and development materials related to the manipulation of dendritic cell signalling pathways to enhance the immune response; research and development materials, electronic databases; computer programs and technologies; marketing and/or scientific studies and analysis; product and pricing knowledge; manufacturing methods; supplier lists and information; any and all information concerning past, present and future customers, referral sources or vendors; contracts and licenses; management structure, company ownership, personnel information (including the performance, skills, abilities and payment of employees); purchasing, accounting and business systems; short and long range business planning; data regarding the Company's past, current and future financial performance, sales performance, and current and/or future plans to increase the Company's market share by targeting specific medical issues, demographic and/or geographic markets; standard operating procedures; financial information; trade secrets, copyrights, derivative works, patents, inventions, know-how, and other intellectual property; business policies; submissions to government or regulatory agencies and related information; methods of operation; implementation strategies; promotional information and techniques; marketing presentations; price lists; files or other information; pricing strategies; computer files; samples; customer originals; or any other confidential information concerning the business and affairs of the Company. The Company's Confidential Information is also comprised of the personal information received from third parties and/or confidential and proprietary information regarding research, products, or clinical trials received from third parties. All information obtained by Consultant from the Company or in the course of his engagement, whether in writing, any other tangible form of expression or disclosed orally or through visual means or otherwise, and regardless of whether such information bears a confidential or proprietary legend, will be presumed to be Confidential Information. Consultant acknowledges that the Confidential Information is vital, valuable, sensitive, confidential and proprietary to Company and provides Company with a competitive advantage. Consultant further acknowledges that Company's Confidential Information is dynamic, and constantly changes in nature and/or quantity, given that Company continues to refine its Confidential Information. The term "Confidential Information" does not include information that: (a) is or becomes generally available to the public other than as a result of a disclosure in violation of this Agreement; (b) is in Consultant's possession and not subject to a duty of confidentiality prior to its disclosure by Company; (c) is obtained by Consultant, outside the performance of his engagement by the Company, from a third party who is rightfully in possession of the Confidential Information and does not violate any obligation of confidentiality or non-use by disclosing such Confidential Information; (d) is independently developed by Consultant without use of or access to Confidential Information; or (e) the Company agrees in writing may be disclosed.

10. Non-Competition: Non-Solicitation, Etc.

(a) *Company Promises*.

(i) This Agreement is entered into in reliance on Consultant's agreement to these non-compete and non-solicitation provisions. Consultant's agreement to the provisions in Paragraphs 9 through 11 is a material condition of the Company's entering into the Agreement and engagement of Consultant.

(ii) Contemporaneously with the execution of this Agreement, the Company agrees to provide Consultant with access to new Confidential Information and in a greater quantity and/or expanded nature than any such Confidential Information that may have already been provided to Consultant and with additional opportunities to broaden the Company's services and develop the Company's customers in a manner not previously available to Consultant including, but not limited to, information regarding the Company's business plan; research results; information supporting patent applications; and Company standard operating procedures related to the manipulation of dendritic cell signaling pathways to enhance immune response, and the activation of apoptotic pathways to mitigate cell therapy toxicity.

(iii) The Company promises that during Consultant's engagement, the Company will provide Consultant with the opportunity to develop goodwill and establish rapport with the customer contacts in a greater quantity and/or expanded nature than any such opportunities that may have already been provided to Consultant;

(iv) The Company promises that Consultant will continue to receive and have access to new Confidential Information throughout Consultant's engagement by the Company.

(b) *Consultant's Promises*. In exchange for the Company's promises listed above and all other consideration provided pursuant to this Agreement, to which these promises are ancillary, Consultant promises as follows:

(i) Consultant will not, during or after Consultant's engagement by the Company, use, copy, remove, disclose or disseminate to any person or entity, the Company's Confidential Information, except (i) as required in the course of performing Consultant's duties with the Company for the benefit of the Company, or (ii) when required to do so by a court of law, by any governmental agency having supervisory authority over the business of the Company or by any administrative or legislative body (including a committee thereof) with apparent jurisdiction to order Consultant to divulge, disclose or make accessible such information, it being understood that Consultant will promptly notify the Company of such requirement so that the Company may seek to obtain a protective order;

(ii) Consultant agrees that Consultant's engagement hereunder is on a part-time basis.

(iii) Following the termination of this Consulting Agreement, Consultant will immediately return to the Company all materials created, received or utilized in any way in conjunction with Consultant's work performed with the Company or that in any way incorporate, reflect or constitute the Company's Confidential Information.

(iv) Consultant acknowledges that the market for the Company's products, services, and activities is global, and that the products, services and/or activities can be provided anywhere in the world where cancer therapies are utilized. Consultant recognizes that the Company draws its customers and/or clients from around the world because it will seek to file patents and run clinical trials in countries around the world, and sell its product to consumers around the world and/or pharmaceutical companies located around the world. Moreover, Consultant recognizes that the Company's customers may be contacted by telephone, in person, or in writing (including e-mail via the Internet). Consultant further acknowledges that due to the international scope of the Company's customer and client base, the following non-solicitation/non-competition restriction is necessary.

(vi) Consultant agrees and acknowledges that the Company will not be provided access to Confidential Information, as defined in Section 9, from or belonging to a third party that Consultant was exposed to or received from said third party prior to the execution date of the Existing Consulting Agreement and that is the subject of any confidentiality requirement of any kind between Consultant and said third party. Consultant also agrees to indemnify, reimburse, and hold harmless the Company for all attorney fees, expenses, costs, harm, or related costs to the Company arising from or as a result of any actual breach of this section by Consultant.

(c) *Non-Compete*. Ancillary to the consideration reflected within this Agreement, the Company and Consultant agree to the following non-competition provisions. Consultant agrees that during Consultant's engagement by the Company and for a period of twelve (12) months following the termination of his engagement ("**Non-Compete Period**"):

(i) Consultant shall not, directly or indirectly, (A) engage in or participate (including, without limitation, as an investor, officer, employee, director, agent, or consultant (any such capacity, being a "**Participant**") in or on behalf of any entity engaging in (1) any line of business competitive with that of the Company or any of its Affiliates, including but not limited to the Company's business of developing therapeutics for metastatic castrate resistant prostate cancer or graft versus host disease, or (2) any other line of business that the Company or any of its Affiliates was contemplating on or before the date of Consultant's termination as evidenced by existing memoranda, minutes or other correspondence (including, without limitation, internal or external presentations), if during Consultant's engagement by the Company, Consultant had access or potential access to information regarding the proposed plans or the business in which the Company engaged, or (B) except as a consultant to the Company, in any capacity for Consultant or others, directly or indirectly call on, service, or solicit competing business from clients or prospective clients of the Company if during Consultant's engagement by the Company Consultant had or made contact with the client, or had access to information and files about the client (the "**Non-Compete Obligations**"), provided, however, that nothing herein shall prevent Consultant from investing as a less than 5% shareholder in securities of any company listed on a national securities exchange or quoted on an automated quotation system. Consultant has disclosed his relationship with the entities listed on Exhibit C attached hereto and the foregoing will not apply to such relationships as disclosed on Exhibit C. Consultant shall notify the Company in writing of all other consulting agreements, employment agreements or arrangements which Consultant enters into with, or any consulting services which Consultant may provide to any third party subsequent to the date of this Agreement.

(ii) Geographic Limitation. The geographic limitation for the Non-Compete Obligations is North America, Europe and Japan.

(iii) During Consultant's engagement by the Company and for a period of twelve (12) months after Consultant's engagement by the Company has ended, Consultant will not directly or indirectly become employed or otherwise associated with any of the following entities, each of which is a direct competitor of the Company, in any geographic region:

Dendreon Corporation	3005 First Avenue Seattle, WA 98121
Argos Therapeutics, Inc.	4233 Technology Drive Durham, NC 27704
Athersys, Inc.	3201 Carnegie Avenue Cleveland, OH
Bavarian Nordic	Hejreskovvej 10A Kvistgaard 3490 Denmark
Intrexon Corporation	1872 Pratt Drive Blacksburg, VA
Kiadis Pharma B.V.	Entrada 231-234 1096 EG Amsterdam The Netherlands
Mesoblast Limited	275 Madison Avenue New York, NY 10016
MolMed S.p.A.	Via Olgettina, 58 20132 Milan, Italy
Northwest Biotherapeutics, Inc.	4800 Montgomery Lane, Suite 800 Bethesda, MD 20814
Progenies Pharmaceuticals, Inc.	777 Old Saw Mill River Rd. Tarrytown, NY 10591

Consultant and the Company agree that with respect to the foregoing entities such names are the common names of such entities. Consultant and the Company agree that the restrictions contained in this Agreement are binding whether or not Consultant and the Company have used the correct legal name, affiliated entity, or new owner of such entities.

(iv) Consultant agrees that Consultant's work for any third party engaged in the Company's business during the Non-Compete Period inevitably would lead to Consultant's unauthorized use of the Company's Confidential Information, even if such use is unintentional. Because it would be impossible, as a practical matter, to monitor, restrain, or police Consultant's use of such Confidential Information other than by Consultant's not working for such third party, and because the Company's business is highly specialized, the competitors are identifiable, the market for the Company's product, services and activities is global, and the Company's customers are located throughout the world, Consultant agrees that restricting such employment as set forth in this Agreement is the narrowest way to protect the Company's legitimate business interests, and the narrowest way of enforcing Consultant's consideration for the receipt of Company's Consideration, (namely, Consultant's promise not to use or disclose that Confidential Information/specialized training).

(d) *Nonsolicitation of Employees*. Consultant agrees that for a period of twelve (12) months after the termination of Consultant's engagement, Consultant will not, directly or indirectly, (i) induce or solicit any person who was an employee, consultant or independent contractor of the Company or any of its Affiliates during the course of Consultant's engagement with the Company, to terminate such individual's employment or service with the Company or any of its Affiliates, (ii) hire or retain the services of any such person, regardless of whether such person had been solicited for employment, or (iii) assist any other person or entity in such activities.

(e) *Permitted Activities*. Notwithstanding anything contained herein to the contrary, but subject to the provisions of Section 9, Consultant may at any time practice medicine and/or be employed by an academic institution in a manner consistent with the other terms and conditions of this Consulting Agreement. The foregoing sentence is for clarification and shall not expand the scope of the activities restricted by Section 10(c).

11. Injunction. Consultant recognizes that Consultant's services hereunder are of a special, unique, unusual, extraordinary and intellectual character giving them a peculiar value, the loss of which cannot be reasonably or adequately compensated for in damages. Consultant acknowledges that if Consultant were to compete, directly or indirectly, with the Company, or use or disclose, directly or indirectly, the Company's Confidential Information (whether in tangible form or memorized), that such competition, use and/or disclosure would cause the Company irreparable harm and injury for which no adequate remedy at law exists. Consultant agrees this Agreement is the narrowest way to protect the Company's interests. Therefore, in the event of the breach or threatened breach of the provisions of this Agreement by Consultant, the Company shall be entitled to obtain injunctive relief to enjoin such breach or threatened breach, in addition to all other remedies and alternatives that may be available at law or in equity. Consultant acknowledges that the remedies contained in this Agreement for violation of this Agreement are not the exclusive remedies that the Company may pursue.

12. Inventions.

(a) *Inventions Retained and Licensed*. Consultant has attached hereto as Exhibit B, a list describing all inventions, original works of authorship, derivative works, developments, improvements and trade secrets that (i) were made by Consultant prior to his engagement with the Company, (ii) belong to Consultant, (iii) relate to the Company's proposed business, products or research and development and (iv) have not been assigned to the Company previously, with respect to which the Company has no rights of assignment and are not assigned to the Company hereunder (collectively, "**Prior Inventions**"); or, if no such list is attached, Consultant represents that there are no such Prior Inventions. Consultant agrees that Consultant will not incorporate, or permit to be incorporated, any Prior Invention owned by Consultant or in which Consultant has an interest into a Company product, process or service without the Company's prior written consent. Nevertheless, if, in the course of Consultant's engagement with the Company, Consultant incorporates into a Company product, process or service a Prior Invention owned by Consultant or in which Consultant has an interest, Consultant hereby grants to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, perpetual, transferable, sublicensable, worldwide license to reproduce, make derivative works of, distribute, perform, display, import, make, have made, modify, use, sell, offer to sell, and exploit in any other way such Prior Invention as part of or in connection with such product, process or service, and to practice any method related thereto.

(b) *Assignment of Inventions*. Consultant agrees that Consultant will promptly make full written disclosure to the Company, will hold in trust for the sole right and benefit of the Company, and hereby assign to the Company, or its designee, all of Consultant's right, title, and interest in and to any and all inventions, original works of authorship, derivative works, developments, concepts, modifications, improvements (including improvements to Confidential Information), designs, discoveries, ideas, know-how, trademarks, trade dress, trade secrets or other intellectual property, whether or not patentable or registrable under copyright or similar laws, which Consultant may solely or jointly conceive or develop or reduce to practice, or cause to be conceived or developed or reduced to practice, whether or not reduced to drawings, written descriptions, documentation or other tangible form, as applicable, during the period of time Consultant is engaged by the Company that (1) employ a molecule that induces the interaction or proximity of two or more proteins, modified to contain a dimerizer-binding domain, resulting in the activation of specific cell signaling, gene transduction, or protein secretion events in cultured cells, whole animals, or humans or (2) use Company Confidential Information (collectively, "**Inventions**"). Consultant further acknowledges that all original works of authorship which are made by Consultant (solely or jointly with others) within the scope of and during the period of Consultant's engagement by the Company and which are protectable by copyright are "works made for hire" as that term is defined in the United States Copyright Act. Consultant understands and agrees that the decision whether or not to commercialize or market any Invention is within the Company's sole discretion and for the Company's sole benefit and that no royalty will be due to Consultant as a result of the Company's efforts to commercialize or market any such Invention.

The Company acknowledges that Consultant has no obligation to assign to the Company any inventions, original works of authorship, derivative works, developments, improvements and trade secrets that are not Inventions or works made for hire (the "Non-Consulting Inventions"), and that such Non-Consulting Inventions may be assigned to Employer. Consultant agrees that Consultant will not enter into an agreement with Employer unless the agreement includes an acknowledgment by Employer that Employer has no right to any Inventions assigned to the Company pursuant to this Agreement. Moreover, prior to accepting any offers from any Employer, Consultant agrees to provide the Company a redacted copy of the offer letter, or employment agreement, so that the Board of Directors of the Company can review the offer letter, or employment agreement for compliance with this paragraph of Section 12(b). So long as Consultant reasonably cooperates with the Company, the Company shall indemnify, reimburse, and hold harmless Consultant for all attorney fees, expenses, costs, harm, or related costs to Consultant arising from or as a result of any conflict or dispute regarding his obligations hereunder and those owed to Employer.

(c) *Inventions Assigned to the United States*. Consultant agrees to assign to the United States government all Consultant's right, title, and interest in and to any and all Inventions whenever such full title is required to be in the United States by a contract between the Company and the United States or any of its agencies.

(d) *Maintenance of Records*. Consultant agrees to keep and maintain adequate and current written records of all Inventions during the term of Consultant's engagement with the

Company. The records will be in the form of notes, sketches, drawings and any other format that may be specified by the Board. The records will be available to and remain the Company's sole property at all times.

(e) *Patent and Copyright Registrations*. Consultant agrees to assist the Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in any Inventions and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including, but not limited to, the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, declarations, assignments and all other instruments that the Company deems necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such Inventions, and any copyrights, patents, mask work rights or other intellectual property rights relating thereto. Consultant further agrees that Consultant's obligations to execute or cause to be executed, when it is in Consultant's power to do so, any such instrument or papers shall continue after the termination of this Agreement. If the Company is unable because of Consultant's mental or physical incapacity or for any other reason to secure Consultant's signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering any Inventions or original works of authorship assigned to the Company as above, then Consultant hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Consultant's agent and attorney in fact, to act for and in Consultant's behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of letters patent or copyright registrations thereon with the same legal force and effect as if executed by Consultant.

(f) *Exception to Assignments*. Consultant understands that the provisions of this Agreement requiring assignment of Inventions to the Company do not apply to any Invention, that Consultant has developed entirely on Consultant's own time prior to the commencement of the Term which has not already been assigned to the Company or with respect to which the Company does not have a right to assignment, all of which are disclosed on Exhibit B (an "**Other Invention**").

13. Disputes. Any dispute or controversy between the Company and Consultant, arising out of or relating to this Consulting Agreement, the breach of this Consulting Agreement, or otherwise, shall be settled by arbitration in Houston, Texas, administered by the American Arbitration Association in accordance with its Employment Rules then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitrator shall have the authority to award any remedy or relief that a court of competent jurisdiction could order or grant, including, without limitation, the issuance of an injunction. However, either patty may, without inconsistency with this arbitration provision, apply to any court having jurisdiction over such dispute or controversy and seek interim provisional, injunctive or other equitable relief until the arbitration award is rendered or the controversy is otherwise resolved. Except as necessary in court proceedings to enforce this arbitration provision or an award rendered hereunder, or to obtain interim relief, neither a party nor an arbitrator may disclose the existence, content or results of any arbitration hereunder without the prior written consent of the Company and Consultant. Each party shall bear its or his costs and expenses in any arbitration hereunder and one-half of the arbitrator's fees and costs; provided, however, that the arbitrator shall have the discretion to award the prevailing party reimbursement of its or his reasonable attorney's fees and costs.

14. Notices. All notices given under this Agreement shall be in writing and shall be deemed to have been duly given (a) when delivered personally, (b) three business days after being mailed by first class certified mail, return receipt requested, postage prepaid, (c) one business day after being sent by a reputable overnight delivery service, postage or delivery charges prepaid, or (d) on the date on which a facsimile is transmitted to the parties at their respective addresses stated below. Any party may change its address for notice and the address to which copies must be sent by giving notice of the new addresses to the other parties in accordance with this Section 14, except that any such change of address notice shall not be effective unless and until received.

If to the Company:

6400 Fannin Street, Suite 2300
Houston, Texas 77030
Attention: Chief Executive Officer

with a copy (which shall not constitute notice) to:

Bracewell & Giuliani LLP
711 Louisiana, Suite 2300
South Tower Pennzoil Place
Houston, Texas 77002
Attention: William D. Gutermuth

If to Consultant, to Consultant's address set forth above.

15. Miscellaneous.

(a) *Governing Law*. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to principles of conflict of laws.

(b) *Entire Agreement/Amendments*. This Agreement and the instruments contemplated herein contain the entire understanding of the parties with respect to the engagement of Consultant by the Company from and after the Commencement Date and supersede any prior agreements between the Company and Consultant. There are no restrictions, agreements, promises, warranties, covenants or undertakings between the parties with respect to the subject matter herein other than those expressly set forth herein and therein. This Consulting Agreement may not be altered, modified, or amended except by written instrument signed by the parties hereto.

(c) *No Waiver*. The failure of a party to insist upon strict adherence to any term of this Consulting Agreement on any occasion shall not be considered a waiver of such party's rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Consulting Agreement. Any such waiver must be in writing and signed by Consultant or an authorized officer of the Company, as the case may be.

(d) *Assignment*. This Consulting Agreement shall be binding upon and inure to the benefit of the Company and Consultant and their successors, assigns, executors and administrators. This Consulting Agreement shall not be assignable by Consultant.

(e) *Representation*. Consultant represents that the Consultant's engagement by the Company and the performance by Consultant of his obligations under this Consulting Agreement do not, and shall not, breach any agreement, including, but not limited to, any agreement that obligates him to keep in confidence any trade secrets or confidential or proprietary information of his or of any other party, to write or consult to any other party or to refrain from competing, directly or indirectly, with the business of any other party. Consultant shall not disclose to the Company or use any trade secrets or confidential or proprietary information of any other party.

(f) *Successors; Binding Agreement; Third Party Beneficiaries*. This Consulting Agreement shall inure to the benefit of and be binding upon the personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees legatees and permitted assignees of the parties hereto.

(g) *Withholding Taxes*. The Company may withhold from any and all amounts payable under this Consulting Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

(h) *Survivorship*. The respective rights and obligations of the parties hereunder, including without limitation Section 10 hereof, shall survive any termination of Consultant's engagement to the extent necessary to the agreed preservation of such rights and obligations. Notwithstanding anything to the foregoing to the contrary, the provisions of Section 4(c)(ii) shall survive the termination of this Agreement and remain in full force and effect for so long as Consultant remains in the service of the Company as a consultant, director or employee.

(i) *Counterparts*. This Consulting Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

(j) *Headings*. The headings of the sections contained in this Consulting Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

(k) *Section 409A*. This Consulting Agreement is intended to comply with, or otherwise be exempt from, Section 409A of the Code. This Consulting Agreement shall be administered, interpreted, and construed in a manner consistent with Section 409A of the Code. Should any provision of this Consulting Agreement be found not to comply with, or otherwise be exempt from, the provisions of Section 409A of the Code, such provision shall be modified and given effect (retroactively if necessary), by the Company, with the consent of the Consultant, in such manner as the Company and Consultant agree reasonably and in good faith to be necessary or appropriate to comply with, or to effectuate an exemption from, Section 409A of the Code. Notwithstanding anything in this Consulting Agreement to the contrary, in no event shall any payment under this Agreement that constitutes "nonqualified deferred compensation" (within the meaning of Section 409A of the Code) be accelerated unless and to the extent that such acceleration is permissible under Treasury Regulation 1.409A-3G)(4) or any successor provision.

All reimbursements under this Consulting Agreement shall be paid as soon as administratively practicable after Consultant has provided the appropriate documentation, but in no event shall any reimbursements be paid later than the last day of the calendar year following the calendar year in which the expense was incurred. Notwithstanding anything in this Consulting Agreement to the contrary, to the extent required by Section 409A of the Code: (1) the amount of expenses eligible for reimbursement or in-kind benefits provided under this Consulting Agreement during a calendar year will not affect the expenses eligible for reimbursement or in-kind benefits provided in any other calendar year, and (2) the right to reimbursement or in-kind benefits provided under this Consulting Agreement shall not be subject to liquidation or exchange for another benefit.

[The remainder of this page is intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Consulting Agreement as of the day and year first above written.

By: Bellicum Pharmaceuticals, Inc.

By: /s/ Thomas J. Farrell
Thomas J. Farrell
Chief Executive Officer

/s/ Kevin M. Slawin
Kevin M. Slawin, M.D.

EXHIBIT A

ANNUAL PERFORMANCE BONUS

Any Annual Performance Bonus shall be based on achievement of qualitative strategic goals established in writing by the Board, after consultation with Consultant. Within ninety (90) days after the first day of each calendar year, the Board, after consultation with Consultant, shall establish, in writing, the required improvement in the qualitative strategic goals over the prior calendar year necessary to achieve the target bonus. The target and maximum Annual Performance Bonus shall be thirty percent (30%) of Consultant's Base Fee.

The Annual Performance Bonus shall be adjusted from the target bonus amount based on a determination in the sole discretion of the Board of whether Consultant and the Company have achieved the qualitative strategic goals.

EXHIBIT B

INVENTIONS

1. Novel hereditary renal and prostate cancer syndrome
2. Novel molecular forms of PSA including proPSA and BPSA

EXHIBIT C

EXISTING RELATIONSHIPS

1. Director, Vanguard Urologic Institute and the Texas Prostate Center.
2. Director, Vanguard Urologic Research Foundation.
3. Professor and Chair of the Department of Urology, Center for Clinical and Translational Sciences, UTHSC-H.
4. Director of Urology, Memorial Hermann Hospital.
5. Clinical Professor of Urology, Baylor College of Medicine.

EXHIBIT D

OPTION AGREEMENT

See attached.

EXHIBIT E

SERVICES

The Services shall include, but shall not be limited to, the following:

- Serve as the Company's Executive Chairman of the Board of Directors;
- Serve as the Company's Chief Medical Officer;
- Support and facilitate the transfer of licensed technology to the Company;
- Consult with Company on Company's product portfolio strategy;
- Assist, as necessary in providing strategic input to the annual and long-range budgetary process of the Company;
- Assist the Company in its fund raising efforts including but not limited to meeting with potential investors and other interested parties and responding to due diligence inquiries;
- Consult with the Company regarding its research and development activities;
- Consult with the Company regarding the clinical development of Bellicum technologies or Bellicum products or Bellicum clinical trials procedures;
- Assist the Company in evaluation other non-Bellicum technologies;
- Participate in meetings with potential collaborative partners; and
- Other duties as assigned and agreed upon by both parties.

Tom Farrell
President & Chief Executive Officer

December 6, 2011

Ken Moseley, J.D.
7913 Brightman Lane
Austin, TX 78733

Dear Ken:

It is my pleasure to extend the following offer of employment to you on behalf of Bellicum Pharmaceuticals, Inc. (the “Company”).

Title: Vice President of Intellectual Property & Legal Affairs; and Corporate Secretary

The position will report to the CEO, and will be based in Austin, with travel to the Company’s premises in Houston, Texas for a minimum of two working days per month.

The Job Description for this position is attached. Please keep in mind that the job description may change as the organization changes and grows. Furthermore, your title and reporting relationship may change from time to time.

Your base salary, at 50% Full Time Equivalency for a 2.5 day work week, will be paid in twice-monthly installments of $3,750.00, which is equivalent to $90,000 on an annual basis, and subject to deductions for taxes and other withholdings as required by law or agreements with the Company.

You must sign the Company’s standard non-compete and intellectual property agreements prior to your start date.

As a part time employee you will generally not be entitled to participate in the Company’s employee benefit plans and programs.

Normal and reasonable expenses, in the Company’s sole discretion, will be reimbursed on a monthly basis per Company policy and upon completion of the appropriate expense request form.

Provided that you successfully complete the Company’s standard pre-employment requirements, your start date with the Company will be December 12, 2011. Your employment with Bellicum Pharmaceuticals, Inc. is at-will and either party can terminate the relationship at any time with or without cause and with or without notice. Nothing will alter the at-will nature of this

employment relationship other than a written agreement signed by you and an authorized officer of the Company that expressly agrees to modify the at-will relationship. Nothing in this letter should be construed as a guaranty of any term of employment.

If you are in agreement with the above offer, please sign below. You acknowledge that this letter contains all of the terms and conditions of employment that you will use to make your decision and that you have not relied on any other agreements, assurances, representations or promises as the basis for your decision to accept the job as offered. This offer is in effect until December 9, 2011.

Signatures:

/s/Thomas J. Farrell	December 6, 2011
Thomas J. Farrell, President & CEO Bellicum Pharmaceuticals, Inc.	Date
/s/Ken Moseley	12-8-11
Ken Moseley, J.D.	Date

Exhibit 10.12

Tom Farrell
Chief Executive Officer

June 8, 2011

Mr. Joseph H. Senesac
20406 Apple Harvest Circle, Apt G
Germantown, MD 20876

Dear Joe:

It is my pleasure to extend the following offer of employment to you on behalf of Bellicum Pharmaceuticals, Inc. (the "Company"). This offer is contingent upon your satisfactory completion of all standard pre-employment requirements, including, without limitation, passing a criminal background check.

Title: Vice President of Manufacturing

The position will report to the CEO.

The Job Description for this position is attached. Please keep in mind that the job description may change as the organization changes and grows. Furthermore, your title and reporting relationship may change from time to time.

Your base salary will be paid In twice-monthly installments of $7,500, which is equivalent to $180,000 on an annual basis, and subject to deductions for taxes and other withholdings as required by law or agreements with the Company.

Effective upon satisfactory completion of the first 90 days of employment, and based upon the goals and objectives agreed to in the performance development planning process with your manager, you may be eligible for a bonus of up to 25% of your base salary. The bonus plan for this year and beyond, should such a plan exist, will be based on the formula determined by the Company, in its sole discretion, for that year.

You must sign the Company's standard non-compete and intellectual property agreements prior to your start date.

Should you accept this offer of employment, you shall generally be entitled to participate in the Company's employee benefit plans and programs to the extent other similarly situated employees are entitled to participate in such plans and programs, subject to the requirements for eligibility and participation in such plans and programs. The current, proposed plan includes

medical, dental, and vision coverage. However, please note that the Company is not obligated to institute, maintain, refrain from changing, amending or discounting any employee benefit program or plan.

Upon joining the Company, you will be eligible to receive 100,000 stock options, pursuant to the terms of the Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan, as amended (the "Plan"). Pursuant to the Plan, a grant of stock options to an employee must be approved by the Board of Directors of the Company. The strike price for these options will be determined by the Board no later than July 31, 2011.

The Company will provide you with up to $10,000 in reimbursement for relocation. Relocation reimbursement is contingent upon presenting receipts for approval to the Company. In the event that you voluntarily leave your position with the Company within the first six months, any money paid to you for relocation will be repayable to the Company.

Personal Time Off Is accrued at 7 hours per pay period, which is equivalent to 21 days on an annual basis, per Company policy.

Normal and reasonable expenses, in the Company's sole discretion, will be reimbursed on a monthly basis per Company policy and upon completion of the appropriate expense request form.

Provided that you successfully complete the Company's standard pre-employment requirements, your start date with the Company will be July 1, 2011. Your employment with Bellicum Pharmaceuticals, Inc. is at-will and either party can terminate the relationship at any time with or without cause and with or without notice. Nothing will alter the at-will nature of this employment relationship other than a written agreement signed by you and an authorized officer of the Company that expressly agrees to modify the at-will relationship. Nothing in this letter should be construed as a guaranty of any term of employment.

If you are in agreement with the above offer, please sign below. You acknowledge that this letter contains all of the terms and conditions of employment that you will use to make your decision and that you have not relied on any other agreements, assurances, representations or promises as the basis for your decision to accept the job as offered. This offer is in effect until June 17, 2011.

Signatures:

/s/ Thomas J. Farrell	8 June, 2011
Thomas J. Farrell, CEO Bellicum Pharmaceuticals, Inc.	Date
/s/ Joseph H. Senesac	22 August, 2011
Joseph H. Senesac	Date

LEASE AGREEMENT

LIFE SCIENCE PLAZA

2130 WEST HOLCOMBE BOULEVARD
HOUSTON, TEXAS

BY AND BETWEEN

SHERIDAN HILLS DEVELOPMENTS L.P.

("LANDLORD")

AND

BELLICUM PHARMACEUTICALS, INC.

("TENANT")

June 1, 2012

TABLE OF CONTENTS

		Page
WITNESSETH:		1
SEC. 1	**LEASED PREMISES**	1
SEC. 2	**TERM:**	3
SEC. 3	**USE:**	3
SEC. 4	**SECURITY DEPOSIT:**	3
SEC. 5	**BASE RENT:**	4
SEC. 6	**ADDITIONAL RENT:**	4
SEC. 7	**SERVICES AND UTILITIES:**	10
SEC. 8	**MAINTENANCE, REPAIRS AND USE:**	12
SEC. 9	**QUIET ENJOYMENT; RIGHTS RESERVED:**	13
SEC. 10	**ALTERATIONS:**	14
SEC. 11	**FURNITURE, FIXTURES AND PERSONAL PROPERTY:**	15
SEC. 12	**SUBLETTING AND ASSIGNMENT:**	16
SEC. 13	**FIRE AND OTHER CASUALTY:**	18
SEC. 14	**CONDEMNATION:**	18
SEC. 15	**DEFAULT BY TENANT:**	19
SEC. 16	**REMEDIES OF LANDLORD:**	20
SEC. 17	**LIEN FOR RENT:**	22
SEC. 18	**NON-WAIVER:**	22
SEC. 19	**LAWS AND REGULATIONS; RULES AND REGULATIONS:**	22
SEC. 20	**ASSIGNMENT BY LANDLORD; LIMITATION OF LANDLORD'S LIABILITY:**	22
SEC. 21	**SEVERABILITY:**	22
SEC. 22	**SIGNS:**	22
SEC. 23	**SUCCESSORS AND ASSIGNS:**	23
SEC. 24	**SUBORDINATION:**	23
SEC. 25	**TAX PROTEST:**	24
SEC. 26	**HOLDING OVER:**	24
SEC. 27	**INDEPENDENT OBLIGATION TO PAY RENT:**	24
SEC. 28	**INDEMNITY; RELEASE AND WAIVER:**	24
SEC. 29	**INSURANCE:**	25
SEC. 30	**ENTIRE AGREEMENT:**	25
SEC. 31	**NOTICES:**	26
SEC. 32	**COMMENCEMENT DATE:**	27
SEC. 33	**INTENTIONALLY DELETED:**	27
SEC. 34	**BROKERS:**	27
SEC. 35	**ESTOPPEL CERTIFICATES:**	27
SEC. 36	**NAME CHANGE:**	27
SEC. 37	**BANKRUPTCY:**	27
SEC. 38	**TELECOMMUNICATIONS PROVIDERS:**	28
SEC. 39	**HAZARDOUS SUBSTANCES:**	28

SEC. 40 NO MONEY DAMAGES FOR FAILURE TO CONSENT; WAIVER OF CERTAIN DAMAGES: 29
SEC. 41 ACKNOWLEDGMENT OF NON-APPLICABILITY OF DTPA: 29
SEC. 42 ATTORNEYS' FEES: 29
SEC. 43 AUTHORITY OF TENANT: 29
SEC. 44 INABILITY TO PERFORM: 30
SEC. 45 JOINT AND SEVERAL TENANCY: 30
SEC. 46 EXECUTION OF THIS LEASE AGREEMENT: 30
SEC. 47 WAIVER OF TRIAL BY JURY; COUNTERCLAIM: 30
SEC. 48 CALCULATION OF TIME PERIODS: 30
SEC. 49 ANTI-TERRORISM LAWS: 30
SEC. 50 RENEWAL OPTIONS: 31
SEC. 51 RIGHT OF FIRST REFUSAL: 31
SEC. 52 PREFERENTIAL RIGHT TO LEASE: 33
SEC. 53 CHASE SPACE: 34
SEC. 54 BACK-UP GENERATOR: 34
SEC. 55 FINANCIAL STATEMENTS: 35
SEC. 56 LANDLORD DEFAULT: 35
SEC. 57 EXHIBITS: 35

EXHIBITS:

EXHIBIT A - FLOOR PLAN OF THE LEASED PREMISES
EXHIBIT A-1 - FLOOR PLAN OF THE HOLD SPACE
EXHIBIT B - LEGAL DESCRIPTION OF THE LAND
EXHIBIT C - PARKING AGREEMENT
EXHIBIT D - RULES AND REGULATIONS
EXHIBIT E - ACCEPTANCE OF PREMISES MEMORANDUM
EXHIBIT F - TENANT'S ESTOPPEL CERTIFICAE
EXHIBIT G - LEASEHOLD IMPROVEMENTS
EXHIBIT H - AIR CONDITIONING AND HEATING SERVICES
EXHIBIT I - INSURANCE REQUIREMENTS
EXHIBIT J - PREVIOUSLY GRANTED ED EXCLUSIVE USES
EXHIBIT K - MODIFIED BOMA STANDARD
EXHIBIT L - LIST OF PREVIOUSLY GRANTED RENEWAL OPTIONS, EXPANSION OPTIONS, RIGHTS OF FIRST OFFER AND RIGHTS OF FIRST REFUSAL
EXHIBIT M - FORM OF SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

LEASE AGREEMENT

Office Building

This Lease Agreement (this "**Lease Agreement**") is made and entered into as of the date set forth on the signature page between SHERIDAN HILLS DEVELOPMENTS L.P., a Texas limited partnership, hereinafter referred to as "**Landlord**", and BELLICUM PHARMACEUTICALS, INC., a Delaware corporation, hereinafter referred to as "**Tenant**"**:**

WITNESSETH:

SEC. 1 LEASED PREMISES In consideration of the mutual covenants as set forth herein, Landlord and Tenant hereby agree as follows:

A. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord for the rental and on the terms and conditions hereinafter set forth approximately 10,768 square feet of Net Rentable Area on the eighth (8th) floor as indicated on the floor plan attached hereto as **Exhibit A** and made a part hereof for all purposes and known as Suite 850 (the "**Leased Premises**") in the medical office building located at 2130 West Holcombe Boulevard, Houston, Harris County, Texas 77030 (the "**Building**") and situated on that certain tract or parcel of land more particularly described by metes and bounds on **Exhibit B** attached hereto and made a part hereof for all purposes (the "**Land**"). Subject to Section 9.B below, Landlord hereby grants Tenant, its employees, invitees and other visitors, a nonexclusive license for the Term of this Lease Agreement and all extensions and renewals thereof to use, for the purpose of ingress and egress to the Building and the Leased Premises, and in accordance with Section 19 below, the Common Areas (as hereinafter defined) twenty-four hours a day, seven days a week (subject to temporary closures as necessary for repairs, maintenance or emergencies). Facilities and areas of the Building that are intended and designated by Landlord from time to time for the common, general and non-exclusive use of all tenants of the Building, which include, without limitation, the Garage (as defined on Exhibit C), are called "**Common Areas**," subject to the provisions of this Lease Agreement. Landlord has the exclusive control over and right to manage the Common Areas. In addition, Landlord shall have the exclusive use and control over all other areas of the Building not designated as Common Areas nor leased exclusively to tenants of the Building, which include, but are not limited to, all risers, horizontal and vertical shafts and telephone closets in the Building.

B. The term "**Net Rentable Area**" shall mean the net rentable area measured according to standards based on but modified from those published by the Building Owners and Managers Association (BOMA) International, Publication ANSI/BOMA Z 65.1-2010, both as may be amended or replaced from time to time (the "**Modified BOMA Standard**"). A copy of the current Modified BOMA Standard is attached hereto as **Exhibit K** and made a part hereof for all purposes. Within thirty (30) days following the Commencement Date (the "**NRA Notice Period**"), if Landlord determines that the Net Rentable Area of the Leased Premises differs from that referenced in Section 1.A above, Landlord may deliver a written notice to Tenant (the "**NRA Notice**") specifying Landlord's determination of the Net Rentable Area of the Leased Premises. If the Landlord does not deliver the NRA Notice during the NRA Notice Period, the Net Rentable Area of the Leased Premises specified in Section 1.A above shall be deemed to be correct for all purposes under this Lease Agreement. If Landlord delivers the NRA Notice to Tenant within the NRA Notice Period, Tenant shall have the next thirty (30) days (the "**Response Period**") in which to have its architect verify the Net Rentable Area of the Leased Premises specified in the NRA Notice and notify Landlord in writing if Tenant disagrees with such determination (the "**NRA Response**"). Tenant's NRA Response must specify in detail the basis for Tenant's disagreement with Landlord's determination of the Net Rentable Area of the Leased Premises. Should Tenant fail to deliver the NRA Response during the Response Period, the Net Rentable Area of the Leased Premises specified in the NRA Notice shall be deemed to be correct for all purposes under this Lease Agreement. If Tenant timely sends the NRA Response to Landlord during the Response Period and Landlord's architect and Tenant's architect are unable to agree on the Net Rentable Area of the Leased Premises within the next thirty (30) days [such thirty (30) day period commencing on the date of the NRA Response (the "**Negotiation Period**")], the Net Rentable Area of the Leased Premises shall be determined by an independent third-party architect mutually selected by Landlord and Tenant in good faith within five (5) business days of the expiration of the Negotiation Period (the fees of such architect being shared equally by Landlord and Tenant). Such independent third-party architect shall make the final and conclusive determination of the Net Rentable Area of the Leased Premises within thirty (30) days of his/her appointment. All measurements of the

Leased Premises and the Building shall be made in accordance with the Modified BOMA Standard. If the Building is ever demolished, altered, remodeled, renovated, expanded or otherwise changed in such a manner as to alter the amount of space contained therein, then the Net Rentable Area of the Building shall be adjusted and recalculated by using the Modified BOMA Standard.

C. Landlord also leases to Tenant certain parking spaces on the terms and conditions set forth in **Exhibit C** attached hereto and made a part hereof for all purposes.

D. The Leased Premises shall be delivered to Tenant and Tenant shall accept same, in its current "**AS IS, WHERE IS**" condition subject to the construction of leasehold improvements set forth and described on **Exhibit G** attached hereto and made a part hereof for all purposes and the completion of any incomplete or corrective items specified in a "punch list" approved by Landlord and Tenant pursuant to **Exhibit G** and latent defects, to the extent Tenant notifies Landlord thereof in writing within the first six (6) months following the Commencement Date. Tenant acknowledges that no representations as to the repair of the Leased Premises or the Building, nor promises to alter, remodel or improve the Leased Premises or the Building, have been made by Landlord, except as are expressly set forth in this Lease Agreement.

E. Tenant shall have the option (the "**Hold Option**") to lease the space located on the eighth (8th) floor of the Building containing approximately 3,642 square feet of Net Rentable Area, as indicated on the floor plan attached hereto as **Exhibit A-1** and made a part hereof for all purposes, or any portion thereof that is contiguous to the Leased Premises (the "**Hold Space**"). In the event that Tenant desires to exercise the Hold Option, Tenant must deliver written notice (the "**Hold Option Exercise Notice**") to Landlord in respect of the applicable portion of the Hold Space which the Tenant elects to lease, by 5:00 p.m., Central Time, on or before the two hundred seventieth (270th) day following the Commencement Date (the "**Hold Option Exercise Date**"). In the event Tenant fails to deliver such written notice to Landlord on or before the Hold Option Exercise Date in respect of all of the Hold Space, the Hold Option will terminate and be of no further force and effect with regard to the portion of the Hold Space not leased. If Tenant shall have elected (in accordance with and subject to the provisions of this Section 1.E) to exercise the Hold Option, the Hold Space shall be deemed to be part of the Leased Premises for all purposes under this Lease Agreement, and the Hold Space shall be delivered to Tenant ten (10) days after Landlord's receipt of the Hold Option Exercise Notice, hereinafter referred to as the "Hold Space Delivery Date", with the commencement date with respect to the applicable portion of the Hold Space to be the earlier to occur of (i) Tenant's beneficial occupancy of such space for the purpose of conducting its business therein, or (ii) sixty (60) days after the Hold Space Delivery Date for the purposes of Tenant undertaking leasehold improvement work therein (such earlier date, the "**Hold Space Commencement Date**"). The lease of the Hold Space shall be upon, and subject to, all of the terms, covenants and conditions provided in this Lease Agreement with respect to the Leased Premises; provided, however, that Base Rent for the Hold Space shall be dated for purposes of rent increases per the schedule set forth in Section 5.A. from the Commencement Date applicable to the original Leased Premises, not from the Hold Space Commencement Date (provided, however, Base Rent for any Hold Space shall not accrue until the Hold Space Commencement Date for such space); and Tenant will be only be provided with a leasehold improvement allowance for such Hold Space equal to the product of (x) $45.00 per square foot of Net Rentable Area in the Hold Space and (y) a quotient, the numerator of which is the number of months in the initial Term remaining from the Hold Space Commencement Date and the denominator of which is the number of months in the initial Term. This Lease Agreement shall be deemed to have been automatically amended in accordance with this Section 1.E as of the date of the Hold Option Exercise Notice, and Tenant and Landlord shall thereafter promptly (but in no event longer than fifteen (15) days after Landlord's submission of the amendment to Tenant) execute and deliver an appropriate amendment of this Lease Agreement to evidence the foregoing. Notwithstanding any provision herein to the contrary, Tenant shall not have the right to lease the Hold Space pursuant to this Section 1.E if, at the time Tenant exercises such Hold Option or on the applicable Hold Space Commencement Date, an Event of Default (as hereinafter defined) then exists under this Lease Agreement. Any termination of this Lease Agreement shall also terminate the Hold Option. Tenant shall not have the right to assign the Hold Option to any subtenant of the Leased Premises or assignee of this Lease Agreement (other than a Permitted Transferee [hereinafter defined]), nor may any such subtenant or assignee (other than a Permitted Transferee) exercise such Hold Option unless in connection with an assignment of Tenant's entire interest in this Lease Agreement or a sublease of the entire Leased Premises.

SEC. 2 TERM:

A. The term of this Lease Agreement (the "**Term**") shall commence on the Leasehold Improvements Completion Date (as defined in **Exhibit G**) which is anticipated to be November 1, 2012 (the "**Estimated Leased Premises Delivery Date**"), less the total number of days of Tenant Delay (as defined on **Exhibit G**) (such date being herein referred to as the "**Commencement Date**") and, unless sooner terminated or renewed and extended in accordance with the terms and conditions set forth herein, shall expire at 11:59 p.m. on the day preceding the fifth (5th) anniversary of the Commencement Date (the "**Expiration Date**"). Notwithstanding any provision herein to the contrary, the Commencement Date shall not be prior to November 1, 2012.

B. This Lease Agreement shall be effective as of the Effective Date (as hereinafter defined). Landlord hereby consents to Tenant and its agents, employees or contractors entering the Leased Premises prior to the Commencement Date for purposes of undertaking alterations, additions and improvements therein, including, but not limited to, telephone, and data cabling and installation of furniture systems, which entry shall be subject to the terms and conditions of this Lease Agreement, except that the Rent (as hereinafter defined) shall not commence to accrue as a result of such entry until the date specified in Section 5 below.

SEC. 3 USE: The Leased Premises shall be used and occupied by Tenant solely as (i) general office purposes and other uses customarily associated therewith, (ii) a research laboratory up to and including Biosafety Level 2 and for no other purposes. In addition to the foregoing uses, in the event that Tenant exercises the Hold Option, Tenant's Right of First Refusal set forth in Section 51 below, or Tenant's Preferential Right to Lease set forth in Section 52 below, Tenant shall be permitted to operate a vivarium (limited to mice only) in the Hold Space or such space obtained through Tenant's exercise of Tenant's Right of First Refusal or Tenant's Preferential Right to Lease. The Leased Premises shall not be used for any purpose which would tend to lower the first-class character of the Building, violate any other tenants' exclusive use, if any, previously granted by Landlord, which exclusive use is identified in **Exhibit J** attached hereto and made a part hereof for all purposes, create unreasonable elevator loads or otherwise interfere with standard Building operations. Tenant agrees specifically that no food, soft drink or other vending machine will be installed within the Leased Premises without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Under no circumstances shall any abortions be performed in the Leased Premises (but the foregoing does not prohibit routine gynecological procedures).

SEC. 4 SECURITY DEPOSIT: $27,144.33 payable on the Effective Date. Upon the occurrence of any Event of Default, Landlord may, from time to time, without prejudice to any other remedy, use the security deposit paid to Landlord by Tenant as herein provided to the extent necessary to make good any arrears of Rent (as hereinafter defined) and any other damage, injury, expense or liability caused to Landlord by such Event of Default. Following any such application of the security deposit, Tenant shall pay to Landlord within ten (10) days of demand the amount so applied in order to restore the security deposit to the amount thereof existing prior to such application. Any remaining balance of the security deposit shall be returned by Landlord to Tenant within sixty (60) days after the termination of this Lease Agreement and after Tenant provides written notice to Landlord of Tenant's forwarding address; provided, however, Landlord shall have the right to retain and expend such remaining balance (a) to reimburse Landlord for any and all rentals or other sums due hereunder that have not been paid in full by Tenant and/or (b) for cleaning and repairing the Leased Premises if Tenant shall fail to deliver same at the termination of this Lease Agreement in a neat and clean condition and in as good a condition as existed at the date of possession of same by Tenant, ordinary wear and tear and casualty loss only excepted. Tenant shall not be entitled to any interest on the security deposit. Such security deposit shall not be considered an advance payment of rental or a measure of Landlord's damages in case of an Event of Default by Tenant.

SEC. 5 BASE RENT:

A. As part of the consideration for the execution of this Lease Agreement, Tenant covenants and agrees and promises to pay Landlord base rent according to the following schedule (the "**Base Rent**"):

Months Following the Commencement Date	Annual Base Rent Rate Per Square Foot of Net Rentable Area	Annual Base Rent	Monthly Payment
1-12	$ 28.25	$ 304,196.00	$25,349.67
13-24	$ 28.75	$ 309,580.00	$25,798.33
25-36	$ 29.25	$ 314,964.00	$26,247.00
37-48	$ 29.75	$ 320,348.00	$26,695.66
49-60	$ 30.25	$ 325,732.00	$27,144.33

The Base Rent shall be payable to Landlord at the address of the Landlord's property manager set forth in Section 31 below (or such other address as may be designated by Landlord in writing from time to time) in monthly installments in legal tender of the United States of America, in advance, without demand, set-off or counterclaim except as herein expressly provided, on or before the first day of each calendar month during the Term hereof; provided, however, the first monthly payment of Base Rent shall be made on the Effective Date. If the Term of this Lease Agreement as described above commences on other than the first day of a calendar month or terminates on other than the last day of a calendar month, then the installments of Base Rent for such month or months shall be prorated and the installment or installments so prorated shall be paid in advance. The payment for such prorated month shall be calculated by multiplying the monthly installment by a fraction, the numerator of which shall be the number of days of the Term occurring during said commencement or termination month, as the case may be, and the denominator of which shall be the total number of days occurring in said commencement or termination month.

B. In addition to the foregoing Base Rent and the Additional Rent to be paid by Tenant pursuant to Section 6 below, Tenant agrees to pay to Landlord as additional rent all charges for any services, goods or materials furnished by Landlord at Tenant's request which are not required to be furnished by Landlord under this Lease Agreement, as well as other sums payable by Tenant hereunder, within ten (10) days after Landlord renders a statement therefor to Tenant. All Rent (as hereinafter defined) shall bear interest from the date due until paid at the greater of (i) two percent (2%) above the "prime rate" per annum of the JPMorgan Chase Bank, a New York banking corporation or its successor or such other "money center" bank as Landlord and Tenant may agree from time to time ("**Chase**") in effect on said due date (or if the "prime rate" be discontinued, the base reference rate then being used by Chase to define the rate of interest charged to commercial borrowers) or (ii) ten percent (10%) per annum; provided, however, in no event shall the rate of interest hereunder exceed the maximum non-usurious rate of interest (hereinafter called the "**Maximum Rate**") permitted by the applicable laws of the State of Texas or the United States of America, and to the extent that the Maximum Rate is determined by reference to the laws of the State of Texas, the Maximum Rate shall be the weekly ceiling (as defined and described in Chapter 303 of the Texas Finance Code, as amended) at the applicable time in effect.

C. If the Net Rentable Area of the Leased Premises is modified for any reason, the provisions of this Lease Agreement which are contingent upon the size of the Leased Premises (including without limitation, Base Rental, Additional Rent, Tenant's pro rata share, the Improvement Allowance and number of reserved Parking Spaces and number of unreserved Parking Spaces) shall be automatically adjusted to reflect the modification of the Net Rentable Area of the Leased Premises, effective as of the date of the determination made in accordance with Section 1.B above. If the Net Rentable Area of the Building is modified for any reason, the provisions of this Lease Agreement which are contingent upon the size of the Building (including, without limitation, Tenant's pro rata share) shall automatically be adjusted to reflect the modification of the Net Rentable Area of the Building, effective as of the date of the determination made in accordance with Section 1.B above. The parties shall memorialize all such adjustments in an amendment to this Lease Agreement as soon as reasonably possible thereafter.

SEC. 6 ADDITIONAL RENT:

A. As part of the consideration for the execution of this Lease Agreement, and in addition to the Base Rent specified above, Tenant covenants and agrees to pay, for each calendar year during the Term, as additional rent (the "**Additional Rent**"), Tenant's pro rata share of the Operating Expenses (as hereinafter defined) for that year. Tenant's pro rata share shall be a fraction, the numerator of which is the Net Rentable Area in the Leased Premises and the denominator of which is the Net Rentable Area in the Building.

B. All Operating Expenses shall be determined in accordance with generally accepted accounting principles, consistently applied and shall be computed on the accrual basis. The term "**Operating Expenses**" as

used herein shall mean all expenses, costs and disbursements in connection with the ownership, operation, management, maintenance and repair of the Building, the Land, related pedestrian walkways, landscaping, fountains, roadways and parking facilities (including the Garage [as defined on **Exhibit C**]), and such additional facilities to service any of the foregoing in subsequent years as may be necessary or desirable in Landlord's reasonable discretion (the Building, the Land and said additional facilities being hereinafter sometimes referred to as the "**Complex**"), including but not limited to the following:

(1) Wages and salaries of all employees engaged in the operation, security, cleaning and maintenance of the Complex, including customary taxes, insurance and benefits relating thereto, allocated based upon the time such employees are engaged directly in providing such services, but not above the level of property manager.

(2) All supplies, tools, equipment and materials used in operation and maintenance of the Complex.

(3) Cost of all utilities for the Complex, including but not limited to the costs of water, electricity, gas, heating, lighting, air conditioning and ventilation; provided, however, in the event that Landlord elects to meter or sub-meter any or all of the aforementioned utilities in accordance with Section 7.E hereof, Operating Expenses shall not include the cost of such metered or sub-metered utilities provided to the Leased Premises or the leased premises of the other tenants in the Complex.

(4) Cost of all janitorial service, maintenance and service agreements for the Complex and the equipment therein, including alarm service, security service, window cleaning, janitorial service, trash removal and elevator maintenance.

(5) Cost of all insurance relating to the Complex which Landlord may elect to obtain, including but not limited to casualty and liability insurance applicable to the Complex and Landlord's personal property used in connection therewith; the amount of the commercially reasonable deductible paid by Landlord or deducted from any insurance proceeds paid to Landlord shall also constitute an Operating Expense.

(6) Accounting costs and audit fees attributable to Landlord's ownership of the Complex, including without limitation in connection with tax returns. All taxes and assessments and other governmental charges (whether federal, state, county or municipal and whether they be by taxing districts or authorities presently taxing the Leased Premises or by others subsequently created or otherwise) and any other taxes and improvement assessments attributable to the Complex, or its operation or the revenues or rents received therefrom (whether directly or indirectly through the use of a franchise, margin or other similar tax and whether or not such taxes allow for the deduction of expenses in calculating the base amount on which the tax is levied) but excluding, however, federal and state taxes on income (collectively, "**Taxes**"); provided, however, that if at any time during the Term, new taxes, assessments, levies, impositions or charges are imposed on the rents received from the Complex or the rents reserved herein or any part thereof (whether directly or indirectly through the use of a franchise, margin or other similar tax), or the present method of taxation or assessment shall be so changed that the whole or any part of the taxes, assessments, levies, impositions or charges now levied, assessed or imposed on real estate and the improvements thereof shall be discontinued and as a substitute therefor, or in lieu of an increase to the tax rate thereof, taxes, assessments, levies, impositions or charges shall be levied, assessed and/or imposed wholly or partially as a capital levy or otherwise on the rents received from the Complex or the rents reserved herein or any part thereof (whether directly or indirectly through the use of a franchise, margin or similar tax and whether or not such taxes allow for the deduction of expenses in calculating the base amount on which the tax is levied), then such substitute or additional taxes, assessments, levies, impositions or charges, to the extent so levied, assessed or imposed, shall be deemed to be included within Taxes to the extent that such

substitute or additional tax would be payable if the Complex were the only property of the Landlord subject to such tax. It is agreed that Tenant will also be responsible for ad valorem taxes on its personal property and on the value of leasehold improvements to the extent that the same exceed standard building allowance, provided, however, that such amount(s) is(are) expressly set out in the tax statements from the taxing authorities, or are reasonably determinable from tax statements that pertain specifically to the Leased Premises, even if no reference is made in such statements to "standard building allowance" or similar concepts.

(7) Amortization of the cost of installation of capital investment items that have been (whether before or during the Term) or are hereafter installed for the purpose of reducing Operating Expenses or which may be required by any laws, ordinances, orders, rules, regulations and requirements which are amended, become effective or are interpreted differently after the Commencement Date which impose any duty with respect to or otherwise relate to the use, condition, occupancy, maintenance or alteration of the Complex. All such costs which relate to the installation of such capital investment items shall be amortized over the reasonable life of the capital investment item, with the reasonable life and amortization schedule being determined in accordance with generally accepted accounting principles as reasonably determined by Landlord.

(8) The property management fees incurred by Landlord, in no event to exceed four percent (4%) of the gross revenues (but expressly excluding parking revenues) received by Landlord on the Complex.

(9) Cost of repairs and general maintenance (excluding repairs and general maintenance paid by proceeds of insurance or by Tenant or other third parties) for the Complex.

(10) The reasonable rental value of the Building management office (which shall not exceed 3,000 square feet of Net Rentable Area).

(11) All costs incurred by Landlord for the purpose of reducing Operating Expenses, including, without limitation, the cost of all tax protests (subject to the provisions set forth in Section 6.B(7) above.

C. Notwithstanding anything contained in this Lease Agreement to the contrary, the following shall not be included in or considered as Operating Expenses:

(1) Except as set forth in Section 6.B(7) above, expenditures classified as capital expenditures, including without limitation, capital improvements, capital repairs, capital equipment and capital tools, under generally accepted accounting principles consistently applied, including rental payments with respect to capital items, or any non-cash charges such as depreciation or amortization. All costs incurred for the acquisition and renovation, construction and improving of the Complex and Garage, and readying same for occupancy and use, including without limitation tap fees or other one-time utility charges and initial installation of landscaping improvements, light fixtures and other items, even if the replacement thereof is permitted to be included in Operating Expenses shall be excluded from Operating Expenses.

(2) Advertising, promotional expenses, leasing commissions, attorneys fees, costs and disbursements and other expenses incurred in connection with the leasing of the Complex or negotiations or disputes relating to leasing and lease interpretations with tenants or prospective tenants or other occupants of the Complex. Personnel costs of persons on-site and off-site to the extent same are engaged in leasing activities shall be excluded from Operating Expenses. Gifts, meals and entertainment expenses incurred with tenants, tenant prospects and brokers shall be excluded from Operating Expenses.

(3) The cost of repairs or other work occasioned by any casualty which is covered by insurance or coverable by standard all risk property insurance available in Texas, or by the exercise of the right of eminent domain or otherwise reimbursed to Landlord from another source, net of deductibles carried by Landlord, and reasonable out-of-pocket cost of adjustment.

(4) Landlord's cost of HVAC, electricity, water, janitorial and other services or benefits sold or provided to tenants in the Complex and for which Landlord is entitled to be reimbursed by such tenants as a separate additional charge or rental over and above the base rent or additional rent payments payable under the lease agreement with such tenant. The cost of providing HVAC services to other tenants at times or in quantities in excess of that made available to Tenant without special charge under this Lease Agreement, and the cost of providing electricity, water, janitorial or other services to other tenants in quantities or at specifications in excess of that made available to Tenant without special charge under this Lease Agreement, shall be excluded from Operating Expenses regardless of whether Landlord offers such services to other tenants without special charge under the terms of such other tenants' leases.

(5) All costs (including permit, license and inspection fees), however paid, in demolishing, removing, completing, fixturing, furnishing, renovating, decorating or otherwise altering or improving space for tenants or other occupants of the Complex or for vacant space, or for any management office, including space planning, interior design and engineering work.

(6) Except as set forth in Section 6.B(7) above, all costs incurred by Landlord in connection with the design or construction of the Complex or any equipment therein and related facilities, the correction of defects in design, construction or in the discharge of Landlord's obligations under **Exhibit G** attached to this Lease Agreement.

(7) Except as set forth in Section 6.B(7) above, all costs of removing, remediating, encapsulating and/or monitoring any hazardous waste, substance or material, including, without limitation, asbestos containing materials, but excluding automotive fuels discharged in driving and parking areas of the Complex. Notwithstanding Section 6.B(7) above, all operating and capital costs required by or incurred in connection with (i) the installation of any capital improvement required by any law, ordinance or regulation enacted before the Effective Date, including, without limitation, the Americans with Disabilities Act, the Texas Architectural Barriers Act, the Houston Life Safety Ordinance, but excluding any changes in interpretations, enforcement or ruling thereon after the Effective Date, (ii) the existence of chlorofluorocarbons (freon) in the Complex heating ventilation and air conditioning system or variable air volume system, or (iii) any future asbestos abatement of the Complex shall be excluded from Operating Expenses.

(8) All costs, including without limitation fines, penalties and legal fees, incurred or imposed in connection with any legal violation by Landlord or the property manager or any breach or default by Landlord under any loan or mortgage instrument or any lease or license agreement. All costs, including without limitation interest, late charges, penalties and legal fees, incurred in connection with any late payment by Landlord.

(9) Except as otherwise provided in Section 6.B(6) above, federal and state taxes on income and inheritance, estate and gift taxes of Landlord, the property manager and their respective affiliates, and all taxes imposed on or calculated on the basis of any mortgage encumbering the Complex or Garage or in connection with any transfer of ownership of the Complex or Garage or beneficial interests therein.

(10) Ad valorem taxes attributable to the leasehold improvements of Tenant and the other tenants of the Complex in excess of Complex standard but only to the extent (a) Landlord

is reimbursed directly by such other tenants for any ad valorem taxes attributable to the above Building standard leasehold improvements of such other tenants or (b) a separate allocation is made by the applicable taxing authority.

(11) All payments to any affiliate of Landlord for services in excess of the costs of arms-length, third-party providers for services of comparable quality and scope.

(12) Compensation paid to clerks, attendants or other persons in commercial concessions operated by Landlord or the property manager.

(13) All costs incurred in connection with the operation, maintenance or repair of any antennae or satellite facilities, unless such services are being provided to all tenants of the Complex, including Tenant.

(14) Except as otherwise provided in Section 6.B(6) above, other costs (including consulting fees and related disbursements) incurred in connection with Landlord's ownership of the Complex to the extent not directly related to the operation, maintenance and repair thereof, including without limitation, costs of any disputes between Landlord and its employees or the property manager and costs of selling, syndicating, financing, mortgaging or hypothecating any of the Landlord's interest in the Complex and/or common areas, costs of defending Landlord's title or interest in and to said property.

(15) All contributions to charitable organizations.

(16) All contributions to reserves for Operating Expenses.

(17) Except as otherwise provided in Section 6.B(6) above, any special assessments of taxes from any city, county, state or federal governmental agency, including, but not limited to, such items as parking income taxes.

(18) Costs of repair or replacement for any item to the extent that Landlord is reimbursed for same pursuant to a warranty.

(19) Costs which Landlord is reimbursed by its insurance carrier or by any tenant's insurance carrier or by any other entity.

(20) Any fines, costs, penalties or interest resulting from the negligence or willful misconduct of the Landlord or its agents, contractors or employees.

(21) Any bad debt loss, rent loss or reserves for bad debt or rent loss.

(22) All payments of principal, interest or other charges of any kind incurred in connection with any indebtedness secured by the Complex, and any payments under any ground lease or other underlying lease; provided that if Landlord makes payment of ad valorem taxes to its lender, rather than to taxing authorities, then payment to the lender shall not be included in Operating Expenses, but payments by the lender to taxing authorities shall be considered payments by Landlord, to be included in Operating Expenses to the extent otherwise provided for herein.

(23) The cost of any additional casualty insurance premium for the Complex in excess of the standard rate payable by Landlord, which additional cost is attributable to: (a) the tenancy of a particular tenant or tenants in the Complex other than Tenant or (b) the use of any part of the Complex by Landlord other than for purposes of providing general services to the Complex.

(24) Accounting costs and audit fees attributable to Landlords ownership (as opposed to the operation) of the Complex, including in connection with Landlord's income tax returns.

D. If the Term of this Lease Agreement commences or terminates on other than the first day of a calendar year, Tenant's Additional Rent shall be prorated for such commencement or termination year, as the case may be, by multiplying each by a fraction, the numerator of which shall be the number of days of the Term during the commencement or termination year, as the case may be, and the denominator of which shall be 365, and the calculation described in Section 6.F below shall be made as soon as reasonably possible after the termination of this Lease Agreement, Landlord and Tenant hereby agreeing that the provisions relating to said calculation shall survive the termination of this Lease Agreement.

E. On or about January 1 of each calendar year during the Term, Landlord shall endeavor to deliver to Tenant Landlord's good faith estimate of Tenant's Additional Rent (the "**Estimated Additional Rent**") for such year. The Estimated Additional Rent shall be paid in equal installments in advance on the first day of each month. If Landlord does not deliver an estimate to Tenant for any year by January 1 of that year, Tenant shall continue to pay Estimated Additional Rent based on the prior year's estimate until Landlord's estimate is delivered to Tenant. From time to time during any calendar year, but in no event more than twice in any calendar year, Landlord may revise its estimate of the Additional Rent for that year based on either actual or reasonably anticipated increases in Operating Expenses, and the monthly installments of Estimated Additional Rent shall be appropriately adjusted for the remainder of that year in accordance with the revised estimate so that by the end of the year, the total payments of Estimated Additional Rent paid by Tenant shall equal the amount of the revised estimate.

F. Within one hundred fifty (150) days after the end of each calendar year during the Term, or as soon as reasonably practicable thereafter, Landlord shall provide Tenant a statement showing the Operating Expenses for said calendar year, prepared in accordance with generally accepted accounting practices, and a statement prepared by Landlord comparing Estimated Additional Rent paid by Tenant with actual Additional Rent. If the Estimated Additional Rent paid by Tenant, if any, exceeds the actual Additional Rent for said calendar year, Landlord shall pay Tenant an amount equal to such excess at Landlord's option, by either giving a credit against rentals next due, if any, or by direct payment to Tenant within thirty (30) days of the date of such statement. If the actual Additional Rent exceeds Estimated Additional Rent for said calendar year, Tenant shall pay the difference to Landlord within thirty (30) days of receipt of the statement. The provisions of this paragraph shall survive the expiration or termination of this Lease Agreement. Any amount due to the Landlord as shown on Landlord's statement described above, whether or not disputed by Tenant as provided herein shall be paid by Tenant when due as provided above, without prejudice to any subsequent written exception made pursuant to Section 6.**I**. The Base Rent, Additional Rent and all other sums of money that become due and payable under this Lease Agreement shall collectively be referred to herein as "**Rent**".

G. Notwithstanding any other provision herein to the contrary, it is agreed that if less than one hundred percent (100%) of the Net Rentable Area of the Building is occupied during any calendar year or if less than one hundred percent (100%) of the Net Rentable Area of the Building is being provided with Building standard services during any calendar year, an adjustment shall be made in computing each component of the Operating Expenses for that year which varies with the rate of occupancy of the Building (such as, but not limited to, utilities, management fees and janitorial services) so that the total Operating Expenses shall be computed for such year as though the Building had been one hundred percent (100%) occupied during such year and as though one hundred percent (100%) of the Building had been provided with Building standard services during that year.

H. All Additional Rent shall be paid by Tenant to Landlord contemporaneously with the required payment of Base Rent on the first day of each calendar month, monthly in advance, for each month of the Term, in lawful money of the United States at the address of the Landlord's property manager specified in Section 31 below (or such other address as may be designated by Landlord in writing from time to time). No payment by Tenant or receipt by Landlord of an amount less than the amount of Rent herein stipulated to be paid shall be deemed to be other than on account of the stipulated Rent, nor shall any endorsement on any check or any letter accompanying such payment of Rent be deemed an accord and satisfaction, but Landlord may accept such payment without prejudice to his rights to collect the balance of such Rent.

I. Landlord shall maintain full and complete records of Operating Expenses and exclusions therefrom in accordance with generally accepted accounting principles and good commercial practice and sufficient to enable Tenant to audit Operating Expenses to confirm that Operating Expenses are being charged in accordance with this Lease Agreement. Not more than once per calendar year, and only on or before the sixtieth (60th) day following the date Landlord delivered the statement described in Section 6.F above to Tenant setting out the adjustment, if any, to the Estimated Additional Rent (the Estimated Additional Rent, as adjusted by such statement, is hereinafter referred to as the "**Adjusted Additional Rent**"), Tenant shall have the right, directly or through agents or contractors, to commence an inspection and audit of Landlord's books and records pertaining to Operating Expenses and exclusions therefrom for the period covered by the statement only, upon reasonable advance notice to and coordination with Landlord; provided, however, in no event will Landlord be obligated to permit any such inspection or audit to be performed by a consultant or firm that is compensated by Tenant on a contingent fee or percentage of recovery basis. If Tenant fails to commence such audit on or before the sixtieth (60th) day following the date Landlord delivered the statement described in Section 6.F above to Tenant or to complete such audit and deliver the auditor's report to Landlord before the ninetieth (90th) day following the delivery of such statement, then Tenant shall conclusively be deemed to have accepted the Adjusted Additional Rent specified in such statement and to have waived any right to contest such amount in the future. The cost of any such review or audit by Tenant shall be borne solely by Tenant. Notwithstanding the foregoing, if following such audit it is conclusively determined that the Adjusted Additional Rent exceeds the actual Additional Rent by more than five percent (5%) for the calendar year in question, Landlord shall reimburse Tenant for all of Tenant's reasonable out of pocket costs and expenses incurred by Tenant in connection with such audit. If following such audit, it is conclusively determined that the Adjusted Additional Rent paid by Tenant exceeds the actual Additional Rent for said calendar year, Landlord shall pay Tenant an amount equal to such excess at Landlord's option, by either giving a credit against rentals next due, if any, or by direct payment to Tenant within thirty (30) days of the date of such determination. If as a result of such audit, it is conclusively determined that the actual Additional Rent exceeds the Adjusted Additional Rent for said calendar year, Tenant shall pay to Landlord within thirty (30) days of the date of such determination, the positive difference between the amount that the actual Additional Rent exceeds the Adjusted Additional Rent for said calendar year.

J. Landlord and Tenant hereby each acknowledge and agree that they are knowledgeable and experienced in commercial transactions and further hereby acknowledge and agree that the provisions of this Lease Agreement for determining Operating Expenses and other charges are commercially reasonable and valid even though such methods may not state precise mathematical formulae for determining such Operating Expenses. **ACCORDINGLY, TENANT HEREBY VOLUNTARILY AND KNOWINGLY WAIVES ALL RIGHTS AND BENEFITS TO WHICH TENANT MAY BE ENTITLED UNDER SECTION 93.012 OF THE TEXAS PROPERTY CODE, AS ENACTED BY HOUSE BILL 2186, 77TH LEGISLATURE, AS SUCH SECTION NOW EXISTS OR AS SAME MAY BE HEREAFTER AMENDED OR SUCCEEDED.**

SEC. 7 SERVICES AND UTILITIES:

A. Provided no Event of Default has occurred and is continuing hereunder, and subject to the provisions of Sections 7.B and 7.C below, Landlord shall furnish the following services and amenities (collectively, the "**Required Services**") to Tenant (and its assignees and sublessees permitted hereunder) while occupying the Leased Premises:

(1) Domestic water at those points of supply provided for general use of the tenants of the Building;

(2) Chilled water piping to the west mechanical room on the eighth (8th) floor of the Building for central heat, ventilation and air conditioning in season, twenty-four (24) hours per day, seven (7) days per week, all as more particularly described on **Exhibit H** attached hereto and made a part hereof for all purposes;

(3) Electric lighting service for all public areas and special service areas of the Building in the manner and to the extent deemed by Landlord to be in keeping with the standards of other comparable medical office buildings in and in the vicinity of the Texas Medical Center area of Houston, Texas;

(4) Janitor service on a five (5) day week basis, in the manner and to the extent deemed standard by Landlord during the periods and hours as such services are normally furnished to tenants in the Building and such window-washing as may from time to time in Landlord's judgment reasonably be required, all in keeping with the standards of other comparable medical office buildings in and in the vicinity of the Texas Medical Center area of Houston, Texas;

(5) On-site security personnel and equipment for the Building; provided, however, that Tenant agrees that Landlord shall not be responsible for the adequacy or effectiveness of such security provided that (i) Landlord has exercised reasonable care in the selection of the security contractor and equipment, and (ii) the scope and extent of the security services contracted for by Landlord are in keeping with the standards of other comparable medical office buildings in and in the vicinity of the Texas Medical Center area of Houston, Texas;

(6) Electrical facilities to furnish 24 hours a day, seven days a week (i) power to operate typewriters, personal computers, calculating machines, photocopying machines and other equipment that operates on 120/208 volts (collectively, the "**Low Power Equipment**"); provided, however, total rated connected load by the Low Power Equipment shall not exceed an annual average of four (4) watts per square foot of Net Rentable Area of the Leased Premises and (ii) power to operate Tenant's lighting and Tenant's equipment that operates on 277/480 volts (collectively, the "**High Power Equipment**"); provided, however, total rated connected load by the High Power Equipment shall not exceed an annual average of two (2) watts per square foot of Net Rentable Area of the Leased Premises. In the event that the Tenant's connected loads for low electrical consumption (120/208 volts) and high electrical consumption (277/480 volts) are in excess of those loads stated above, as determined by an independent utility consultant, and Landlord agrees to provide such additional load capacities to Tenant (such determination to be made by Landlord in its sole discretion), then Landlord may install and maintain, at Tenant's expense, electrical submeters, wiring, risers, transformers, and electrical panels, and other items required by Landlord, in Landlord's discretion, to accommodate Tenant's design loads and capacities that exceed those loads stated above, including, without limitation, the installation and maintenance thereof.

(7) All Building standard fluorescent bulb replacement and all incandescent bulb replacement in the Common Areas of the Complex; and

(8) Non-exclusive passenger elevator service to the Leased Premises twenty-four (24) hours per day and non-exclusive freight elevator service during normal business hours of the Building.

B. The obligation of Landlord to provide the Required Services shall be subject to governmental regulation thereof (i.e., rationing, temperature control, etc.) and any such regulation that impairs Landlord's ability to provide the Required Services as herein stipulated shall not constitute an Event of Default hereunder but rather providing the applicable Required Services to the extent allowed pursuant to such regulations shall be deemed to be full compliance with the obligations and agreements of Landlord hereunder.

C. To the extent any of the Required Services require electricity, gas and water supplied by public utilities or others, Landlord's covenants hereunder shall only impose on Landlord the obligation to use its good faith efforts to cause the applicable public utilities or other providers to furnish the same. Failure by Landlord to furnish any of the Required Services to any extent, or any cessation thereof, due to failure of any public utility or other provider to furnish service to the Building, or any other cause beyond the reasonable control of Landlord, shall not render Landlord liable in any respect for damages to either person or property, nor be construed as an eviction of Tenant, nor work an abatement of Rent, nor relieve Tenant from fulfillment of any covenant or agreement hereof. As used herein, the phrase "cause beyond the reasonable control of Landlord" shall include, without limitation, acts of the public enemy, restraining of government, unavailability of materials, strikes, civil riots, floods, hurricanes,

tornadoes, earthquakes and other severe weather conditions or acts of God. In the event of any failure by Landlord to furnish any of the Required Services to any extent, or any cessation thereof, due to malfunction of any equipment or machinery, or any other cause within the reasonable control of Landlord, Tenant shall have no claim for rebate of Rent or damages on account thereof, except as provided herein, provided that Landlord utilizes its reasonable efforts to promptly repair said equipment or machinery and to restore said Required Services as soon thereafter as is reasonably practicable. If the interruption of Essential Required Services (as defined herein) is caused by the negligence or willful misconduct of Landlord, its employees, contractors, subcontractors or agents or lies within Landlord's reasonable control and such interruption renders any portion of the Leased Premises, as applicable, unusable by Tenant for its intended purpose, then if such Essential Required Services are not restored within five (5) consecutive days following the initial interruption of Essential Required Services, Tenant shall receive an abatement of all Base Rent and Additional Rent as to the portion of the Leased Premises, as applicable, rendered unusable for its intended purpose beginning on the sixth (6th) consecutive day following the initial interruption of Essential Required Services until such Essential Required Services are restored. Furthermore, if such interruption of Essential Required Services renders the Leased Premises unusable for its intended purpose for more than sixty (60) consecutive days and Landlord fails to commence to cure and thereafter diligently pursue the cure of such interruption within such sixty (60) consecutive day period, then Tenant may terminate this Lease Agreement by delivering written notice to Landlord at any time after the expiration of such 60-day period unless Landlord has commenced to cure such interruption. The foregoing Rent abatement and termination rights shall be Tenant's sole recourse in the event of an interruption of an Essential Required Service. Landlord in no event shall be liable for damages by reason of loss of profits, business interruption or other consequential damages. The provisions of this Section 7.C do not apply in the case of a casualty or condemnation under Sections 13 and 14 hereof, which provisions shall govern in such circumstances. As used herein, the term "**Essential Required Services**" means any one or more of the following services to the extent Landlord is required to provide such service to Tenant under this Lease Agreement: HVAC, electricity, water, and/or elevator service.

D. Tenant hereby acknowledges and agrees that Landlord is obligated to provide only the Required Services under this Lease Agreement, and that Landlord, its agents and representatives, have made no representations whatsoever of any additional services or amenities to be provided by Landlord now or in the future under this Lease Agreement. Notwithstanding the foregoing, Tenant recognizes that Landlord may, at Landlord's sole option, elect to provide additional services or amenities for the tenants of the Building from time to time, and hereby agrees that Landlord's discontinuance of any provision of any such additional services or amenities shall not constitute a default of Landlord under this Lease Agreement nor entitle Tenant to any abatement of or reduction in Rent.

E. Notwithstanding anything contained in this Section 7 to the contrary, Landlord shall have the right to install, at Tenant's sole cost and expense, meters or sub-meters within the Leased Premises for the purpose of metering or sub-metering water, electricity or any other utility provided to the Leased Premises, and may install, at its sole discretion and at Tenant's sole cost and expense, meters or sub-meters for the purpose of metering or sub-metering heating, air conditioning and ventilation. In the event that Landlord installs one or more of the aforementioned meters or sub-meters, Landlord shall provide an invoice to Tenant for the utilities provided to the Leased Premises on a monthly basis in arrears based on the actual costs charged to Landlord for providing such utilities to the Leased Premises, which shall be paid by Tenant as Additional Rent on or before the first day of the following calendar month, along with the remainder of the Additional Rent then due and owing by Tenant. In the alternative, Landlord shall have the continuing right to require Tenant to procure water, electricity and/or any other utility directly from a reputable third party service provider ("**Provider**") for Tenant's own account in which case Tenant shall be responsible for the payment of such utilities directly to such Provider. In such event, Tenant shall require each Provider to comply with the Building's rules and regulations, all applicable laws, and Landlord's reasonable policies and practices for the Building. Tenant acknowledges Landlord's current policy that requires all Providers utilizing any area of the Complex outside the Premises to be approved by Landlord and to enter into a written agreement reasonably acceptable to Landlord prior to gaining access to, or making any installations in or through, such area. Accordingly, Tenant shall give Landlord written notice sufficient for such purposes.

SEC. 8 MAINTENANCE, REPAIRS AND USE:

A. Landlord shall provide for the cleaning and maintenance of the public portions of the Building including painting and landscaping surrounding the Building. Unless otherwise expressly stipulated herein,

Landlord shall not be required to make any improvements or repairs of any kind or character on the Leased Premises during the Term, except such repairs as may be required by normal maintenance operations to the exterior walls, corridors, windows, roof and other structural elements and equipment of the Building.

B. Landlord, its officers, agents, designees and representatives shall have the right to enter all parts of the Leased Premises at all reasonable hours upon at least 24 hours' advance notice (except in the event of an emergency or to provide janitorial service, in which case no notice is required) for the purposes of: (i) inspecting same for compliance with Tenant's obligations hereunder, (ii) cleaning, making repairs, alterations or additions to the Building or Leased Premises which it may deem necessary or desirable, (iii) to provide any service which it is obligated to furnish to Tenant, or (iv) showing the Leased Premises to prospective purchasers, mortgagees, or prospective tenants (but with prospective tenants only, during the last 6 months of the Term), and Tenant shall not be entitled to any abatement or reduction of Rent by reason thereof; provided, however, Landlord shall use commercially reasonable efforts not to disturb Tenant's use of the Leased Premises and accommodate Tenant's preferred time of entry to the extent reasonable under the circumstances. Further, Tenant may elect to have a Tenant representative escort Landlord, its officers, agents, designees and representatives through the Leased Premises provided such election shall not delay Landlord's entry into the Leased Premises. Landlord shall use commercially reasonable efforts to cause all parties entering the Leased Premises on Landlord's behalf or invitation to keep all information learned about Tenant's business operations during any such visit to the Leased Premises confidential and shall not disclose any such information to a third party.

C. Landlord may, at its option and at the cost and expense of Tenant, repair or replace any damage or injury done to the Complex or any part thereof, caused by Tenant, Tenant's agents, employees, licensees, invitees or visitors; Tenant shall pay the reasonable cost thereof to Landlord within 30 days of demand. Tenant further agrees to maintain and keep the interior of the Leased Premises in good repair and condition at Tenant's expense. Tenant agrees not to commit or allow any waste or damage to be committed on any portion of the Leased Premises, and at the termination of this Lease Agreement, by lapse of time or otherwise, to deliver up the Leased Premises to Landlord in as good condition as on the Leasehold Improvements Completion Date, ordinary wear and tear and casualty and condemnation damage alone excepted, and upon such termination of this Lease Agreement, Landlord shall have the right to re-enter and resume possession of the Leased Premises.

D. Tenant will not use, occupy or permit the use or occupancy of the Leased Premises for any purpose which is directly or indirectly forbidden by law, ordinance or governmental or municipal regulation or order, or which may be dangerous to life, limb or property; or permit the maintenance of any public or private nuisance; or do or permit any other thing which may unreasonably interfere with, annoy or disturb the quiet enjoyment of any other tenant of the Building; or keep any substance or carry on or permit any operation which might emit offensive odors or conditions into other portions of the Complex; or use any apparatus which might make undue noise or set up vibrations in the Complex; or permit anything to be done which would increase the fire and extended coverage insurance rate on the Building or contents and if there is any increase in such rates by reason of acts of Tenant, then Tenant agrees to pay such increase promptly upon demand therefor by Landlord. In the event Tenant fails to correct, cure or discontinue such prohibited or dangerous use within five (5) days following notice from the Landlord, such failure shall constitute an Event of Default by Tenant hereunder and Landlord shall have all of its remedies as set forth in this Lease Agreement.

SEC. 9 QUIET ENJOYMENT; RIGHTS RESERVED:

A. Tenant, on paying the said Rent and performing the covenants herein agreed to be by it performed, shall and may peaceably and quietly have, hold and enjoy the Leased Premises for the said Term.

B. Notwithstanding anything herein to the contrary, provided no such actions materially adversely affect Tenant's access to or use of the Leased Premises or the Garage, Landlord hereby expressly reserves the right in its sole discretion to (i) temporarily or permanently change the location of, close, block or otherwise alter any streets, driveways, entrances, corridors, doorways or walkways leading to or providing access to the Complex or any part thereof or otherwise restrict the use of same provided such activities do not unreasonably impair Tenant's access to the Leased Premises, or reduce the size or configuration of the Leased Premises, (ii) improve, remodel, add additional floors to or otherwise alter the Building, (iii) construct, alter, remodel or repair one or more parking facilities (including garages) on the Land, and (iv) convey, transfer or dedicate portions of the Land. In addition,

Landlord shall have the right, in its sole discretion, at any time during the Term to attach to any or all of the Building windows a glazing, coating or film or to install storm windows for the purpose of improving the Building's energy efficiency. Tenant shall not remove, alter or disturb any such glazing, coating or film. The addition of such glazing, coating or film, or the installation of storm windows or the exercise of any of Landlord's rights pursuant to this Section 9, shall in no way reduce Tenant's obligations under this Lease Agreement or impose any liability on Landlord and it is agreed that Landlord shall not incur any liability whatsoever to Tenant as a consequence thereof and such activities shall not be deemed to be a breach of any of Landlord's obligations hereunder. Landlord agrees to exercise good faith in notifying Tenant within a reasonable time in advance of any alterations, modifications or other actions of Landlord under this Section 9. Any diminution or shutting off of light, air or view by any structure which is now or may hereafter be effected on lands adjacent to the Building shall in no way affect this Lease Agreement or impose any liability on Landlord. Noise, dust or vibration or other incidents caused by or arising out of any work performed pursuant to the exercise of Landlord's rights reserved in this Section 9 or new construction of improvements on lands adjacent to the Building, whether or not owned by Landlord, or on the Land shall in no way affect this Lease Agreement or impose any liability on Landlord. Tenant agrees to cooperate with Landlord in furtherance of Landlord's exercise of any of the rights specified in this Section 9.

SEC. 10 ALTERATIONS:

A. Tenant shall not make or allow to be made (except as otherwise provided in this Lease Agreement) any alterations or physical additions (including fixtures) in or to the Leased Premises (which for the purposes hereof includes the placement of safes, vaults and other heavy furniture or equipment), without first obtaining the written consent of Landlord; provided, however, Landlord's consent to (i) any alterations or physical additions (including fixtures) to the Leased Premises which do not affect the HVAC, plumbing, electrical or mechanical systems or structural elements of the Leased Premises or the Building or (ii) the placement of safes, vaults or other heavy furniture or equipment within the Leased Premises, shall not be unreasonably withheld, conditioned or delayed. In addition, Tenant shall not be permitted to take x-rays or core drill or penetrate the floor of the Leased Premises or any other floor of the Building without first obtaining the Landlord's consent, which consent shall not be unreasonably withheld, conditioned or delayed. However, notwithstanding the foregoing, Landlord acknowledges and agrees that Tenant may drill into the floor slab for plumbing associated with drainage, the location and scheduling thereof to be consented to by Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. The cost of any consultant or engineer hired by Landlord in connection with such work undertaken by Tenant shall be paid for by Tenant as additional rent hereunder. Tenant shall submit requests for consent to make alterations or physical additions together with copies of the plans and specifications for such alterations. Subsequent to obtaining Landlord's consent and prior to commencement of construction of the alterations or physical additions, Tenant shall deliver to Landlord the building permit, a copy of the executed construction contract covering the alterations and physical additions and evidence of contractor's and subcontractor's insurance, such insurance being with such companies, for such periods and in such amounts as Landlord may reasonably require, naming the Landlord Parties (as defined on **Exhibit I**) as additional insureds. Tenant shall pay to Landlord upon demand a review fee in the amount of Landlord's actual costs incurred to compensate Landlord for the cost of review and approval of the plans and specifications and for additional administrative costs incurred in monitoring the construction of the alterations, all such charges to Tenant to be reasonable. Tenant shall deliver to Landlord a copy of the "as-built" plans and specifications for all alterations or physical additions so made in or to the Leased Premises, and shall reimburse Landlord for the cost incurred by Landlord to update its current architectural plans for the Building.

B. Tenant shall indemnify, defend (with counsel reasonably acceptable to Landlord) and hold harmless the Landlord Parties from and against all costs (including reasonable attorneys' fees and costs of suit), losses, liabilities, or causes of action arising out of or relating to any alterations, additions or improvements made by Tenant to the Leased Premises, including but not limited to any mechanics' or materialmen's liens asserted in connection therewith.

C. Tenant shall not be deemed to be the agent or representative of Landlord in making any such alterations, physical additions or improvements to the Leased Premises, and shall have no right, power or authority to encumber any interest in the Complex in connection therewith other than Tenant's leasehold estate under this Lease Agreement. However, should any mechanics' or other liens be filed against any portion of the Complex or any interest therein (other than Tenant's leasehold estate hereunder) by reason of Tenant's acts or omissions or

because of a claim against Tenant or its contractors, Tenant shall cause the same to be canceled or discharged of record by bond or otherwise within twenty (20) days after notice by Landlord. If Tenant shall fail to cancel or discharge said lien or liens, within said twenty (20) day period, which failure shall be deemed to be an Event of Default hereunder without the necessity of any further notice, Landlord may, at its sole option and in addition to any other remedy of Landlord hereunder, cancel or discharge the same and upon Landlord's demand, Tenant shall promptly reimburse Landlord for all costs incurred in canceling or discharging such lien or liens.

D. Tenant shall cause all alterations, physical additions, and improvements (including fixtures), constructed or installed in the Leased Premises by or on behalf of Tenant to comply with all applicable governmental codes, ordinances, rules, regulations and laws. Tenant acknowledges and agrees that neither Landlord's review and approval of Tenant's plans and specifications nor its observation or supervision of the construction or installation thereof shall constitute any warranty or agreement by Landlord that same comply with such codes, ordinances, rules, regulations and laws or release Tenant from its obligations under this Section 10.D.

E. Tenant shall be wholly responsible for any accommodations or alterations that are required by applicable governmental codes, ordinances, rules, regulations and laws to be made to the Leased Premises to accommodate disabled employees and customers of Tenant, including, without limitation, compliance with the Americans with Disabilities Act (42 U.S.C. §§ 12101 et seq.) and the Texas Architectural Barriers Act (Texas Government Code, Chapter 469) (collectively, the "**Accommodation Laws**") to the extent interpreted and enforced from time to time, as well as all applicable regulatory requirements promulgated by the Centers for Medicare and Medicaid Services ("**CMS**"), the State of Texas, Occupational Safety and Health Administration and the administrative regulations promulgated thereunder and all other federal, state and local statutory and regulatory requirements and building codes, including, without limitation, state hospital licensing standards and CMS certification regulations (collectively, the "**Healthcare Laws**"). Except to the extent provided below, Landlord shall be responsible for making all accommodations and alterations to the Common Areas of the Building necessary to comply with the Accommodation Laws and any other federal, state and local statutory and regulatory requirements and building codes. Notwithstanding the foregoing, Landlord may perform, at Tenant's sole cost and expense, any accommodations or alterations that are required by the Accommodation Laws and/or Healthcare Laws or that are required by any governmental official acting pursuant to the Accommodation Laws and/or Healthcare Laws to any area outside of the Leased Premises which are triggered by any alterations or additions to the Leased Premises or by the proposed use of the Premises as described in Section 3 and Tenant shall reimburse Landlord for such cost and expense within thirty (30) days of demand.

SEC. 11 FURNITURE, FIXTURES AND PERSONAL PROPERTY: Tenant may remove its trade fixtures, office supplies and movable office furniture and equipment not attached to the Building provided: (a) such removal is made prior to the termination of this Lease Agreement; (b) Tenant is not in default of any obligation or covenant under this Lease Agreement at the time of such removal; and (c) Tenant promptly repairs all damage caused by such removal. All other property at the Leased Premises and any alterations or additions to the Leased Premises (including wall-to-wall carpeting, paneling or other wall covering) and any other article attached or affixed to the floor, wall or ceiling of the Leased Premises (excluding lab benches which will be considered movable equipment not attached to the Building and which may be removed by Tenant in accordance with the first sentence of this Section 11) shall become the property of Landlord and shall remain upon and be surrendered with the Leased Premises as a part thereof at the termination of the Lease Agreement by lapse of time or otherwise, Tenant hereby waiving all rights to any payment or compensation therefor. Tenant will, prior to termination of this Lease Agreement, remove any and all alterations, additions, fixtures, equipment and property placed or installed by Tenant in the Leased Premises and will repair any damage caused by such removal; provided, however, Tenant shall not be obligated to remove any alterations or physical additions that affect the Leased Premises or the Building if at such time as Landlord approves any such alterations or physical additions pursuant to Section 10 above, Landlord notifies Tenant in writing that Landlord requires such items not be removed upon the expiration or termination of this Lease Agreement. In addition, Tenant shall be required prior to the termination of this Lease Agreement to remove all of its telecommunications equipment, including, but not limited to, all switches, cabling, wiring, conduit, racks and boards, whether located in the Leased Premises or in the Common Areas. If Tenant does not complete all removals prior to the termination of this Lease Agreement, Landlord may remove such items (or contract for the removal of such items), Tenant shall reimburse Landlord upon demand for the reasonable costs incurred by Landlord in connection therewith and Tenant shall be deemed to be holding over pursuant to Section 26 below until such time as such items have been removed from the Leased Premises. This Section 11 shall survive the expiration or termination of this Lease Agreement.

SEC. 12 SUBLETTING AND ASSIGNMENT:

A. In the event Tenant should desire to assign this Lease Agreement or sublet the Leased Premises or any part thereof or allow same to be used or occupied by others, Tenant shall give Landlord written notice (which shall specify the duration of said desired sublease or assignment, the date same is to occur, the exact location of the space affected thereby, the proposed rentals on a square foot basis chargeable thereunder and sufficient information of the proposed sublessee or assignee regarding its intended use, financial condition and business operations) of such desire at least fifteen (15) days in advance of the date on which Tenant desires to make such assignment or sublease or allow such a use or occupancy. Landlord shall then have a period of ten (10) days following receipt of such notice within which to notify Tenant in writing that Landlord elects:

(1) in the event such assignee or sublessee fails to meet the conditions set forth in subparagraph (3) below, to refuse to permit Tenant to assign this Lease Agreement or sublet such space, and in such case this Lease Agreement shall continue in full force and effect in accordance with the terms and conditions hereof; or

(2) to terminate this Lease Agreement as to the space so affected as of the date so specified by Tenant in which event Tenant shall be relieved of all obligations hereunder as to such space arising from and after such date; provided, however, that if Landlord elects to terminate this Lease Agreement pursuant to this Section 12.A(2), Tenant shall have ten (10) days after receipt of written notice of Landlord's election during which Tenant may, if it so desires, withdraw its request for Landlord's consent to such assignment or sublease, in which event this Lease Agreement shall remain in full force and effect as if such request for Landlord's consent had not been made; or

(3) to permit Tenant to assign this Lease Agreement or sublet such space for the duration specified in such notice, such approval not to be unreasonably withheld, conditioned or delayed, if (a) the nature and character of the proposed assignee or sublessee and the principals thereof; their business and activities and intended use of the Leased Premises are in Landlord's reasonable judgment consistent with the current standards of the Building and the floor or floors on which the Leased Premises are located, (b) neither the proposed assignee or sublessee (nor any party which, directly or indirectly, controls or is controlled by or is under common control with the proposed assignee or sublessee) is a department, representative or agency of any governmental body or then an occupant of any part of the Building or a party with whom Landlord is then negotiating to lease space in the Building or in any adjacent Building owned by Landlord or an affiliate of Landlord in and in the vicinity of the Texas Medical Center area of Houston, Texas, (c) the form and substance of the proposed sublease or instrument of assignment are acceptable to Landlord (which acceptance by Landlord shall not be unreasonably withheld, conditioned or delayed) and is expressly subject to all of the terms and provisions of this Lease Agreement and to any matters to which this Lease Agreement is subject, (d) the proposed occupancy would not (1) increase Landlord's cleaning requirements, (2) impose an extra burden upon the services to be supplied by Landlord to Tenant hereunder, (3) violate the current rules and regulations of the Building, (4) violate the provisions of any other leases of tenants in the Building or (5) cause alterations or additions to be made to the Building (excluding the Leased Premises), (e) Tenant enters into a written agreement with Landlord whereby it is agreed that fifty percent (50%) of any rent realized by Tenant as a result of said sublease or assignment in excess of the Base Rent and Additional Rent payable to Landlord by Tenant under this Lease Agreement and any and all sums and other considerations of whatsoever nature paid to Tenant by the assignee or sublessee for or by reason of such assignment or sublease, including, but not limited to, sums paid for the sale of Tenant's fixtures, leasehold improvements, equipment, furniture, furnishings or other personal property in excess of the fair market value thereof (that is, after

deducting and giving Tenant credit for Tenant's reasonable costs directly associated therewith, including reasonable brokerage fees, reasonable marketing costs, reasonable attorney's fees and the reasonable cost of remodeling or otherwise improving the Leased Premises for said assignee or sublessee but excluding any free rentals or the like offered to any such sublessee or assignee) shall be payable to Landlord such payments are actually received by Tenant, (f) the granting of such consent will not constitute a default under any other agreement to which Landlord is a party or by which Landlord is bound and (g) the creditworthiness of the proposed assignee or sublessee and the principals thereof is acceptable to Landlord, in Landlord's reasonable discretion.

B. No assignment or subletting by Tenant shall be effective unless Tenant shall execute, have acknowledged and deliver to Landlord, and cause each sublessee or assignee to execute, have acknowledged and deliver to Landlord, an instrument in form and substance reasonably acceptable to Landlord in which (i) such sublessee or assignee adopts this Lease Agreement and assumes and agrees to perform jointly and severally with Tenant, all of the obligations of Tenant under this Lease Agreement, as to the space transferred to it, (ii) Tenant and such sublessee or assignee agree to provide to Landlord, at their expense, direct access from a public corridor in the Building to the transferred space, (iii) such sublessee or assignee agrees to use and occupy the transferred space solely for the purpose specified in Section 3 and otherwise in strict accordance with this Lease Agreement and (iv) Tenant acknowledges and agrees that, notwithstanding such subletting or assignment, Tenant remains directly and primarily liable for the performance of all the obligations of Tenant hereunder (including, without limitation, the obligation to pay Rent), and Landlord shall be permitted to enforce this Lease Agreement against Tenant or such sublessee or assignee, or both, without prior demand upon or proceeding in any way against any other persons. Tenant shall, upon demand, reimburse Landlord for all reasonable out-of-pocket expenses incurred by Landlord in connection with a request made by Tenant pursuant to this Section 12, including, without limitation, any investigations as to the acceptability of the proposed assignee or sublessee, and all legal costs reasonably incurred in connection with the granting of any requested consent.

C. Any consent by Landlord to a particular assignment or sublease shall not constitute Landlord's consent to any other or subsequent assignment or sublease, and any proposed sublease or assignment by any assignee or sublessee shall be subject to the provisions of this Section 12 as if it were a proposed sublease or assignment by Tenant. The prohibition against an assignment or sublease described in this Section 12 shall be deemed to include a prohibition against (i) Tenant's mortgaging or otherwise encumbering its leasehold estate, (ii) an assignment or sublease which may occur by merger or operation of law and (iii) permitting the use or occupancy of the Leased Premises, or any part thereof, by anyone other than Tenant, each of which shall be ineffective and void and shall constitute an Event of Default under this Lease Agreement unless consented to by Landlord in writing in advance, which consent shall not be unreasonably withheld, conditioned or delayed. For purposes hereof, the transfer of the ownership or voting rights in a controlling interest of the voting stock of Tenant (if Tenant is a corporation) or the transfer of a general partnership interest or a majority of the limited partnership interest in Tenant (if Tenant is a partnership), at any time throughout the Term, shall be deemed to be an assignment of this Lease Agreement.

D. Notwithstanding anything to the contrary contained herein, Tenant may assign this Lease Agreement or sublet the Leased Premises or any part thereof, without the prior consent of Landlord, to (i) an Affiliate (as defined below) of Tenant, (ii) an entity into which Tenant is merged, consolidated or converted (or the resulting entity in any merger of any other entity into or with Tenant), or (iii) an entity to which fifty percent (50%) or more of Tenant's assets are transferred (each a "**Permitted Transferee**"); provided, however, (a) Tenant shall give Landlord written notice (which shall specify the assignee or sublessee, the duration of said assignment or sublease, the effective date of such assignment or subletting, the financial information necessary for Landlord to confirm the net worth test set forth below has been satisfied and the exact location of the space affected thereby and the rentals on a square foot basis to be charged thereunder) of such assignment or sublease at least ten (10) business days prior to such assignment or sublease, and (b) the assignee or successor entity must carry on the same use from the Leased Premises as Tenant and have a net worth as determined by generally accepted accounting principles ("**GAAP**") on the date following such sale of assets or merger at least equal to the GAAP net worth of Tenant as of the day preceding such assignment, sublease, sale or merger. In the event of any subletting or assignment to a Permitted Transferee, one hundred percent (100%) of the rent received from such Permitted Transferee shall be retained by Tenant. Further, any Permitted Transferee under an assignment of the Lease Agreement or the

subletting of all of the Leased Premises shall have the right to exercise Tenant's Right of First Refusal, Tenant's Preferential Right, the Renewal Option and any rights to the Hold Space. As used herein, (1) the term "**Affiliate**" means any person or entity controlled by, under common control with, or which controls, the Tenant, and (2) the term "**control**" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of the entity referred to, whether through ownership of voting securities, by contract or otherwise, and the terms "**controlling**" and "**controls**" have meanings correlative to the foregoing.

SEC. 13 FIRE AND OTHER CASUALTY:

A. In the event of a fire or other casualty in the Leased Premises, Tenant shall immediately give notice thereof to Landlord. If the Leased Premises shall be partially destroyed by fire or other casualty so as to render the Leased Premises untenantable in whole or in part. Rent shall abate thereafter as to the portion of the Leased Premises rendered untenantable until such time as the Leased Premises are made tenantable as reasonably determined by Landlord and Landlord agrees to commence and prosecute such repair work promptly and with all due diligence; provided, however, in the event such destruction (i) results in total or substantial damages to or destruction of the Building and Landlord shall decide not to rebuild or (ii) results in the Leased Premises being untenantable in whole or in substantial part and the reasonable estimation of a responsible contractor selected by Landlord as to the amount of time necessary to rebuild or restore such destruction to the Leased Premises and all other portions of the Building exceeds six (6) months from the time such work is commenced, then in either event, Landlord shall have a right to terminate this Lease Agreement effective as of the date of casualty or destruction, and upon such termination, all Rent owed up to the time of such destruction or termination shall be paid by Tenant. Subject to reasonable delays for insurance adjustments, Landlord shall give Tenant written notice of its decisions, estimates or elections under this Section 13 within sixty (60) days after any such damage or destruction. If any portion of Rent is abated under this Section 13, Landlord may elect to extend the expiration date of the Term of this Lease Agreement for the period of the abatement. Notwithstanding any provision herein to the contrary, if such casualty to the Leased Premises occurs during the last 12 months of the Term, or the repairs required will, in the reasonable estimation of the contractor selected by Landlord, take twelve (12) months or longer to repair, Tenant may terminate this Lease Agreement by delivering written notice to Landlord within thirty (30) days of Landlord's delivery to Tenant of the estimation of the time period necessary to make the repairs, such termination to be effective as of the date of casualty or destruction, and upon such termination, all Rent owed up to the time of such destruction or termination shall be paid by Tenant.

B. Notwithstanding anything in this Lease Agreement to the contrary, if the Leased Premises are damaged by fire or other casualty resulting from the gross negligence or willful misconduct of Tenant, or the agents, employees, licensees, customers or invitees of Tenant, such damage shall be repaired by and at the expense of Tenant under the direction and supervision of Landlord, and this Lease Agreement shall not be terminated and Rent shall continue without abatement.

C. Notwithstanding anything contained in this Section 13, in no event shall Landlord be required to expend more to reconstruct, restore and repair the Building than the amount actually received by Landlord from the proceeds of the property insurance carried by Landlord and Landlord (or which would have been received had Landlord carried the insurance required to be carried hereunder) shall have no duty to repair or restore any portion of any alterations, additions, installation or improvements in the Leased Premises or the decorations thereto except to the extent that the proceeds of the insurance carried by Tenant are timely received by Landlord. If Tenant desires any other additional repairs or restoration, and if Landlord consents thereto, it shall be done at Tenant's sole cost and expense subject to all of the applicable provisions of this Lease Agreement. Tenant acknowledges that Landlord shall be entitled to the full proceeds of any insurance coverage whether carried by Landlord or Tenant, for damage to any alterations, addition, installation, improvements or decorations which would become the Landlord's property upon the termination of this Lease Agreement.

SEC. 14 CONDEMNATION: If all of the Complex is taken or condemned, or acquired under threat of condemnation, by or at the direction of any governmental authority (a "**Taking**" or "**Taken**", as the context requires), or if so much of the Complex is Taken that, in Landlord's opinion, the remainder cannot be restored to an economically viable, quality office building, or if the awards payable to Landlord as a result of any Taking are, in Landlord's opinion, inadequate to restore the remainder to an economically viable, quality office building, Landlord may, at its election, exercisable by the giving of written notice to Tenant within sixty (60) days after the date of the

Taking, terminate this Lease Agreement as of the date of the Taking or the date Tenant is deprived of possession of the Leased Premises (whichever is later). If this Lease Agreement is not terminated as a result of a Taking, Landlord shall restore the Leased Premises remaining after the Taking to a Building standard condition. During the period of restoration, Base Rent shall be abated to the extent the Leased Premises are rendered untenantable and, after the period of restoration, Base Rent and Tenant's pro rata share shall be reduced in the proportion that the area of the Leased Premises Taken or otherwise rendered untenantable bears to the area of the Leased Premises just prior to the Taking. If any portion of Base Rent is abated under this Section 14, Landlord may elect to extend the expiration date of the Term for the period of the abatement. All awards, proceeds, compensation or other payments from or with respect to any Taking of the Complex or any portion thereof shall belong to Landlord, Tenant hereby assigning to Landlord all of its right, title, interest and claim to same. Tenant shall have the right to assert a claim for and recover from the condemning authority, but not from Landlord, such compensation as may be awarded on account of Tenant's moving and relocation expenses, and depreciation to and loss of Tenant's movable personal property.

SEC. 15 DEFAULT BY TENANT: The occurrence of any one or more of the following shall constitute an "Event of Default" under this Lease Agreement:

A. The failure of Tenant to pay any Rent as and when due under this Lease Agreement and such failure continues for five (5) business days after Landlord gives Tenant written notice of such failure; provided, however, that once Landlord has given Tenant two (2) such notices during any calendar year of this Lease Agreement for any payments that are not made when due hereunder, Landlord shall not be required to give further notice or any notice at all with respect to subsequent defaults in such payments in such calendar year, and the failure or refusal by Tenant to timely make any payment thereafter due hereunder during such calendar year shall immediately constitute an Event of Default entitling Landlord to pursue its remedies without notice or demand;

B. The failure of Tenant to perform, comply with or observe any of the other covenants or conditions contained in this Lease Agreement and the continuance of such failure for the period of time as may be specified elsewhere in this Lease Agreement for such specific covenant or condition, or should no period of time be specified elsewhere in this Lease Agreement with respect to such specific covenant or condition, a period of thirty (30) days after written notice to Tenant; or, if such failure cannot reasonably be cured within said thirty (30) day period despite Tenant's diligent good faith efforts, the failure of Tenant to promptly commence its diligent good faith efforts to cure such failure within said thirty (30) day period and/or the continuance of such failure for a period of ninety (90) days notwithstanding Tenant's efforts to cure;

C. Tenant shall fail to execute and acknowledge or otherwise respond in good faith and in writing within ten (10) days after submission to Tenant of a request for confirmation of the subordination of this Lease Agreement pursuant to Section 24 or an estoppel certificate pursuant to Section 35;

D. Intentionally Deleted;

E. The filing of a petition by or against Tenant or any guarantor of Tenant's obligations under this Lease Agreement (i) naming Tenant or any guarantor as debtor in any bankruptcy or other insolvency proceeding, (ii) for the appointment of a liquidator or receiver for all or substantially all of Tenant's or any guarantor's property or for Tenant's interest in this Lease Agreement, or (iii) to reorganize or modify Tenant's or any guarantor's capital structure;

F. The admission by Tenant or any guarantor in writing of its inability to meet its obligations as they become due or the making by Tenant or any guarantor of an assignment for the benefit of its creditors;

G. The attempt by Tenant to assign this Lease Agreement or to sublet all or any part of the Leased Premises to other than a Permitted Transferee (or to a Permitted Transferee in a manner that does not comply with Section 12.D.) without the prior written consent of Landlord in accordance with Section 12;

H. Any holding over by Tenant in accordance with Section 26 with respect to all or any portion of the Leased Premises after the expiration or termination of the Lease Agreement; or

I. The failure by Tenant to comply with the insurance requirements set forth in **Exhibit I.**

SEC. 16 REMEDIES OF LANDLORD: Upon any Event of Default, Landlord may exercise any one or more of the following described remedies, in addition to all other rights and remedies provided at law or in equity:

A. Terminate this Lease Agreement by written notice to Tenant and forthwith repossess the Leased Premises and be entitled to recover forthwith as damages a sum of money equal to the total of (i) the cost of recovering the Leased Premises (including reasonable attorneys' fees and costs of suit), (ii) the reasonable cost of removing and storing any personal property, (iii) the unpaid Rent earned at the time of termination, plus interest thereon at the rate described in Section 5, (iv) the present value (discounted at the rate of eight percent (8%) per annum) of the balance of the Rent for the remainder of the Term less the present value (discounted at the same rate) of the fair market rental value of the Leased Premises for said period, taking into account the period of time the Leased Premises will remain vacant until a new tenant is obtained, and the reasonable cost to prepare the Leased Premises for occupancy and the other reasonable costs (such as leasing commissions, tenant improvement allowances and attorneys' fees) to be incurred by Landlord in connection therewith, and (v) any other sum of money and damages owed by Tenant to Landlord under this Lease Agreement.

B. Terminate Tenant's right of possession (but not this Lease Agreement) and may repossess the Leased Premises by forcible detainer suit or otherwise, without thereby releasing Tenant from any liability hereunder and without demand or notice of any kind to Tenant and without terminating this Lease Agreement. Landlord shall use reasonable efforts under the circumstances to relet the Leased Premises on such terms and conditions as Landlord in its sole discretion may determine (including a term different than the Term, rental concessions, alterations and repair of the Leased Premises); provided, however, Landlord hereby reserves the right (i) to lease any other comparable space available in the Building or in any adjacent building owned by Landlord prior to offering the Leased Premises for lease, and (ii) to refuse to lease the Leased Premises to any potential tenant which does not meet Landlord's standards and criteria for leasing other comparable space in the Building. Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished because of, Landlord's failure or refusal to relet the Leased Premises or collect rent due in respect of such reletting. For the purpose of such reletting Landlord shall have the right to decorate or to make any repairs, changes, alterations or additions in or to the Leased Premises as may be reasonably necessary or desirable. In the event that (i) Landlord shall fail or refuse to relet the Leased Premises, or (ii) the Leased Premises are relet and a sufficient sum shall not be realized from such reletting (after first deducting therefrom, for retention by Landlord, the unpaid Rent due hereunder earned but unpaid at the time of reletting plus interest thereon at the rate specified in Section 5, the reasonable cost of recovering possession (including reasonable attorneys' fees and costs of suit), all of the reasonable costs and expenses of such decorations, repairs, changes, alterations and additions, the reasonable expense of such reletting and the reasonable cost of collection of the rent accruing therefrom) to satisfy the Rent, then Tenant shall pay to Landlord as damages a sum equal to the amount of such deficiency. Any such payments due Landlord shall be made upon demand therefor from time to time and Tenant agrees that Landlord may file suit to recover any sums falling due under the terms of this Section 16 from time to time. No delivery to or recovery by Landlord of any portion due Landlord hereunder shall be any defense in any action to recover any amount not theretofore reduced to judgment in favor of Landlord, nor shall such reletting be construed as an election on the part of Landlord to terminate this Lease Agreement unless a written notice of such intention be given to Tenant by Landlord. Notwithstanding any such termination of Tenant's right of possession of the Leased Premises, Landlord may at any time thereafter elect to terminate this Lease Agreement. In any proceedings to enforce this Lease Agreement under this Section 16, Landlord shall be presumed to have used its reasonable efforts to relet the Leased Premises, and Tenant shall bear the burden of proof to establish that such reasonable efforts were not used.

C. Alter any and all locks and other security devices at the Leased Premises, and if it does so Landlord shall not be required to provide a new key or other access right to Tenant unless Tenant has cured all Events of Default; provided, however, that in any such instance, during Landlord's normal business hours and at the convenience of Landlord, and upon the written request of Tenant accompanied by such written waivers and releases as Landlord may require, Landlord will escort Tenant or its authorized personnel to the Leased Premises to retrieve any personal belongings or other property of Tenant not subject to the Landlord's lien or security interest described in Section 17. The provisions of this Section 16.0 are intended to override and control any conflicting provisions of the Texas Property Code.

D. All agreements and provisions to be performed by Tenant under any of the terms of this Lease Agreement shall be at Tenant's sole cost and expense and without any abatement of Rent, except as otherwise provided in this Lease Agreement. If Tenant shall fail to pay any sum of money, other than Base Rent, required to be paid by it hereunder or shall fail to cure any default and such failure shall continue for ten (10) days after notice thereof by Landlord, then Landlord may, but shall not be obligated so to do, and without waiving or releasing Tenant from any obligations, make any such payment or perform any such act on Tenant's part. All sums so paid by Landlord and all reasonable costs incurred by Landlord in taking such action shall be deemed Additional Rent hereunder and shall be paid to Landlord on demand, and Landlord shall have (in addition to all other rights and remedies of Landlord) the same rights and remedies in the event of the non-payment thereof by Tenant as in the case of default by Tenant in the payment of Rent.

E. In connection with the exercise by Landlord of its rights and remedies in respect of any Event of Default on the part of Tenant, to the extent (but no further) that Landlord is required by applicable Texas law to mitigate damages, or to use efforts to do so, and such requirement cannot be lawfully and effectively waived (it being the intention of Landlord and Tenant that such requirements be and are hereby WAIVED to the maximum extent permitted by applicable law), Tenant agrees in favor of Landlord that Landlord shall not be deemed to have failed to mitigate damages, or to have used the efforts required by law to do so, because:

(1) Landlord leases other space in the Building prior to re-letting the Leased Premises;

(2) Landlord refuses to relet the Leased Premises to any Affiliate of Tenant, or any principal of Tenant, or any Affiliate of such principal;

(3) Landlord refuses to relet the Leased Premises to any person or entity whose creditworthiness Landlord in good faith deems unacceptable;

(4) Landlord refuses to relet the Leased Premises to any person or entity because the use proposed to be made of the Leased Premises by such prospective tenant is not of a type and nature consistent with that of the other tenants in the Building or the floor where the Leased Premises are situated as of the date Tenant defaults under this Lease Agreement, or because such use would, in the good faith opinion of Landlord, impose unreasonable or excessive demands upon the Building;

(5) Landlord refuses to relet the Leased Premises to any person or entity, or any affiliate of such person or entity, who has been engaged in litigation with, or who has threatened litigation against, Landlord or any of its affiliates, or whom Landlord in good faith deems to be unreasonably or excessively litigious;

(6) Landlord refuses to relet the Leased Premises because the tenant or the terms and provisions of the proposed lease are not approved by the holders of any liens or security interests in the Building or any part thereof, or would cause Landlord to breach or be in default of, or to be unable to perform any of its covenants under, any agreements between Landlord and any third party;

(7) Landlord refuses to relet the Leased Premises because the proposed tenant is unwilling to execute and deliver Landlord's standard lease form without substantial tenant-oriented modifications or such tenant requires improvements to the Leased Premises to be paid at Landlord's cost and expense; or

(8) Landlord refuses to relet the Leased Premises to a person or entity whose character or reputation, or the nature of whose business, Landlord in good faith deems unacceptable;

and it is further agreed that each and all of the grounds for refusal set forth in clauses (1) through (8) above, both inclusive, of this sentence are reasonable grounds for Landlord's refusal to relet the Leased Premises, or (as to all other provisions of this Lease Agreement) for Landlord's refusal to issue any approval, or take any other action,

of any nature whatsoever under this Lease Agreement. In the event the waiver set forth in this Section 16.E shall be ineffective, Tenant further agrees in favor of Landlord, to the maximum extent to which it may lawfully and effectively do so, that the following efforts to mitigate damages if made by Landlord (and without obligating Landlord to render such efforts) shall be conclusively deemed reasonable, and that Landlord shall be conclusively deemed to have used the efforts to mitigate damages required by applicable law if: Landlord places the Leased Premises on its inventory of available space in the Building; Landlord makes such inventory available to brokers who request same; and Landlord shows the Leased Premises to prospective tenants (or their brokers) who request to see it.

SEC. 17 LIEN FOR RENT: LANDLORD HEREBY WAIVES ANY STATUTORY LANDLORD'S LIEN TO WHICH LANDLORD MAY OTHERWISE BE ENTITLED.

SEC. 18 NON-WAIVER: Neither acceptance of Rent by Landlord nor failure by Landlord to exercise available rights and remedies, whether singular or repetitive, shall constitute a waiver of any of Landlord's rights hereunder. Waiver by Landlord of any right for any Event of Default of Tenant shall not constitute a waiver of any right for either a subsequent Event of Default of the same obligation or any other Event of Default. No act or thing done by Landlord or its agent shall be deemed to be an acceptance or surrender of the Leased Premises and no agreement to accept a surrender of the Leased Premises shall be valid unless it is in writing and signed by a duly authorized officer or agent of Landlord.

SEC. 19 LAWS AND REGULATIONS; RULES AND REGULATIONS: Tenant shall comply with, and Tenant shall use commercially reasonable efforts to cause its visitors, employees, contractors, agents, invitees and licensees to comply with, all laws, ordinances, orders, rules and regulations of any state, federal, municipal and other agencies or bodies having any jurisdiction thereof relating to the use, condition or occupancy of the Leased Premises, including, without limitation, all Healthcare Laws. Such reasonable written rules and regulations applying to all tenants in the Building as may be hereafter adopted by Landlord for the safety, care and cleanliness of the premises and the preservation of good order thereon, are hereby made a part hereof for all purposes and Tenant agrees to comply with all such rules and regulations. Landlord shall have the right at all times to change such rules and regulations or to amend them in any reasonable manner as may be deemed advisable by Landlord (provided such changes do not materially adversely affect Tenant's use of the Leased Premises for the uses set forth in Section 3), all of which changes and amendments will be sent by Landlord to Tenant in writing and shall be thereafter carried out and observed by Tenant. The current rules and regulations of the Building are set forth in **Exhibit D** attached hereto and made a part hereof for all purposes. Landlord shall use commercially reasonable efforts to enforce the rules and regulations in a non-discriminatory manner.

SEC. 20 ASSIGNMENT BY LANDLORD; LIMITATION OF LANDLORD'S LIABILITY: Landlord shall have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder and in the Complex, and in such event and upon such transferee's assumption of all obligations of Landlord accruing after the date of such transfer, no further liability or obligation shall thereafter accrue against Landlord hereunder. Furthermore, Tenant specifically agrees to look solely to Landlord's interest in the Complex for the recovery of any judgment from Landlord, it being agreed that the Landlord Parties shall never be personally liable for any such judgment.

SEC. 21 SEVERABILITY: This Lease Agreement shall be construed in accordance with the laws of the State of Texas. If any clause or provision of this Lease Agreement is illegal, invalid or unenforceable, under present or future laws effective during the Term hereof, then it is the intention of the parties hereto that the remainder of this Lease Agreement shall not be affected thereby, and it is also the intention of both parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added as part of this Lease Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

SEC. 22 SIGNS: No signs of any kind or nature, symbol or identifying mark shall be put on the Building, in the halls, elevators, staircases, entrances, parking areas or upon the doors or walls, whether plate glass or otherwise, of the Leased Premises or within the Leased Premises so as to be visible from the public areas or exterior of the Building without the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. All signs or lettering shall conform in all respects to the sign and/or lettering criteria established by Landlord in writing. Landlord, at its sole cost and expense, shall provide Building standard signage on the north public corridor wall immediately adjacent to Tenant's entrance opposite the elevator lobby on the north side of the eighth (8th) floor.

SEC. 23 SUCCESSORS AND ASSIGNS: Landlord and Tenant agree that all provisions hereof are to be construed as covenants and agreements as though the words imparting such covenants were used in each separate paragraph hereof, and that, except as restricted by the provisions of Section 12, this Lease Agreement and all the covenants herein contained shall be binding upon the parties hereto, their respective heirs, legal representatives, successors and assigns.

SEC. 24 SUBORDINATION:

A. Tenant covenants and agrees with Landlord that this Lease Agreement is subject and subordinate to any mortgage, deed of trust, ground lease and/or security agreement which may now or hereafter encumber the Complex or any interest of Landlord therein and/or the contents of the Building, and to any advances made on the security thereof and to any and all increases, renewals, modifications, consolidations, replacements and extensions thereof; provided any such subordination to a mortgage, deed of trust, ground lease and/or security agreement executed after the Effective Date shall be upon the express condition that this Lease Agreement shall be recognized by the mortgagee or ground lessor and that the rights of Tenant shall remain in full force and effect during the Term so long as Tenant shall continue to perform all the covenants and conditions of this Lease Agreement. In confirmation of such subordination, however, at Landlord's request Tenant shall execute promptly any appropriate certificate or instrument that Landlord may request, provided such subordination includes a commercially reasonable non-disturbance provision. hi the event of the enforcement by the ground lessor, the trustee, the beneficiary or the secured party under any such ground lease, mortgage, deed of trust or security agreement of the remedies provided for by law or by such ground lease, mortgage, deed of trust or security agreement, Tenant will automatically become the Tenant of such ground lessor or successor in interest without any change in the terms or other provisions of this Lease Agreement; provided, however, that such ground lessor or successor in interest shall not be (a) bound by any payment of Rent for more than one month in advance except prepayments in the nature of security for the performance by Tenant of its obligations under this Lease Agreement to the extent such prepayments have been delivered to such successor in interest, (b) bound by any amendment or modification of this Lease Agreement made without the written consent of such ground lessor or such successor in interest (c) liable for any previous act or omission of the Landlord, (d) subject to any credit, demand, claim, counterclaim, offset or defense which theretofore accrued to Tenant against the Landlord, (e) required to account for any security deposit of Tenant other than any security deposit actually delivered to lender by Landlord and (f) responsible for any monies owing by Landlord to Tenant. Upon request by such ground lessor or successor in interest, whether before or after the enforcement of its remedies, Tenant shall execute and deliver an instrument or instruments confirming and evidencing the attornment herein set forth. Notwithstanding anything contained in this Lease Agreement to the contrary, in the event of any default by Landlord in performing its covenants or obligations hereunder which would give Tenant the right to terminate this Lease Agreement, Tenant shall not exercise such right unless and until (a) Tenant gives written notice of such default (which notice shall specify the exact nature of said default and how the same may be cured) to the lessor under any such land or ground lease and the holder(s) of any such mortgage or deed of trust or security agreement who has theretofore notified Tenant in writing of its interest and the address to which notices are to be sent, and (b) said lessor and holder(s) fail to cure or cause to be cured said default within thirty (30) days from the receipt of such notice from Tenant. This Lease Agreement is further subject to and subordinate to all matters of record in Harris County, Texas.

B. Additionally, within thirty (30) days of the Effective Date of this Lease Agreement, Landlord will use commercially reasonable efforts to cause all mortgagees, lenders, ground lessors and other parties currently holding a security interest affecting the Leased Premises or the Complex to execute a subordination, nondisturbance and attornment agreement substantially in the form attached hereto as **Exhibit M** (the "**SNDA**"). Consequently, if Landlord fails for any reason whatsoever, other than the failure of Tenant to provide Landlord for forwarding to the lender with such information regarding Tenant, its operations, finances, and principals, as the lender may request, or to act reasonably in respect of the proposed wording of the SNDA, or to act expeditiously to execute the SNDA, to obtain and deliver to Tenant the SNDA signed by such lender within thirty (30) days after the Effective Date of this Lease Agreement, Tenant shall have the right, in its sole discretion by written notice to Landlord, to terminate this Lease Agreement at any time prior to Tenant's receipt of the SNDA executed by such lender.

C. Notwithstanding anything to the contrary set forth above, any beneficiary under any deed of trust may at any time subordinate its deed of trust to this Lease Agreement in whole or in part, without any need to obtain Tenant's consent, by execution of a written document subordinating such deed of trust to the Lease Agreement to the extent set forth in such document and thereupon the Lease Agreement shall be deemed prior to such deed of trust to the extent set forth in such document without regard to their respective dates of execution, delivery and/or recording. In that event, to the extent set forth in such document, such deed of trust shall have the same rights with respect to this Lease Agreement as would have existed if this Lease Agreement had been executed, and a memorandum thereof, recorded prior to the execution, delivery and recording of the deed of trust.

SEC. 25 TAX PROTEST: Tenant waives all rights under the Texas Property Tax Code, now or hereafter in effect, including all rights under Sections 41.413 and 42.015 thereof, granting to tenants of real property or lessees of tangible personal property the right to protest the appraised value, or receive notice of reappraisal, of all or any part of the Complex, irrespective of whether Landlord has elected to protest such appraised value. To the extent such waiver is prohibited, Tenant appoints Landlord as its attorney-in-fact, coupled with an interest, to appear and take all actions on behalf of Tenant which Tenant may take under the Texas Property Tax Code.

SEC. 26 HOLDING OVER: In the event of holding over by Tenant with respect to all or any portion of the Leased Premises after the expiration or termination of the Lease Agreement, such holding over shall constitute a tenancy at sufferance relationship between Landlord and Tenant and all of the terms and provisions of this Lease Agreement shall be applicable during such period, except that as monthly rental, Tenant shall pay to Landlord for each month (or any portion thereof) during the period of such hold over an amount equal to one hundred fifty percent (150%) of the Rent payable by Tenant for the month immediately preceding the holdover period. The rental payable during such hold over period shall be payable to Landlord on demand. No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease Agreement except as herein provided. In the event of any unauthorized holding over, Tenant shall also indemnify, defend (with counsel reasonably acceptable to Landlord) and hold harmless the Landlord Parties (as defined on **Exhibit I**) against all claims for damages against the Landlord Parties as a result of Tenant's possession of the Leased Premises, including, without limitation, claims for damages by any other party to which Landlord may have leased, or entered into an agreement to lease, all or any part of the Leased Premises effective upon the termination of this Lease Agreement. **Notwithstanding anything herein to the contrary, Landlord and Tenant specifically agree that no notice to terminate Tenant's tenancy hereunder will be required from and after the expiration of the Term of this Lease Agreement under Section 91.001 or Section 24.005 of the Texas Property Code before Landlord files a forcible detainer suit on grounds that Tenant is holding over beyond the end of the Term or renewal period (if any) hereof; and any sublease hereunder shall not be approved unless it also contains a specific comparable waiver by the subtenant thereunder.**

SEC. 27 INDEPENDENT OBLIGATION TO PAY RENT:

A. It is the intention of the parties hereto that the obligations of Landlord and Tenant hereunder shall be separate and independent covenants and agreements, that the Rent and all other sums payable by Tenant hereunder shall continue to be payable in all events and that the obligations of Tenant hereunder shall continue unaffected, unless the requirement to pay or perform the same shall have been terminated pursuant to an express provision of this Lease Agreement.

B. Except as otherwise expressly provided herein, Tenant waives the right (a) to quit, terminate or surrender this Lease Agreement or the Leased Premises or any part thereof, or (b) to any abatement, suspension, deferment or reduction of the rent or any other sums payable under this Lease Agreement.

SEC. 28 INDEMNITY; RELEASE AND WAIVER:

A. Tenant hereby agrees to indemnify, protect, defend and hold the Landlord Parties harmless from and against any and all liabilities, claims, causes of action, fines, damages, suits and expenses, including reasonable attorneys' fees and necessary litigation expenses (collectively, the "**Claims**"), arising from Tenant's use, occupancy or enjoyment of the Leased Premises and its facilities for the conduct of its business or from any activity, work or thing done, permitted, omitted or suffered by Tenant and its partners, officers, directors, employees, agents, servants, contractors, customers, licensees and invitees in or about the Complex, **INCLUDING ANY CLAIMS RESULTING FROM THE NEGLIGENCE OF THE LANDLORD PARTIES, BUT NOT TO THE EXTENT**

CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE LANDLORD PARTIES and Tenant further agrees to indemnify, protect, defend and hold the Landlord Parties harmless from and against any and all Claims arising from any breach or default in the performance of any obligation on Tenant's part to be performed under the terms of this Lease Agreement or arising from any negligence, or willful misconduct of Tenant or any of its partners, officers, directors, employees, agents, servants, contractors, customers, licensees and invitees, **INCLUDING ANY CLAIMS RESULTING FROM THE NEGLIGENCE OF THE LANDLORD PARTIES, BUT NOT TO THE EXTENT CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE LANDLORD PARTIES**. In case any action or proceeding shall be brought against the Landlord Parties by reason of any such Claim, Tenant, upon notice from Landlord, shall provide a separate defense to same at Tenant's sole cost and expense by counsel reasonably satisfactory to Landlord. The indemnity obligations of Tenant under this Section 28.A shall survive the expiration or earlier termination of this Lease Agreement.

B. Tenant hereby releases the Landlord Parties from any and all claims or causes of action whatsoever which Tenant might otherwise now or hereafter possess resulting in or from or in any way associated with any loss covered or which would have been covered by insurance required to be carried by Tenant under this Lease Agreement, **REGARDLESS OF CAUSE OR ORIGIN OF SUCH LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SOLE, JOINT, OR CONCURRENT NEGLIGENCE OF THE LANDLORD PARTIES**, including the deductible and/or uninsured portion thereof, maintained and/or required to be maintained by Tenant pursuant to this Lease Agreement.

C. Landlord shall not be liable or responsible to Tenant for (a) any loss or damage to any property or person occasioned by theft, criminal act, fire, act of God, public enemy, injunction, riot, strike, insurrection, war, court order, requisition or order of governmental body or authority, or any cause beyond Landlord's control, or (b) any damage or inconvenience which may arise through repair or alteration of any part of the Building made necessary by virtue of any such cause; provided, however, Landlord shall use commercially reasonable efforts to minimize such damage or inconvenience to Tenant.

D. Subject to Tenant's indemnification obligations set forth in Section 28.A above, which shall not be limited, negated or lessened in any way by the indemnity obligations set forth in this Section 28.D, Landlord hereby agrees to indemnify, protect, defend and hold the (a) Tenant, (b) its shareholders, members, partners, affiliates and subsidiaries, successors and assigns, and (c) any directors, officers, employees, agents, or contractors of such persons or entities (collectively, the "**Tenant Parties**") harmless from and against any and all Claims, arising from Landlord's ownership or operation of the Complex (excluding Claims arising from Tenant's use, occupancy or enjoyment of the Leased Premises and Tenant's use of the Parking Spaces) or from any activity, work or thing done, permitted or suffered by the Landlord Parties in or about the Complex (excluding the Leased Premises and Tenant' s Parking Spaces), **EXCLUDING ANY PORTION OF ANY CLAIM TO THE EXTENT IT RESULTS FROM THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE TENANT PARTIES** and Landlord further agrees to indemnify, protect, defend and hold the Tenant Parties harmless from and against any and all Claims arising from any breach or default in the performance of any obligation on Landlord's part to be performed under the terms of this Lease Agreement or arising from any negligence or willful misconduct of the Landlord Parties, **EXCLUDING ANY CLAIMS RESULTING FROM THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE TENANT PARTIES**. In case any action or proceeding shall be brought against the Tenant Parties by reason of any such Claim, Landlord, upon notice from Tenant, shall provide a separate defense to same at Landlord's sole cost and expense by counsel reasonably satisfactory to Tenant. The indemnity obligations of Landlord under this Section 28.D shall survive the expiration or earlier termination of this Lease Agreement.

SEC. 29 INSURANCE: Landlord and Tenant shall satisfy the insurance requirements as more particularly described on **Exhibit I** attached hereto and made a part hereof for all purposes. In no event shall Tenant's liability under this Lease Agreement be limited by the amount of insurance required to be carried under **Exhibit I**.

SEC. 30 ENTIRE AGREEMENT: This instrument and any attached addenda or exhibits signed by the parties constitute the entire agreement between Landlord and Tenant with respect to the subject matter hereof; no prior written or prior or contemporaneous oral promises or representations shall be binding. This Lease Agreement shall not be amended, changed or extended except by written instrument signed by both parties hereto. Section captions herein are for Landlord's and Tenant's convenience only, and neither limit nor amplify the provisions of this instrument. Tenant agrees, at Landlord's request, to execute a recordable memorandum of this Lease Agreement.

SEC. 31 NOTICES: Whenever in this Lease Agreement it shall be required or permitted that notice, notification or demand be given or served by either party to this Lease Agreement to or on the other, such notice or demand shall be given or served and shall not be deemed to have been given or served unless in writing and (i) delivered personally, (ii) forwarded by facsimile, (iii) sent by Certified or Registered Mail, postage prepaid, with a copy also sent by facsimile or (iv) sent by a reputable common carrier guaranteeing next-day delivery, addressed as follows:

To the Landlord:	Sheridan Hills Developments L.P. c/o The Metrontario Group 601-1 Yorkdale Road Toronto, Ontario Canada M6A 3A1 Attention: Mr. Matt Fisher Telephone: (416) 785-6000x228 Facsimile: (416) 785-7000
With a copy to:	Andrews Kurth LLP 600 Travis, Suite 4200 Houston, TX 77002 Attn: Darren S. Inoff, Esq. Telephone: (713) 220-3841 Facsimile: (713) 238-7134
With a copy to:	Jones Lang LaSalle Americas, Inc. 1400 Post Oak Boulevard, Suite 1100 Houston, Texas 77056 Attention: Mary Stanton Telephone: (713) 888-4009 Facsimile: (713) 888-4040
With a copy to:	Property Management Office 2301 West Holcombe Blvd., Suite 1300 Houston, Texas 77030 Attention: Property Manager Telephone: (713) 592-5433 Facsimile: (713) 660-0295
To the Tenant:	At the address noted for Tenant on the signature page hereof until the Commencement Date, at which time it shall become the Address of the Leased Premises.
With a copy to:	DuBois, Bryant & Campbell, LLP 700 Lavaca, Suite 1300 Austin, Texas 78701 Attention: Kim Shraibati Telephone: (512) 457-8000 Facsimile: (512) 457-8008

Such addresses may be changed from time to time by either party by serving written notice as above provided. Any such notice or demand shall be deemed to have been given on the date of receipted delivery, refusal to accept delivery or when delivery is first attempted but cannot be made due to a change of address for which no notice is given, five (5) business days after it shall have been mailed as provided in this Section 31 or if sent by facsimile, upon electronic or telephonic confirmation of receipt from the receiving facsimile machine, whichever is earlier.

SEC. 32 COMMENCEMENT DATE: Tenant shall, if requested by Landlord, execute and deliver to Landlord within ten (10) days of Landlord's request an Acceptance of Premises Memorandum of the Leased Premises, the form of which is attached as **Exhibit E** attached hereto and made a part hereof for all purposes.

SEC. 33 INTENTIONALLY DELETED:

SEC. 34 BROKERS: Each of Landlord and Tenant warrants that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease Agreement, excepting only PinPoint Commercial, L.P. and Cushman & Wakefield of Texas, Inc. ("**Broker**") and that it knows of no other real estate broker(s) or agent(s) who is(are) or might be entitled to a commission in connection with this Lease Agreement. Landlord shall agree to pay all real estate commissions due in connection with this Lease Agreement only to the broker(s) named herein, provided Landlord and such broker have entered into a separate commission agreement. Tenant agrees to indemnify, defend (with counsel reasonably acceptable to Landlord) and hold harmless the Landlord Parties from and against any liability from all other claims for commissions, finder's fee or other compensation arising from the negotiation of this Lease Agreement on Tenant's behalf. Landlord agrees to indemnify, defend (with counsel reasonably acceptable to Tenant) and hold Tenant harmless from and against any liability from all other claims for commissions, finder's fee or other compensation arising from the negotiation of this Lease Agreement on Landlord's behalf.

SEC. 35 ESTOPPEL CERTIFICATES: From time to time after the Effective Date, within ten (10) days after request in writing therefor from Landlord, Tenant agrees to execute and deliver to Landlord, or to such other addressee or addresses as Landlord may designate (and Landlord and any such addressee may rely thereon), a statement in writing in the form of **Exhibit F** attached hereto and made a part hereof for all purposes or in such other form and substance satisfactory to Landlord (herein called "**Tenant's Estoppel Certificate**"), certifying to all or any part of the information provided for in **Exhibit F** as is requested by Landlord and any other information reasonably requested by Landlord.

SEC. 36 NAME CHANGE: Landlord and Tenant mutually covenant and agree that Landlord hereby reserves and shall have the right at any time and from time to time to change the name of the Building or the address of the Building as Landlord may deem advisable, and Landlord shall not incur any liability whatsoever to Tenant as a consequence thereof.

SEC. 37 BANKRUPTCY: If a petition is filed by or against Tenant for relief under Title 11 of the United States Code, as amended (the "**Bankruptcy Code**"), and Tenant (including for purposes of this Section Tenant's successor in bankruptcy, whether a trustee or Tenant as debtor in possession) assumes and proposes to assign, or proposes to assume and assign, this Lease Agreement pursuant to the provisions of the Bankruptcy Code to any person or entity who has made or accepted a bona fide offer to accept an assignment of this Lease Agreement on terms acceptable to Tenant, then notice of the proposed assignment setting forth (a) the name and address of the proposed assignee, (b) all of the terms and conditions of the offer and proposed assignment, and (c) the adequate assurance to be furnished by the proposed assignee of its future performance under the Lease Agreement, shall be given to Landlord by Tenant no later than twenty (20) days after Tenant has made or received such offer, but in no event later than ten (10) days prior to the date on which Tenant applies to a court of competent jurisdiction for authority and approval to enter into the proposed assignment. Landlord shall have the prior right and option, to be exercised by notice to Tenant given at any time prior to the date on which the court order authorizing such assignment becomes final and non-appealable, to receive an assignment of this Lease Agreement upon the same terms and conditions, and for the same consideration, if any, as the proposed assignee, less any brokerage commissions which may otherwise be payable out of the consideration to be paid by the proposed assignee for the assignment of this Lease Agreement. If this Lease Agreement is assigned pursuant to the provisions of the Bankruptcy Code, Landlord: (i) may require from the assignee a deposit or other security for the performance of its obligations under the Lease Agreement in an amount substantially the same as would have been required by Landlord upon the initial leasing to a tenant similar to the assignee; and (ii) shall receive, as additional rent, the sums and economic consideration described in Section 12.A(3)(e). Any person or entity to which this Lease Agreement is assigned pursuant to the provisions of the Bankruptcy Code shall be deemed, without further act or documentation, to have assumed all of the Tenant's obligations arising under this Lease Agreement on and after the date of such assignment. Any such assignee shall, upon demand, execute and deliver to Landlord an instrument confirming such assumption. No provision of this Lease Agreement shall be deemed a waiver of Landlord's rights or remedies under the Bankruptcy Code to oppose

any assumption and/or assignment of this Lease Agreement, to require a timely performance of Tenant's obligations under this Lease Agreement, or to regain possession of the Leased Premises if this Lease Agreement has neither been assumed or rejected within sixty (60) days after the date of the order for relief or within such additional time as a court of competent jurisdiction may have fixed. Notwithstanding anything in this Lease Agreement to the contrary, all amounts payable by Tenant to or on behalf of Landlord under this Lease Agreement, whether or not expressly denominated as rent, shall constitute rent for the purposes of Section 502(b)(6) of the Bankruptcy Code.

SEC. 38 TELECOMMUNICATIONS PROVIDERS: In the event Tenant wishes to use, at anytime during the Term of this Lease Agreement, the services of a telecommunications provider whose equipment or service is not then in the Building, no such provider shall be entitled to enter the Building or commence providing such service without first obtaining the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Landlord may condition its consent on such matters as Landlord reasonably deems appropriate including, without limitation, (i) such provider agreeing to an easement or license agreement in form and substance reasonably satisfactory to Landlord, (ii) Landlord having been provided and approved the plans and specifications for the equipment to be installed in the Building, (iii) Landlord having received, prior to the commencement of such work, such indemnities, bonds or other financial assurances as Landlord may require, (iv) the provider agreeing to abide by all Building rules and regulations, and agreeing to provide Landlord an "as built" set of plans and specifications, (v) the provider agreeing to pay Landlord such compensation as Landlord determines to be reasonable, and (vi) Landlord having determined that there is adequate space in the Building for the placement of all of such provider's lines and equipment.

SEC. 39 HAZARDOUS SUBSTANCES:

A. Tenant shall not cause or permit any Hazardous Substance (as hereinafter defined) to be used, stored, generated, contained or disposed of on or in the Complex by Tenant, Tenant's agents, employees, contractors or invitees in violation of Environmental Laws (as hereinafter defined). Landlord acknowledges and agrees that as part of Tenant's use of the Leased Premises as a research laboratory, Tenant shall be permitted to use lab alcohols, acids, radioactive agents, liquid nitrogen (including installation of liquid nitrogen freezers) and other related medical research items as are necessary to the operation of a research laboratory up to and including Biosafety Level 2, provided Tenant must use and store such materials in compliance with all applicable laws, rules and regulations, including, without limitation, all Environmental Laws. All bio-hazardous waste shall be removed, at Tenant's sole cost and expense, and at Tenant's risk, by a third party company following any and all Environmental Laws, insurance requirements and industry disposal regulations regarding said waste. If Hazardous Substances are used, stored, generated, contained or disposed of on or in the Complex in violation of Environmental Laws, or if the Complex becomes contaminated with Hazardous Substances in any manner due to the actions or omissions of Tenant or its agents, employees, contractors or invitees, Tenant shall indemnify, defend (with counsel reasonably acceptable to Landlord) and hold the Landlord Parties harmless from any and all claims, damages, fines, judgments, penalties, costs, liabilities and losses (including, without limitation, a decrease in value of the Complex, damages caused by loss or restriction of rentable or usable space or any damages caused by adverse impact on marketing of the space and any and all sums paid for settlement of claims, attorneys' fees, consultant and expert fees) arising during or after the Term and as a result of such use, storage, generation, disposal or contamination in violation of Environmental Laws. This indemnification includes, without limitation, any and all costs incurred because of any investigation of the site or any cleanup, removal or restoration mandated by a federal, state or local agency or political subdivision. Without limitation of the foregoing, if Tenant causes or permits the presence of any Hazardous Substance on the Complex in violation of Environmental Laws that results in contamination, Tenant shall promptly, at its sole expense, take any and all necessary actions to return the Complex to the condition existing prior to the presence of any such Hazardous Substance on the Complex; provided, however, Tenant must obtain Landlord's prior written approval for any such remedial action. Tenant shall be responsible for the application for and maintenance of all required permits, the submittal of all notices and reports, proper labeling, training and record keeping, and timely and appropriate response to any release or other discharge by Tenant of a Hazardous Substance under Environmental Laws. The indemnity obligations of Tenant under this Section 39 shall survive the expiration or earlier termination of this Lease Agreement. Notwithstanding the foregoing to the contrary, Tenant acknowledges that the Building will be used by various tenants for medical-related purposes and as such, certain Hazardous Substances will be present in the Complex from time to time. To Landlord's current actual knowledge, without the duty of investigation or injury, as of the Effective Date, no Hazardous Substances are in, on, under or about the Leased Premises in violation of any Environmental Law, or requiring any notice, investigation, clean-up,

or other response and Landlord shall indemnify, defend (with counsel reasonably acceptable to Tenant) and hold the Tenant and its officers, directors, agents and employees harmless from any and all claims, damages, fines, judgments, penalties, costs, liabilities and losses arising during or after the Term as a result of Landlord's breach of such representation and warranty. Landlord's obligations set forth in this Section 39 shall survive the expiration or termination of this Lease Agreement.

B. As used herein, "**Hazardous Substance**" means (i) any substance that is toxic, ignitable, reactive or corrosive or that is regulated by any local, state or federal law, and includes any and all material or substances that are defined as "hazardous waste", "extremely hazardous waste", "hazardous substance" or a "hazardous material" pursuant to any such laws and includes, but is not limited to, asbestos, polychlorobiphenyls and petroleum and any fractions thereof, (ii) any substance which is now or hereafter considered a biological contaminant or which could adversely impact air quality, including mold, fungi and other bacterial agents and (iii) all biohazardous, infectious and medical waste. Notwithstanding anything in this Section 39 to the contrary, "Hazardous Substances" shall not include materials commonly used in the ordinary operations of a general office building, provided that (1) such materials are used and properly stored in the Leased Premises in quantities ordinarily used and stored in comparable medical space, (2) such materials are not introduced into the Building's plumbing systems or are not otherwise released or discharged in the Leased Premises or the Building and (3) such materials are in strict compliance with local, state or federal law. As used herein, "**Environmental Laws**" means all applicable federal, state or local laws, regulations, orders, judgments and decrees regarding health, safety or the environment.

SEC. 40 NO MONEY DAMAGES FOR FAILURE TO CONSENT; WAIVER OF CERTAIN DAMAGES: Wherever in this Lease Agreement Landlord's consent or approval is required, if Landlord refuses to grant such consent or approval, whether or not Landlord expressly agreed that such consent or approval would not be unreasonably withheld, conditioned or delayed, Tenant shall not make, and Tenant hereby waives, any claim for money damages (including any claim by way of set-off, counterclaim or defense) based upon Tenant's claim or assertion that Landlord unreasonably withheld, conditioned or delayed its consent or approval. Tenant's sole remedy shall be an action or proceeding to enforce such provision, by specific performance, injunction or declaratory judgment. Except as otherwise permitted by Section 26 of this Lease Agreement, **IN NO EVENT SHALL THE EITHER PARTY HERETO BE LIABLE FOR, AND EACH PARTY HEREBY WAIVES ANY CLAIM FOR, ANY INDIRECT, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES, INCLUDING LOSS OF PROFITS OR BUSINESS OPPORTUNITY, ARISING UNDER OR IN CONNECTION WITH THIS LEASE AGREEMENT**.

SEC. 41 ACKNOWLEDGMENT OF NON-APPLICABILITY OF DTPA: It is the understanding and intention of the parties that Tenant's rights and remedies with respect to the transactions provided for and contemplated in this Lease Agreement (collectively, this "**Transaction**") and with respect to all acts or practices of Landlord, past, present or future, in connection with this Transaction, are and shall be governed by legal principles other than the Texas Deceptive Trade Practices - Consumer Protection Act (the "**DTPA**"). Accordingly, Tenant hereby (a) agrees that under Section 17.49(f) of the DTPA this Transaction is not governed by the DTPA and (b) certifies, represents and warrants to Landlord that (i) Tenant has been represented by legal counsel in connection with this Transaction who has not been directly or indirectly identified, suggested or selected by the Landlord and Tenant has conferred with Tenant's counsel concerning all elements of this Lease Agreement (including, without limitation, this Section 41) and this Transaction and (ii) the Leased Premises will not be occupied by Tenant as Tenant's family residence. Tenant expressly recognizes that the total consideration as agreed to by Landlord has been predicated upon the inapplicability of the DTPA to this Transaction and that Landlord, in determining to proceed with the entering into of this Lease Agreement, has expressly relied on the inapplicability of the DTPA to this Transaction.

SEC. 42 ATTORNEYS' FEES: In the event either party defaults in the performance of any of the terms, agreements or conditions contained in this Lease Agreement and the other party places the enforcement of this Lease Agreement, or any part thereof, or the collection of any rent due or to become due hereunder, or recovery of the possession of the Leased Premises, in the hands of an attorney who files suit upon the same, and should such non-defaulting party prevail in such suit, the defaulting party agrees to pay the other party's reasonable attorneys' fees and other disbursements or costs thereby incurred.

SEC. 43 AUTHORITY OF TENANT: If Tenant is a corporation, partnership or other entity, Tenant warrants and represents unto Landlord that (a) Tenant is a duly organized and existing legal entity, in good standing in the State of

Texas, (b) Tenant has full right and authority to execute, deliver and perform this Lease Agreement, (c) the person executing this Lease Agreement was authorized to do so and (d) upon written request of Landlord, such person will deliver to Landlord satisfactory evidence of his or her authority to execute this Lease Agreement on behalf of Tenant.

SEC. 44 INABILITY TO PERFORM: Whenever a period of time is prescribed for the taking of an action by Landlord or Tenant, the period of time for the performance of such action shall be extended by the number of days or months that the performance is actually delayed due to strikes, acts of God, shortages of labor or materials, war, terrorist attacks (including bio-chemical attacks), civil disturbances and other causes beyond the reasonable control of the Landlord or Tenant, as the case may be ("**Force Majeure**"); provided, however, Force Majeure shall not excuse Tenant's obligation to pay any sums of money due hereunder, including without limitation, the obligation to pay Rent.

SEC. 45 JOINT AND SEVERAL TENANCY: If more than one person executes this Lease Agreement as Tenant, their obligations hereunder are joint and several, and any act or notice of or to, or refund to, or the signature of any one or more of them, in relation to the renewal or termination of this Lease Agreement, or under or with respect to any of the terms hereof shall be fully binding on each and all of the persons executing this Lease Agreement as a Tenant.

SEC. 46 EXECUTION OF THIS LEASE AGREEMENT: The submission of an unsigned copy of this Lease Agreement to Tenant for Tenant's consideration does not constitute an offer to lease the Leased Premises or an option to or for the Leased Premises. This Lease Agreement shall become effective and binding only upon the execution and delivery of this Lease Agreement by both Landlord and Tenant.

SEC. 47 WAIVER OF TRIAL BY JURY; COUNTERCLAIM: LANDLORD AND TENANT HEREBY WAIVE TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ON ANY MATTERS IN ANY WAY ARISING OUT OF OR CONNECTED WITH THIS LEASE AGREEMENT, THE RELATIONSHIP OF LANDLORD AND TENANT, TENANT'S USE OR OCCUPANCY OF THE LEASED PREMISES, OR THE ENFORCEMENT OF ANY REMEDY UNDER ANY APPLICABLE LAW, RULE, STATUTE, ORDER, CODE OR ORDINANCE. If Landlord commences any legal proceeding against Tenant, Tenant shall not interpose any counterclaim of any nature or description in any such proceeding (unless failure to impose such counterclaim would preclude Tenant from asserting in a separate action the claim which is the subject of the counterclaim), and will not seek to consolidate any such proceeding with any other action which may have been or will be brought in any other court by Tenant.

SEC. 48 CALCULATION OF TIME PERIODS: Should the calculation of any of the various time periods provided for herein result in an obligation becoming due on a Saturday, Sunday or legal holiday (such day which is neither Saturday, Sunday or legal holiday, a "business day"), then the due date of such obligation or scheduled time of occurrence of such event shall be delayed until the next business day.

SEC. 49 ANTI-TERRORISM LAWS: Tenant represents and warrants to and covenants with Landlord that (i) neither Tenant nor any of its owners or affiliates currently are, or shall be at any time during the Term, in violation of any laws relating to terrorism or money laundering (collectively, the "**Anti-Terrorism Laws**"), including without limitation Executive Order No. 13224 on Terrorist Financing, effective September 24, 2001, and regulations of the U.S. Treasury Department's Office of Foreign Assets Control (OFAC) related to Specially Designated Nationals and Blocked Persons (SDN's OFAC Regulations), and/or the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Public Law 107-56) (the "**USA Patriot Act**"); (ii) neither Tenant nor any of its owners, affiliates, investors, officers, directors, employees, vendors, subcontractors or agents is or shall be during the term hereof a "**Prohibited Person**" which is defined as follows: (1) a person or entity owned or controlled by, affiliated with, or acting for or on behalf of, any person or entity that is identified as a Specially Designated National and Blocked Person on the then-most current list published by OFAC at its official website, h http://www.treas.gov/offices/eotffc/ofac/sdn/t 11 sdn.pdf, or at any replacement website or other replacement official publication of such list, and (2) a person or entity who is identified as or affiliated with a person or entity designated as a terrorist, or associated with terrorism or money laundering pursuant to regulations promulgated in connection with the USA Patriot Act; and (iii) Tenant has taken appropriate steps to understand its legal obligations under the Anti-Terrorism Laws and has implemented appropriate procedures to assure its continued

compliance with such laws. Tenant hereby agrees to defend, indemnify, and hold harmless Landlord, its officers, directors, agents and employees, from and against any and all claims, damages, losses, risks, liabilities and expenses (including attorney's fees and costs) arising from or related to any breach of the foregoing representations, warranties and covenants. At any time and from time-to-time during the Term, Tenant shall deliver to Landlord within ten (10) days after receipt of a written request therefor, a written certification or such other evidence reasonably acceptable to Landlord evidencing and confirming Tenant's compliance with this Section 49.

SEC. 50 RENEWAL OPTIONS: Tenant shall have, and is hereby granted, the options (the "**Renewal Options**") to extend the Term of this Lease Agreement for five (5) additional periods of one (1) year each (as applicable, the "**Extended Term**") upon and subject to the following terms, conditions and provisions:

A. The Renewal Options may only be exercised by Tenant giving irrevocable written notice thereof to Landlord no later than nine (9) months and one (1) day prior to the commencement of the Extended Term arising from the Renewal Option being exercised. If Tenant fails to give Landlord such written notice of exercise of such Renewal Option within such specified time period, Tenant shall be deemed to have elected not to exercise, and to have waived, such Renewal Option and the unexercised Renewal Options shall automatically terminate and expire and be of no further force and effect. It is expressly agreed that Tenant shall not have the option to extend the Term of this Lease Agreement beyond the Extended Term. If Tenant exercises any of the Renewal Options, such Extended Term shall commence immediately upon the expiration of the then current Term of this Lease Agreement (as applicable, the "**Extended Term Commencement Date**").

B. If Tenant exercises any of the Renewal Options (in accordance with and subject to the provisions of this Section 50), the Extended Term shall be upon, and subject to, all of the terms, covenants and conditions provided in this Lease Agreement except for any terms, covenants and conditions that are expressly or by their nature inapplicable to the Extended Term (including, without limitation, the right to renew the Term of this Lease Agreement beyond the final Extended Term) and except that (i) the annual Base Rent during the applicable Extended Term shall increase $0.50 per square foot of Net Rentable Area in the Leased Premises in each year of the Extended Term over the Base Rent in effect at the expiration of the previous year and (ii) the Leased Premises and all leasehold improvements relating thereto will be provided in the condition they exist (i.e., "AS IS" and "WITH ALL FAULTS") on the Extended Term Commencement Date, and this Lease Agreement shall be deemed to have been automatically amended as of the Extended Term Commencement Date in accordance with this Section 50. Tenant and Landlord shall promptly (but in no event longer than fifteen (15) days after Landlord's submission of the amendment to Tenant) execute and deliver an appropriate amendment of this Lease Agreement to evidence such terms as will apply following commencement of the Extended Term.

C. Notwithstanding any provision herein to the contrary, Tenant shall not have the right to extend the Term of this Lease Agreement pursuant to this Section 50 and such right shall automatically terminate and be of no further force and effect if, at the time Tenant exercises such Renewal Option or on the Extended Term Commencement Date, an Event of Default then exists under this Lease Agreement. Tenant shall not have the right to assign the Renewal Options to any sublessee or assignee of the Leased Premises other than a Permitted Transferee, nor may any such sublessee or assignee (other than a Permitted Transferee) exercise the Renewal Options unless in connection with an assignment of Tenant's entire interest in this Lease Agreement or a sublease of the entire Leased Premises.

D. For all purposes under this Lease Agreement, the Extended Term (if exercised) shall be deemed to be included in and part of the Term.

SEC. 51 RIGHT OF FIRST REFUSAL:

A. Subject only to the renewal options, expansion options, rights of first offer and rights of first refusal of other tenants in the Building granted by Landlord prior to the Effective Date (as listed on **Exhibit L** attached hereto and made a part hereof for all purposes) or which are included in any lease executed after the Effective Date as to which Tenant failed or elected not to exercise its right of refusal under this Section 51, Tenant shall have a continuing right of first refusal (the "**Right of First Refusal**") during the Term with respect to any available space in the Building that is located on the eighth (8th) floor of the Building ("**ROFR Space**"); provided, however, if a Lease Offer (as hereinafter defined) includes the ROFR Space plus any other space in the Building

(the "**Excess Space**") and Landlord gives Tenant the option to lease the Excess Space in addition to the ROFR Space, all as more particularly described in an Availability Notice (as hereinafter defined), then Tenant must also lease such Excess Space in order to exercise the Right of First Refusal granted herein.

B. In the event Landlord desires to accept an offer to lease any of the ROFR Space from any third party (a "**Lease Offer**"), as evidenced by a term sheet or letter of intent, signed by the third-party prospect (subject to any confidentiality requirements of such third-party prospect prohibiting disclosure of its name), Landlord shall give Tenant written notice thereof (the "**Availability Notice**"), which notice shall include the Lease Offer. If such Availability Notice is delivered to Tenant, Tenant shall have three (3) business days from the date of receipt of the Availability Notice to either (i) irrevocably elect to lease said space under the Terms of the Lease Offer, by delivering written notice thereof (the "Election Notice") to Landlord within such three (3) business day period, or (ii) notify Landlord that it does not desire to lease said space. In the event Tenant (i) notifies Landlord that it does not desire to lease said space or (ii) fails to deliver the Election Notice to Landlord within said three (3) business day period, Tenant shall be deemed to have elected not to lease said space, and Landlord shall have a period of one hundred eighty (180) days thereafter to lease such ROFR Space to such third-party tenant prospect upon the terms set forth in the Availability Notice, except that (i) the space actually leased may be greater or up to ten percent (10%) smaller than that set forth in the Lease Offer, and (ii) the lease may be different from the Lease Offer in other immaterial respects. If Landlord does not enter into such a lease of such ROFR Space with such third-party tenant prospect within said one hundred eighty (180) day period, or if Landlord desires to enter into a lease of the ROFR Space with another party or with such third-party tenant prospect in which (i) the space actually leased is more than ten percent (10%) smaller than the square footage specified in the Availability Notice or (ii) the lease terms vary in respects that are material (such as the addition of an early termination provision) or decrease the rent per square foot or other economic obligations of the tenant reflected in the Lease Offer, Tenant shall again have a right of refusal on such ROFR Space as set forth in this Section 51.

C. If Tenant exercises a Right of First Refusal, then effective as of the date that is the earlier to occur of (1) the date Tenant occupies all or any portion of the ROFR Space for the purpose of conducting its business therein, or (2) sixty (60) days following the date Landlord delivers possession of the ROFR Space to Tenant (the "**ROFR Space Delivery Date**"), such ROFR Space shall become a part of the Leased Premises, the annual Additional Rent and Base Rent per square foot of Net Rentable Area for such ROFR Space shall be equal to the Additional Rent and Base Rent stated in the Lease Offer, and such ROFR Space shall be subject to all of the terms, provisions and conditions of the Lease Offer and this Lease Agreement, other than any terms, covenants and conditions that are expressly or by their nature inapplicable to such ROFR Space, except that (i) Base Rent and Tenant's Additional Rent with respect to such ROFR Space shall commence to accrue on the earlier to occur of (1) the date Tenant occupies all or any portion of such ROFR Space for the purpose of conducting its business therein, or (2) sixty (60) days after Landlord's delivery of the ROFR Space to Tenant, (ii) such ROFR Space and any and all leasehold improvements therein will be provided in the condition they exist *(i.e.* "AS IS" and "WITH ALL FAULTS") on such delivery date; and (iii) the Term of this Lease Agreement insofar as it relates to such ROFR Space shall be equal to the longer of (1) the Term with respect to the Leased Premises or (2) the term set forth in the Availability Notice. Notwithstanding any provision to the contrary in this Lease Agreement, if the term set forth in the Availability Notice is longer than the Term with respect to the Leased Premises, Tenant may elect to extend the Term of the Leased Premises to be coterminous with the term set forth in the Availability Notice, in which event the extended term for the Leased Premises shall be on the terms which would otherwise apply to a Renewal Option as set forth in Section 50, except that the Base Rent per square foot shall be the greater of the Base Rent that would be payable upon the exercise of a Renewal Option and the Base Rent set forth in the Availability Notice. This Lease Agreement shall be deemed to have been automatically amended in accordance with this Section 51.0 as of the date of the Election Notice, and Tenant and Landlord shall thereafter promptly (but in no event longer than fifteen (15) days after Landlord's submission of the amendment to Tenant) execute and deliver an appropriate amendment of this Lease Agreement to evidence the foregoing.

D. Notwithstanding any provision herein to the contrary, Tenant shall not have the right to lease the ROFR Space pursuant to this Section 51 if, at the time Tenant exercises such Right of First Refusal or on the applicable ROFR Space Delivery Date, an Event of Default then exists under this Lease Agreement. Any termination of this Lease Agreement shall also terminate the Right of First Refusal. Tenant shall not have the right to assign the Right of First Refusal to any subtenant of the Leased Premises or assignee of this Lease Agreement other than a Permitted Transferee, nor may any such subtenant or assignee (other than a Permitted Transferee) exercise such Right of First Refusal unless in connection with an assignment of Tenant's entire interest in this Lease Agreement or a sublease of the entire Leased Premises.

SEC. 52 PREFERENTIAL RIGHT TO LEASE:

A. Subject only to the renewal options, expansion options, rights of first offer and rights of first refusal of other tenants in the Building granted by Landlord prior to the Effective Date (as listed on **Exhibit L** attached hereto and made a part hereof for all purposes) or which are included in any lease executed after the Effective Date as to which Tenant failed or elected not to exercise its Right of First Refusal under Section 51, and provided no less than twenty-four (24) months remain in the then-remaining Term, including any Extended Term or Terms created through Renewal Options exercised previously or contemporaneously, Tenant shall have a continuing and recurring right, more specifically described below, to lease any space which shall be or become available for "direct" lease on the eighth (8th) floor of the Building (the "**Preferential Right to Lease**"). The Preferential Right to Lease is not a "right of first offer", but rather (absent a prospect for the space, as to which the Right of First Refusal provisions shall apply) the right on the part of Tenant to give written notice to Landlord of its desire to lease additional space on the eighth (8th) floor of the Building (a "**Tenant's Preferential Notice**"), which shall include (i) the approximate amount of additional space which Tenant desires to lease, and (ii) the desired commencement date for such space, it being understood and agreed that the term of the lease for such additional space shall be coterminous with the then existing Term. Within ten (10) business days of receipt of Tenant's Preferential Notice, Landlord shall give written notice to Tenant of (a) all such space availabilities on the eighth (8th) floor of the Building (including space that Landlord believes may become available during the six (6) month period before and after Tenant's date of desired commencement) (the "**Available Space**"), (b) an existing-condition floor plan(s) of the Available Space, and (c) the applicable leasehold improvement allowance (a "**Landlord's Preferential Right Notice**"). Space for which Landlord has a lease proposal out, or is actively negotiating a letter of intent, lease or similar agreement with a third party, shall not be deemed "Available Space". Within ten (10) business days of receipt of Landlord's Preferential Right Notice, Tenant shall give Landlord written notice of its intent to lease all or a portion (contiguous to the Leased Premises as they are then constituted) of the Available Space. The lease of such Available Space shall be on the same terms and conditions as the initial Leased Premises (including the termination date, the Rent then applicable under this Lease Agreement and the dates of rental increases); provided, however, Tenant will be only be provided with a leasehold improvement allowance for such Available Space equal to the product of (x) $45.00 per square foot of Net Rentable Area in the Available Space and (y) a quotient, the numerator of which is the number of months in the initial Term remaining from the commencement date for such Available Space and the denominator of which is the number of months in the initial Term), and the Term with respect to such Available Space shall commence on the date which is the earlier to occur of (A) Tenant's beneficial occupancy of the space for the purposes of conducting its business therein, or (B) sixty (60) days after Landlord tenders such space in its entirety to Tenant. If any of the Available Space which Tenant intends to lease is occupied by a tenant whose lease is expiring, then notwithstanding anything herein contained, Landlord shall be entitled to accept an offer from, or make an offer to, the existing tenant to extend its lease on such terms as Landlord considers appropriate, and in the event that the said tenant and Landlord agree on the terms of an extension, Tenant's notice of intent to lease such Available Space shall be of no force or effect, and Tenant shall be entitled to revoke its notice in respect of the other Available Space it intended to lease. If Tenant elects to lease only a portion of the Available Space on a given floor, then the location and configuration of the space which Tenant desires to lease must be reasonably acceptable to Landlord, including as to the marketability of the remaining space on the floor.

B. This Lease Agreement shall be deemed to have been automatically amended in accordance with this Section 52 as of the date the Available Space is delivered to Tenant, and Tenant and Landlord shall thereafter promptly (but in no event longer than fifteen (15) days after Landlord's submission of the amendment to Tenant) execute and deliver an appropriate amendment of this Lease Agreement to evidence the foregoing. Notwithstanding any provision herein to the contrary, Tenant shall not have the right to lease the Available Space pursuant to this Section 52 if, at the time Tenant exercises its right to lease such Available Space, an Event of Default then exists under this Lease Agreement. Any termination of this Lease Agreement shall also terminate the Preferential Right to Lease. Tenant shall not have the right to assign the Preferential Right to Lease to any subtenant of the Leased Premises or assignee of this Lease Agreement other than a Permitted Transferee, nor may any such subtenant or assignee (other than a Permitted Transferee) exercise such Preferential Right to Lease unless in connection with an assignment of Tenant's entire interest in this Lease Agreement or a sublease of the entire Leased Premises.

C. Subject to the requirements of prospective tenants, any leasing done by Landlord on the eighth (8^{th}) floor of the Building shall begin at the northeast corner of the floor and progress first in a southerly direction, and then in a westerly direction.

SEC. 53 CHASE SPACE: At no cost to Tenant for such right during the Term, Tenant shall have the right to use (on a non-exclusive basis), its pro rata share (based on the percentage of the total Net Rentable Area of the Building comprising the Leased Premises) of the chase space located either (i) on the south side of the Building towards the southwest corner of the 8th floor, or (ii) the chase space located in the core of the Building, such chase space to be used solely by Tenant for uses associated with the laboratory in the Leased Premises (such as venting of a fume hood), which uses shall be subject to the prior written approval of the Landlord. In the event Tenant needs to penetrate surfaces within the Building for such installations, immediately after the completion of such work, Tenant will conceal such work and/or the surface finish will be returned to its condition at the time Tenant commenced such work. All such work will be at Tenant's sole cost and expense and be subject to Landlord's prior approval as to location, time, manner and nature of such work and such work must comply with the terms and provisions of this Lease Agreement.

SEC. 54 BACK-UP GENERATOR:

A. Tenant shall be permitted, at its sole cost and expense, to install, connect to the Building, operate and maintain a diesel back-up electrical generator and all related equipment switching gear, conduit and equipment mounts (collectively, "**Generator**") screened from public view to be located in a location in the Complex mutually agreed upon by Landlord and Tenant. The installation of the Generator shall be subject to all conditions and requirements as provided for in Section 10 hereof. Landlord reserves the right to relocate the Generator from time to time at Landlord's cost and expense, and to install its own generator providing back-up power to the Common Areas and emergency lighting in the Complex in the same area as Tenant's Generator.

B. The installation, maintenance, repair, replacement, removal and repair of any damage relating to the Generator, and all related costs, shall be the sole responsibility of Tenant, subject to Landlord's reasonable direction and control. Landlord shall supply diesel fuel for the Generator from the central tank at the Building which the Landlord shall maintain at its sole cost and expense, but with the diesel fuel drawn from same by Tenant to be at Tenant's sole cost and expense based on a meter (also to be installed and maintained at Tenant's sole cost and expense). Notwithstanding anything to the contrary contained herein, in no event shall Tenant be permitted to install or maintain on or about the Leased Premises or the Building any underground fuel storage tanks or any diesel fuel tanks of its own.

C. Upon the expiration or termination of this Lease Agreement, or at such time as Tenant decides that it no longer wishes to maintain the Generator, Tenant shall be obligated to remove the Generator and all related or ancillary equipment, wiring, and the like, and Tenant shall repair any damage caused by the installation and use of the Generator and by such removal in a manner and method reasonably satisfactory to Landlord.

D. The Generator shall be used solely for the generation of emergency power in the event of and only for the duration of a power outage or "brownout", or interruption of electrical service to the Building. Tenant shall be permitted to periodically test the Generator to confirm that it is in good working order. The Generator shall be used solely for purposes of Tenant's business in the Leased Premises. The use and operation of the Generator shall comply with all applicable provisions of this Lease Agreement. In no event shall the maintenance, use and operation of the Generator interfere with any of the systems of the Building. Tenant shall comply with all laws applicable to the use and operation of the Generator. Tenant shall be responsible for obtaining all licenses, permits and approvals for the use and operation of the Generator.

E. Parking Spaces occupied by the Generator shall be considered unreserved Parking Spaces (as defined on **Exhibit C**) utilized by Tenant and shall be paid for by Tenant in accordance with the terms and provisions of **Exhibit C**.

F. Tenant shall defend, indemnify and hold the Landlord Parties harmless from and against all Claims and liabilities of every kind or nature related to the existence and operation of the Generator, except to the extent that such claims and liabilities are the result of the gross negligence or willful misconduct of any of the Landlord Parties.

G. Throughout the Term, Landlord shall maintain a separate back-up power generator serving the Common Areas and emergency lighting in the Complex.

SEC. 55 FINANCIAL STATEMENTS: Tenant shall from time to time during the Term, but not more than twice in any 12 month period, provide to Landlord an up to date true and accurate unaudited financial statement, balance sheet, and income and expense statement covering Tenant and any guarantor of Tenant's obligations under this Lease Agreement, within twenty (20) days after written request therefor is made by Landlord to Tenant. Except as may be required by law, Landlord agrees to keep any financial information provided pursuant to this Section 55 (the "**Confidential Information**") confidential; provided, however that (a) Landlord may make any disclosure of the Confidential Information to which Tenant has consented in writing in advance, and (b) any of the Confidential Information may be disclosed to employees, partners, agents, successors, affiliates, assigns and representatives of Landlord, including, but not limited to, its auditors, attorneys, and lenders and potential purchasers and lenders of the Building in connection with any financing or sale of the Building who (i) need to know the Confidential Information in connection therewith, (ii) shall have been informed by Landlord of the confidential nature of the Confidential Information, and (iii) shall have agreed to treat the Confidential Information confidentially and to use it only for the purpose described above.

SEC. 56 LANDLORD DEFAULT: The failure of Landlord to promptly and faithfully keep and perform each and every covenant, agreement, and stipulation herein on the part of Landlord to be kept and performed and the continuance of such failure for a period of thirty (30) days after written notice to Landlord; or, if such failure cannot reasonably be cured within said thirty (30) day period despite Landlord's diligent good faith efforts, the failure of Landlord to promptly commence its diligent good faith efforts to cure such failure within said thirty (30) day period shall, at the option of Tenant, constitute a default by Landlord under this Lease Agreement. In the case of any breach or default of this Lease Agreement by Landlord, Tenant shall have all of the remedies, rights, and authority against and with respect to Landlord provided by law, or in equity specifically including the right to injunctive relief. In the event of such failure by Landlord which continues for a period of ninety (90) days notwithstanding Landlord's efforts to cure, Tenant shall have the right at the end of such ninety (90) day period to deliver to Landlord written notice to terminate this Lease Agreement, which shall take effect thirty (30) days after the date of such notice, except that Tenant's right to terminate shall be null and void if the failure is cured during such thirty (30) day period.

SEC. 57 EXHIBITS: **Exhibits A** through **M** are attached hereto and made a part of this Lease Agreement for all purposes.

[END OF TEXT]

IN WITNESS WHEREOF, Landlord and Tenant, acting herein by duly authorized individuals, have caused these presents to be executed in multiple counterparts (by facsimile, pdf or otherwise), each of which shall have the force and effect of an original on this 1st day of June, 2012 (the "**Effective Date**").

LANDLORD:

Sheridan Hills Developments L.P.,
a Texas limited partnership

By: Pouncet Sheridan Inc., an Ontario,
Canada corporation, its general partner

By: /s/ L. Lubin
Name: L. Lubin
Title: V.P.

TENANT:

Bellicum Pharmaceuticals, Inc., a Delaware corporation

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

ADDRESS:

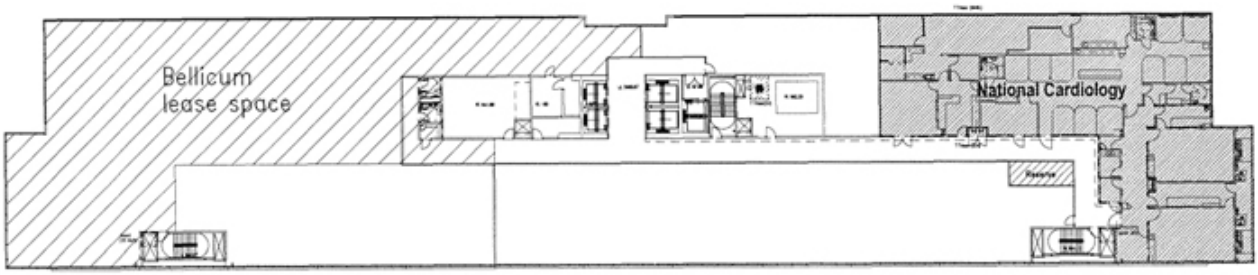
Prior to Commencement Date:
410 Pierce Street
Houston, Texas 77002

Following the Commencement Date:
At the Leased Premises

EXHIBIT A

FLOOR PLAN OF THE LEASED PREMISES

See Attached

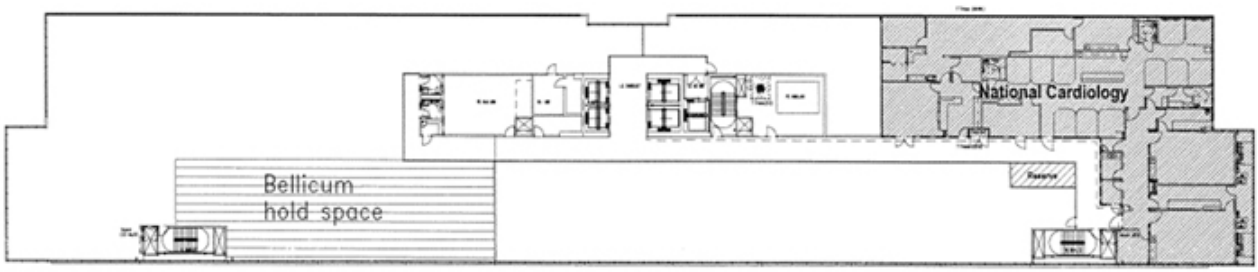


Life Science Plaza
8th Floor
05-31-12

EXHIBIT A-1

FLOOR PLAN OF THE HOLD SPACE

See Attached



Life Science Plaza
8th Floor
05-31-12

EXHIBIT B

LEGAL DESCRIPTION OF THE LAND

All that certain 2.3391 acres being all of Restricted Reserve “A”, Block 1, Twenty-One Thirty West Holcombe Boulevard Replat No. 1 according to the plat thereof as filed in Film Code Number 595196, Harris County Map Records, in the P. W. Rose Survey, Abstract - 645, Houston, Harris County, Texas, and being more particularly described by metes and bounds as follows (bearings based on Texas Coordinate System of 1983, South Central Zone);

Commencing at Harris County Floodplain Reference Mark Number 040110 being a brass disc stamped “040110” having published coordinates of (X: 3,110,377.78) and (Y: 13,820,307.50) from which Harris County Floodplain Reference Mark Number 040115 being a brass disc stamped “D100 BM16” bears S 70° 42’ 24” W - 1,730.12’ for reference; Thence N 36° 12’ 56” W - 1,995.95’ to a found 3/4” iron pipe with cap (stamped C.L. DAVIS RPLS 4464) marking the southeast corner of said Restricted Reserve “A” from which a found 3/4” iron pipe bears N 79° 32’ 53” E - 0.69’ for reference and marking the POINT OF BEGINNING of herein described tract;

1. Thence S 87° 49’ 11” W - 932.20’ with the north right-of-way line of West Holcombe Boulevard (120’ wide) to a found 1” iron pipe marking the southwest corner of said Restricted Reserve “A”;

2. Thence N 02° 10’ 49” W - 104.62’ with the east right-of-way line of Mont Clair Drive (60’ wide) to a 1” pinch top pipe marking the southwest corner of Lot 22, Block 7, Replat of Southgate Addition Section No. 3 according to the plat thereof as filed in Volume 26, Page 16, Harris County Map Records;

3. Thence N 87° 52’ 11” E - 798.90’ north line of said Reserve “A” to a found 5/8” iron rod for corner;

4. Thence N 59° 45’ 09” E - 151.07’ with the south line of Lots 9 - 11, Block 7 of said Replat of Southgate Addition, Section No. 3 to a found 5/8’ iron rod for corner;

5. Thence S 02° 10’ 49” E - 175.00’ with the west line of that certain tract described in a deed dated 06-30-1986 from Miller Hotel Development, Incorporated to Burger King Corporation as filed in Official Records of Real Property of Harris County at Clerk’s File Number K-700805, Film Code 056-71-1646 to the POINT OF BEGINNING and containing 2.3391 (101,892 square feet) of land more or less.

EXHIBIT C

PARKING AGREEMENT

Landlord hereby agrees to make available to Tenant during the Term, as Tenant elects, up to four (4) unreserved parking passes for each 1,000 square feet of Net Rentable Area of the Leased Premises from time to time. Tenant shall be entitled from time to time to take and pay for all or any of such unreserved parking passes (and the parking spaces it is thereby entitled to use shall be hereinafter collectively referred to as the "**Parking Spaces**") for use in the Building parking garage (hereinafter referred to as the "**Garage**"), upon the following terms and conditions:

1. Tenant shall pay as rental for the Parking Spaces the rates charged from time to time by the operator of the Garage, plus all taxes applicable thereto. The initial monthly rate for each of the Parking Spaces for reserved parking shall be $240.00 plus taxes and for unreserved parking shall be $165.00 plus taxes. The charges for up to thirty-nine (39) unreserved Parking Spaces shall be abated for the first six (6) months following the Commencement Date. Said rentals shall be due and payable to Landlord or its parking manager, as designated in writing by Landlord at the address of the Landlord's property manager specified in Section 31 of this Lease Agreement (or such other address as may be designated by Landlord in writing from time to time), as additional rent on the first day of each calendar month during the Term.

2. In the event Tenant so desires, and upon ten (10) days' prior written notice to Landlord, Tenant may convert up to ten percent (10%) of its Parking Spaces for unreserved parking to Parking Spaces for reserved parking. In the event Tenant elects to convert such unreserved Parking Spaces to reserved Parking Spaces in accordance with this Paragraph 2, Landlord shall provide said Parking Spaces for reserved parking to Tenant during the balance of the Term at the rates charged from time to time for reserved Parking Spaces in the Garage plus all taxes applicable thereto. From and after the date Tenant commences leasing such parking spaces for reserved parking, the term "Parking Spaces" shall be deemed to include such reserved Parking Spaces.

3. Notwithstanding anything contained in this **Exhibit C** to the contrary, Landlord shall have the right to recapture any Parking Space not utilized by Tenant for six (6) consecutive months beginning after the first twelve (12) calendar months of the Term, and in the event Landlord exercises such right, Landlord shall have no further obligations to Tenant with respect to such Parking Spaces and the number of reserved or unreserved Parking Spaces, as the case may be, referred to above in this **Exhibit C** shall be correspondingly reduced.

4. Landlord will issue to Tenant parking tags, stickers or access cards for the Parking Spaces, or will provide a reasonable alternative means of identifying and controlling vehicles authorized to park in the contract Garage. Tenant shall surrender each such tag, sticker or other identifying device to Landlord upon termination of the Parking Space related thereto.

5. Landlord, at its discretion, shall have the right from time to time, upon written notice to Tenant, to designate the area(s) within which vehicles may be parked. Tenant agrees that although Landlord shall mark with signage Tenant's reserved Parking Spaces, Landlord shall have no obligation to enforce such reservation by ticketing, towing or affixing a notice to cars parked in Tenant's reserved Parking Spaces by those who are not Tenant's customers, guests, invitees and employees; provided, however, Landlord will use commercially reasonable efforts to direct tenants at the Complex to abide by the parking rules.

6. If for any reason beyond Landlord's reasonable control Landlord fails or is unable to provide any of the Parking Spaces to Tenant at any time during the Term or any renewals or extensions hereof, and such failure continues for two (2) business days after Tenant gives Landlord written notice thereof, Tenant's obligation to pay rental for any Parking Space which is not provided by Landlord shall be abated for so long as Tenant does not have the use thereof and Landlord shall use its diligent good faith efforts to provide alternative parking arrangements in the Garage or within a one-half (1/2) mile radius of the Building for the number of vehicles equal to the number of Parking Spaces not provided by Landlord. Tenant shall pay for any alternative parking provided by Landlord so long as Tenant is not paying rent for the Parking

Spaces. This abatement and good faith effort to provide alternative parking arrangements shall be in full settlement of all claims that Tenant might otherwise have against Landlord by reason of Landlord's failure or inability to provide Tenant with the Parking Spaces.

7. If the Term commences on other than the first day of a calendar month or terminates on other than the last day of a calendar month, then rentals for the Parking Spaces shall be prorated on a daily basis.

8. Tenant shall indemnify, defend (with counsel reasonably acceptable to Landlord) and hold harmless the Landlord Parties from and against all liabilities, obligations, losses, damages, penalties, claims, actions, suits, costs, expenses and disbursements (including court costs and reasonable attorneys' fees) resulting directly or indirectly from the use of the Parking Spaces, unless caused by the gross negligence or willful misconduct of Landlord or the Landlord Parties.

9. Landlord may provide parking in the Garage or in surface lots for visitors to the Building in an area designated by Landlord and in a capacity determined by Landlord to be appropriate for the Building. Landlord reserves the right to charge and collect a fee for parking in the visitor Garage or in the surface lots in an amount determined by Landlord or the operator of the Garage to be appropriate. Provided that no Event of Default has occurred, Landlord agrees to allow Tenant to validate the parking ticket of Tenant's visitors with a stamp or other means approved in advance by Landlord, and to bill Tenant for the parking charges so validated by Tenant on a monthly basis. Said visitor parking charges shall be due and payable to Landlord as additional rent within ten (10) days after Tenant's receipt of such statement. Alternatively, Landlord may establish a parking validation program whereby tenants may, at their option, purchase prepaid parking validation stickers or other means of identification for specific increments of visitor parking charges, which the tenants may then distribute to their visitors and invitees to be submitted to the Garage attendant as payment for the applicable increment of visitor parking charge.

10. Upon the occurrence of an Event of Default, Landlord shall have the right (in addition to all other rights, remedies and recourse hereunder and at law) to terminate Tenant's use of the Parking Spaces without prior notice or warning to Tenant.

11. Landlord shall have the right to relocate the Garage to any future parking facilities Landlord may construct on the Land, provided Tenant has use of at least 4 parking spaces for each 1,000 square feet of Net Rentable Area of the lased Premises.

A condition of any parking shall be compliance by the parker with Garage rules and regulations, including any sticker or other identification system established by Landlord. The following rules and regulations are in effect until notice is given to Tenant of any change. Landlord reserves the right to modify and/or adopt such other reasonable rules and regulations for the Garage as it deems necessary for the operation of the Garage. Landlord may refuse to permit any person who violates the rules to park in the Garage, and any violation of the rules shall subject the car to removal.

PARKING RULES AND REGULATIONS

1. Cars must be parked entirely within the stall lines painted on the floor.
2. All directional signs and arrows and signs designating wheelchair accessible parking spaces must be observed.
3. The speed limit shall be five (5) miles per hour.
4. Parking prohibited:
   (a) in areas not striped for parking
   (b) in aisles
   (c) where “no parking” signs are posted
   (d) on ramps where indicated
   (e) in cross-hatched areas in spaces reserved for exclusive use by designated lessees
   (g) in such other areas as may be designated by Landlord or Landlord’s agent(s).
5. Parking stickers or any other device or form of identification supplied by Landlord shall remain the property of Landlord and shall not be transferable. There will be a replacement charge payable by Tenant equal to the amount posted from time to time by Landlord for loss of any parking card or parking sticker.
6. Garage managers and attendants are not authorized to make or allow any exceptions to these Rules and Regulations.
7. Every parker is required to park and lock his own car. All responsibility for loss or damage to cars and contents, property or persons is assumed by the parker.
8. Tenant is required to give Landlord, on a quarterly basis, a list of employees parking in the Garage which shall include year, make and model of car and license number.
9. In order to protect Landlord’s property, Landlord shall have the right, but not the obligation, to install cameras in the Garage.
10. Landlord is entitled to limit the size of the parked vehicles by weight, height or width without constituting a breach of its obligation to provide parking hereunder.

Failure to promptly pay the rent required hereunder or persistent failure on the part of Tenant or Tenant’s designated parkers to observe the Rules and Regulations above shall give Landlord the right to terminate Tenant’s right to use the parking structure. No such termination shall create any liability on Landlord or be deemed to interfere with Tenant’s right to quiet possession of its Leased Premises.

EXHIBIT D

RULES AND REGULATIONS

The following standards shall be observed by Tenant for the common safety, cleanliness and convenience of all occupants of the Building. These rules are subject to change from time to time, as specified in the Lease Agreement.

1. All tenants will refer all contractors' representatives and installation technicians who are to perform any work within the Building to Landlord for Landlord's supervision, approval (which approval shall not be unreasonably withheld, conditioned or delayed) and control before the performance of any such work. This provision shall apply to all work performed in the Building including, but not limited to, installations of telephones, computer equipment, electrical devices and attachments, and any and all installations of every nature affecting floors, walls, woodwork, trim, windows, ceilings, equipment and any other physical portion of the Building. Tenant shall not mark, paint, drill into, or in any way deface any part of the Building or the Leased Premises, except with the prior written consent of the Landlord, and as the Landlord may direct; provided, however, Tenant may hang pictures, bulletin boards, white boards and the like within the Leased Premises without prior consent of or notice to Landlord.

2. The work of the janitorial or cleaning personnel shall not be hindered by Tenant after 5:30 p.m., and such work may be done at any time when the offices are vacant. The windows, doors and fixtures may be cleaned at any time. Tenant shall provide adequate waste and rubbish receptacles, cabinets, book cases, map cases, etc., necessary to prevent unreasonable hardship to Landlord in discharging its obligations regarding cleaning service.

3. Prior to the commencement of any construction in the Leased Premises, Tenant shall deliver evidence of its contractor's and subcontractor's insurance, such insurance being with such companies, for such periods and in such amounts as Landlord may reasonably require, naming the Landlord Parties as additional insureds.

4. No sign, advertisement or notice shall be displayed, painted or affixed by Tenant, its agents, servants or employees, in or on any part of the outside or inside of the Building or Leased Premises without prior written consent of Landlord, and then only of such color, size, character, style and material and in such places as shall be approved and designated by Landlord. Signs on doors and entrances to the Leased Premises shall be placed thereon by Landlord.

5. Except as otherwise provided in this Lease Agreement and for such items as are installed as part of the Leasehold Improvements, Tenant shall not place, install or operate on the Leased Premises or in any part of the Building any engine, refrigerating, heating or air conditioning apparatus, stove or machinery, or conduct mechanical operations, or place or use in or about the Leased Premises any inflammable, explosive, hazardous or odorous solvents or materials without the prior written consent of Landlord. No portion of the Leased Premises shall at any time be used for cooking, sleeping or lodging quarters. Tenant may use coffee pots, refrigerators and microwaves in Leased Premises.

6. Tenant shall not make or permit any loud or improper noises in the Building or otherwise interfere in any way with other tenants.

7. Landlord will not be responsible for any lost or stolen personal property or equipment from the Leased Premises or public areas, regardless of whether such loss occurs when the area is locked against entry or not.

8. Tenant, or the employees, agents, servants, visitors or licensees of Tenant, shall not, at any time or place, leave or discard rubbish, paper, articles, plants or objects of any kind whatsoever outside the doors of the Leased Premises or in the corridors or passageways of the Building or attached Parking Areas. No animals (other than mice in any vivarium), bicycles or vehicles of any description shall be brought into or kept in or about the Building, except for Landlord designated bicycle parking areas.

9. No additional lock or locks shall be placed by Tenant on any door in the Building unless written consent of Landlord shall have first been obtained. Two (2) keys will be furnished by Landlord for the Leased Premises, and any additional key required must be obtained from Landlord. A charge will be made for each additional key furnished. All keys shall be surrendered to Landlord upon termination of tenancy.

10. None of the entries, passages, doors, hallways or stairways in the Building shall be blocked or obstructed.

11. Landlord shall have the right to determine and prescribe the weight and proper position of any unusually heavy equipment, including computers, safes, large files, etc., that are to be placed in the Building, and only those which in the exclusive judgment of the Landlord will not do damage to the floors, structure and/or elevators may be moved into the Building. Any damage caused by installing, moving or removing such aforementioned articles in the Building shall be paid for by Tenant.

12. All holiday and other decorations must be constructed of flame retardant materials. Live Christmas trees are not permitted in the Leased Premises.

13. Tenant shall provide Landlord with a list of all personnel authorized to enter the Building after hours (6:00 p.m. to 7:00 a.m. Monday through Friday, and 24 hours a day on Saturdays, Sundays and Holidays).

14. The following dates shall constitute "**Holidays**" as said term is used in this Lease Agreement: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, the Friday following Thanksgiving Day and Christmas and any other holiday recognized and taken by tenants cumulatively occupying at least one-half (1/2) of the Net Rentable Area of office space of the Building. The Holidays set forth herein may not be changed by Landlord during the Term.

15. The following hours shall constitute the normal business hours of the Building: between 7:00 a.m. and 6:00 p.m. from Monday through Friday and between 8:00 a.m. and 12:00 noon on Saturdays, all exclusive of Holidays. The aforementioned hours of operation may not be changed by Landlord during the Term.

16. Movement of furniture or office equipment in or out of the Building, or dispatch or receipt by Tenant of any heavy equipment, bulky material or merchandise which requires use of elevators or stairways, or movement through the Building's service dock or lobby entrance shall be restricted to such hours as Landlord shall designate. All such movement shall be in a manner to be agreed upon between Tenant and Landlord in advance. Such prior arrangements shall be initiated by Tenant. The time, method and routing of movement and limitations for safety or other concern which may prohibit any article, equipment or other item from being brought into the Building shall be subject to Landlord's reasonable discretion and control. Any hand trucks, carryalls or similar appliances used for the delivery or receipt of merchandise or equipment shall be equipped with rubber tires, side guards and such other safeguards as the Building shall require. Although Landlord or its personnel may participate in or assist in the supervision of such movement, Tenant assumes full responsibility for all risks as to damage to articles moved and injury to persons or property engaged in such movement, including equipment, property and personnel of Landlord if damaged or injured as a result of acts in connection with carrying out this service for Tenant, from the time of entering the property to completion of work. Landlord shall not be liable for the acts of any person engaged in, or any damage or loss to any of said property or persons resulting from any act in connection with such service performed for Tenant.

17. Landlord shall designate one elevator to be the freight elevator to be used to handle packages and shipments of all kinds. The freight elevator shall be available to handle such deliveries from 9:00 a.m. to 11:00 a.m. and 2:00 p.m. to 3:30 p.m. weekdays. Parcel Post, express, freight or merchants' deliveries can be made anytime within these hours. No furniture or freight shall be handled outside the above hours, except by previous arrangement.

18. Any additional services as are routinely provided to tenants, not required by the Lease Agreement to be performed by Landlord, which Tenant requests Landlord to perform, and which are performed by Landlord, shall be billed to Tenant at Landlord's cost plus five percent (5%).

19. All doors leading from public corridors to the Leased Premises are to be kept closed when not in use.

20. Canvassing, soliciting or peddling in the Building is prohibited and Tenant shall cooperate to prevent same.

21. Tenant shall give immediate notice to the Building Manager in case of accidents in the Leased Premises or in the Building or of defects therein or in any fixtures or equipment, or of any known emergency in the Building.

22. Tenant shall not use the Leased Premises or permit the Leased Premises to be used for photographic, multilith or multigraph reproductions, except in connection with its own business.

23. The requirements of Tenant will be attended to only upon application to the Building Manager. Employees of Landlord shall not perform any work or do anything outside of their regular duties, unless under special instructions from the Building Manager.

24. Tenant shall place or have placed solid pads under all rolling chairs such as may be used at desks or tables. Any damages caused to carpet by not having same shall be repaired or replaced at the expense of Tenant.

25. Tenant, or the employees, agents, servants, visitors or licensees of Tenant shall abide by the rules and regulations for the Parking Areas included in the Parking Agreement attached hereto as **Exhibit C**.

26. Except as otherwise noted, Landlord reserves the right to rescind any of these Rules and Regulations of the Building, and to make such other and further rules and regulations as in its reasonable judgment shall from time to time be needful for the safety, protection, care and cleanliness of the Building, the Leased Premises and the Parking Areas, the operation thereof, the preservation of good order therein and the protection and comfort of the other tenants in the Building and their agents, employees and invitees, which rules and regulations, when made and written notice thereof is given to Tenant, shall be binding upon Tenant in like manner as if originally herein prescribed, provided such changes do not unreasonably interfere with Tenant's use or occupancy of or access to the Leased Premises.

27. Landlord will provide 4.0 cardkeys or other access devices per 1,000 square feet of Net Rentable Area of the Leased Premises during the Term to Tenant and Tenant agrees to return all of these cardkeys and other access devices to Landlord upon expiration or termination of this Lease Agreement. All others will be furnished to Tenant at a cost of Fifty and 00/100 Dollars ($50.00) per card or a mutually agreed upon price for each other access device. Any future increase in the cost of cardkeys and other access devices will be passed on to Tenant for any additional cardkeys and other access devices required.

28. Tenant, or its employees, agents, servants, visitors, invitees or licensees of Tenant, shall not smoke or permit to be smoked cigarettes, cigars or pipes within the Leased Premises or Building. Smoking shall be confined to area(s) designated by Landlord but shall in no event be closer than twenty-five feet (25') to any entrance to the Building. Landlord shall have no obligation to Tenant for failure of another tenant, its employees, agents, servants, visitors, invitees or licensees to comply with this paragraph.

29. Tenant shall not attempt to adjust wall-mounted thermostats in the Building. If there is any damage to wall-mounted thermostats due to attempts by Tenant to adjust thermostats, Landlord may repair such damage at the sole cost and expense of the Tenant.

EXHIBIT E

ACCEPTANCE OF PREMISES MEMORANDUM

This Memorandum is an amendment to the Lease Agreement for space in 2130 West Holcombe Boulevard, Suite 850 Houston, Harris County, Texas 77030, executed on the day of June, 2012 between Sheridan Hills Developments L.P., a Texas limited partnership, as Landlord and Bellicum Pharmaceuticals, Inc., a Delaware corporation, as Tenant.

Landlord and Tenant hereby agree that:

1. The Leased Premises consists of square feet of Net Rentable Area.
2. Except for those items shown on the attached "punch list", if any, which Landlord will remedy within 30 days hereof, Landlord has fully completed the construction work required under the terms of the Lease Agreement.
3. The Leased Premises are tenantable, the Landlord has no further obligation for construction (except as specified above), and Tenant acknowledges that both the Building and the Leased Premises are satisfactory in all respects.
4. The Commencement Date of the Lease Agreement is hereby agreed to be the day of , 201 .
5. The Expiration Date of the Lease Agreement is hereby agreed to be the day of 201 ,

All other terms and conditions of the Lease Agreement are hereby ratified and acknowledged to be unchanged.

Agreed and Executed this day of , 201 .

Landlord:

Sheridan Hills Developments L.P.,
a Texas limited partnership

By: Pouncet Sheridan Inc., an Ontario,
Canada corporation, its general partner

By: _____
Name: _____
Title: _____

Tenant:

Bellicum Pharmaceuticals, Inc.

By: _____
Name: _____
Title: _____

EXHIBIT F

TENANT'S ESTOPPEL CERTIFICATE

(Addressee)

RE: _____ Houston, Texas

Gentlemen:

The undersigned ("**Tenant**") has executed and entered into that certain lease agreement ("**Lease Agreement**") attached hereto as **Exhibit A** and made a part hereof for all purposes with respect to those certain premises ("**Leased Premises**") which are located in the above-referenced project ("**Project**") and are more fully described in the Lease Agreement. Tenant understands that the entity to whom this letter is addressed ("**Addressee**") has committed to loan or invest a substantial sum of money in reliance upon this certification by the undersigned, which certification is a condition precedent to making such loan or investment, or that Addressee intends to take some other action in reliance upon this certification.

With respect to the Lease Agreement, Tenant certifies to you the following, with the intention that you may rely fully thereon:

1. A true and correct copy of the Lease Agreement, including any and all amendments and modifications thereto, is attached hereto as **Exhibit A**;

2. The original Lease Agreement is dated , 201 , and has been assigned, modified, supplemented or amended only in the following respects:

   (Please write "None" above or, on a separate sheet of paper, state the effective date of and describe any oral or written modifications, supplements or amendments to the Lease Agreement and attach a copy of such modifications, supplements or amendments, with the Lease Agreement as Exhibit A);

3. Tenant is in actual occupancy of the Leased Premises under the Lease Agreement; the Leased Premises are known as Suite , of the Project; and the Leased Premises contain approximately square feet;

4. The initial term of the Lease Agreement commenced on , 201 , and ends at 11:59 p.m. on , 201 , at a monthly base rent of $,and no rentals or other payments in advance of the current calendar month have been paid by Tenant, except as follows:

   (Please write "None" above or describe such payments on a separate sheet of paper);

5. Base Rent with respect to the Lease Agreement has been paid by Tenant through , 201 ; all additional rents and other charges have been paid for the current periods;

6. There are no unpaid concessions, bonuses, free months' rent, rebates or other matters affecting the rent for Tenant, except as follows:

   (Please write "None" above or describe such matters on a separate sheet of paper);

7. No security or other deposit has been paid by Tenant with respect to the Lease Agreement, except as follows:

(Please write “None” above or describe such deposits on a separate sheet of paper);

8. The Lease Agreement is in full force and effect and, to Tenant’s current actual knowledge, there are no events or conditions existing which, with notice or the lapse of time or both, could constitute a monetary or other default of the Landlord under the Lease Agreement, or entitle Tenant to any offset or defense against the prompt current payment of rent or constitute a default by Tenant under the Lease Agreement, except as follows:

(Please write “None” above or describe such default on a separate sheet of paper);

9. All improvements required to be made by Landlord under the terms of the Lease Agreement have been satisfactorily completed and accepted by Tenant as being in conformity with the Lease Agreement, except as follows:

(Please write “None” above or describe such improvements on a separate sheet of paper);

10. Tenant has no option to expand or rent additional space within the Project or any right of first refusal with regard to any additional space within the Project, other than the Leased Premises, except as follows:

(Please write “None” above or describe such right or option on a separate sheet of paper);

11. Tenant has no right or option to renew the Lease Agreement for any period of time after the expiration of the initial term of the Lease Agreement, except as follows:

(Please write “None” above or describe such right on a separate sheet of paper);

12. To Tenant’s current actual knowledge, any and all broker’s leasing and other commissions relating to and/or resulting from Tenant’s execution of the Lease Agreement and occupancy of the Leased Premises have been paid in full and no broker’s leasing or other commissions will be or become due or payable in connection with or as a result of either Tenant’s execution of a new Lease Agreement covering all or any portion of the Leased Premises or any other space within the Project or Tenant’s renewal of the Lease Agreement, except as follows:

(Please write “None” above or describe such right on a separate sheet of paper);

13. To Tenant’s current actual knowledge, the use, maintenance or operation of the Leased Premises complies with, and will at all times comply with, all applicable federal, state, county or local statutes, laws, rules and regulations of any governmental authorities relating to environmental, health or safety matters (being hereinafter collectively referred to as the “Environmental Laws”);

14. [intentionally deleted];

15. Tenant has not received any notices, written or oral, of violation of any Environmental Law or of any allegation which, if true, would contradict anything contained herein and there are not writs, injunctions, decrees, orders or judgments outstanding, no lawsuits, claims, proceedings or investigations pending or threatened, relating to the use, maintenance or operation of the Leased Premises, nor is Tenant aware of a basis for any such proceeding;

16. There are no actions, whether voluntary or otherwise, pending against Tenant under the bankruptcy or insolvency laws of the United States or of any state.

17. Tenant has no right of refusal or option to purchase the Leased Premises or the Project.

18. Tenant understands that the Lease Agreement may be assigned to Addressee and Tenant agrees to attorn to Addressee in all respects in accordance with the Lease Agreement.

Dated: , 201 .

Very truly yours,

Bellicum Pharmaceuticals, Inc.

By: _____
Name: _____
Title: _____

EXHIBIT G

LEASEHOLD IMPROVEMENTS

1. Work by Landlord. Landlord shall cause to be constructed and/or installed in the Leased Premises the permanent leasehold improvements and tenant finish desired by Tenant and approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed (the "**Leasehold Improvements**"). The leasehold construction will be performed pursuant to a cost plus contract entered into by Landlord with a general contractor agreed on by Landlord and Tenant.

2. Planning and Construction.

(a) Landlord and Tenant shall cooperate in good faith in the planning and construction of the Leasehold Improvements, it being agreed and understood that it is the intent and desire of the parties that the Leased Premises be ready for Tenant's occupancy on or before the Estimated Leased Premises Delivery Date. Tenant shall respond within five (5) business days to any request from Landlord or Landlord's architect or contractor for Tenant's approval of any particular aspect thereof. To the extent Tenant engages Landlord's consultants as Tenant's mechanical/electrical/plumbing and/or structural engineering consultants, Landlord shall not require reimbursement of third-party fee charges to Landlord for review of Tenant's plans and documents by the consultants so engaged.

(b) Tenant will cause its architect and engineers (the "**Design Professionals**") to prepare a set of space plans (the "**Proposed Space Plans**") for the Leasehold Improvements and submit same to Landlord for its review and approval within fourteen (14) days following the Effective Date. Within ten (10) business days after delivery of the Proposed Space Plans to Landlord, Landlord shall either approve (which approval shall not be unreasonably withheld, conditioned or delayed) the Proposed Space Plans or notify Tenant of the item(s) of the Proposed Space Plans that Landlord disapproves and the reason(s) therefor. If Landlord disapproves the Proposed Space Plans, Tenant shall cause the Design Professionals to revise and resubmit same to Landlord for approval within five (5) business days (the "**Revised Space Plans**"). Within five (5) business days after delivery of the Revised Space Plans to Landlord, Landlord shall either approve the Revised Space Plans or notify Tenant of the item(s) of the Revised Space Plans which Landlord disapproves and the reason(s) therefor. If Landlord disapproves the Revised Space Plans, Tenant shall cause the Design Professionals to further revise and resubmit same to Landlord for approval within five (5) business days, which process shall continue until the plans are approved. Landlord shall have five (5) business days after delivery of each set of Revised Space Plans to either approve the Revised Space Plans or notify Tenant of the item(s) of the Revised Space Plans which Landlord disapproves and the reason(s) therefor. The Proposed Space Plans or Revised Space Plans, as approved by Landlord, are hereinafter referred to as the "**Space Plans**".

(c) Upon Landlord's approval of the Space Plans, Tenant shall cause the Design Professionals to prepare construction drawings (in accordance with the Space Plans) and specifications including complete sets of detailed architectural, structural, mechanical, electrical and plumbing working drawings (the "**Proposed Construction Drawings**") for the Leasehold Improvements and shall deliver the Proposed Construction Drawings to Landlord for approval (which approval shall not be unreasonably withheld, conditioned or delayed). Within ten (10) business days after delivery of the Proposed Construction Drawings to Landlord, Landlord shall either approve the Proposed Construction Drawings or notify Tenant of the item(s) of the Proposed Construction Drawings that Landlord disapproves and the reason(s) therefor. If Landlord disapproves the Proposed Construction Drawings, Tenant shall cause the Design Professionals to revise and resubmit same to Landlord for approval within five (5) business days (the "**Revised Construction Drawings**"). Within five (5) business days after delivery of the Revised Construction Drawings to Landlord, Landlord shall either approve the Revised Construction Drawings or notify Tenant of the item(s) of the Revised Construction Drawings which Landlord disapproves and the reason(s) therefor. If Landlord disapproves the Revised Construction Drawings, Tenant shall cause the Design Professionals to further revise and resubmit same to Landlord for approval within five (5) business days, which process shall continue until the plans are approved. Landlord shall have five (5) business days after delivery of each set of Revised Construction Drawings to either approve the Revised Construction Drawings or notify Tenant of the item(s) of the Revised Construction Drawings which Landlord disapproves and the reason(s) therefor. The Proposed Construction Drawings or Revised Construction Drawings, as approved by Landlord, are hereinafter referred to as the "**Construction Drawings**".

3. Quality of Work. Landlord shall supervise the construction of the Leasehold Improvements in conformance with the Construction Drawings and shall use its diligent good faith efforts to cause same to be constructed and installed in a good and workmanlike manner in accordance with good industry practice.

4. Completion of Construction. The "Leasehold Improvements Completion Date" shall mean the date upon which the Leasehold Improvements are substantially complete in accordance with the Construction Drawings. The phrase "substantially complete" shall mean that all construction debris has been removed from the Leased Premises and the Leased Premises are reasonably clean, the Leasehold Improvements have been completed in substantial accordance with the Construction Drawings therefor, except for the completion of Punch List Items (hereinafter defined), and Landlord shall have obtained and delivered to Tenant a temporary certificate of occupancy for the Leased Premises. Landlord will give Tenant ten (10) days' advance written notice of the date on which Landlord expects the Leased Premises to be substantially complete and ready for occupancy. If the Leased Premises are not ready for occupancy by the Estimated Leased Premises Delivery Date for any reason, Landlord shall not be liable or responsible for any claims, damages or liabilities in connection therewith or by reason thereof. The term "Punch List Items" shall mean details of construction, decoration and mechanical adjustment which, in the aggregate, are relatively minor in character and do not materially interfere with the use or enjoyment of the Leased Premises for the uses permitted in Section 3 of this Lease Agreement. The Punch List Items shall be set forth in a list prepared during a walkthrough inspection of the Leased Premises, such inspection to be performed by Tenant's and Landlord's representatives within ten (10) days after Landlord shall advise Tenant that substantial completion of the Leasehold Improvements in the Leased Premises has occurred or is imminent. Landlord shall use its commercially reasonable efforts to cause the Punch List Items to be substantially completed within thirty (30) days after said walkthrough inspection and Landlord and Tenant's agreement on the Punch List Items. Additionally, Landlord shall use its commercially reasonable efforts to obtain and deliver to Tenant a final (permanent) certificate of occupancy for the Leased Premises within ninety (90) after substantial completion.

5. Tenant Delay. As used herein, "**Tenant Delay**" shall mean the sum of (i) the number of days of delay beyond the 5-business day response period in responding to Landlord's request for approval of any documentation in connection with the Leasehold Improvements, (ii) the number of days of delay in preparing any of such documentation caused by changes requested by Tenant to any aspect of the Leasehold Improvements which were reflected in the documentation theretofore approved by Tenant, (iii) the number of days of delay in completing the Leasehold Improvements caused by the Tenant's early entry into the Leased Premises pursuant to Section 2.B of the Lease Agreement and (iv) the positive difference, if any, between the increase and decrease in the number of days required to complete the Leasehold Improvements caused by changes requested by Tenant to the working drawings after Tenant's approval thereof, in all instances net of any delay on the part of Landlord, its employees, agents or contractors.

6. Disclaimer of Warranty. **TENANT ACKNOWLEDGES THAT THE CONSTRUCTION AND INSTALLATION OF THE LEASEHOLD IMPROVEMENTS WILL BE PERFORMED BY AN UNAFFILIATED CONTRACTOR OR CONTRACTORS AND THAT ACCORDINGLY LANDLORD HAS MADE AND WILL MAKE NO WARRANTIES TO TENANT WITH RESPECT TO THE QUALITY OF CONSTRUCTION THEREOF OR AS TO THE CONDITION OF THE LEASED PREMISES, EITHER EXPRESS OR IMPLIED, AND THAT LANDLORD EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY THAT THE LEASED PREMISES ARE OR WILL BE SUITABLE FOR TENANT'S INTENDED COMMERCIAL PURPOSE. AS SET FORTH IN SECTION 27 OF THE LEASE, TENANT'S OBLIGATION TO PAY BASE AND ADDITIONAL RENTAL HEREUNDER IS NOT DEPENDENT UPON THE CONDITION OF THE LEASED PREMISES OR THE BUILDING OR THE PERFORMANCE BY LANDLORD OF ITS OBLIGATIONS HEREUNDER, AND TENANT SHALL CONTINUE TO PAY THE BASE AND ADDITIONAL RENT WITHOUT ABATEMENT, SETOFF OR DEDUCTION, NOTWITHSTANDING ANY BREACH BY LANDLORD OF ITS DUTIES OR OBLIGATIONS HEREUNDER, WHETHER EXPRESS OR IMPLIED, EXCEPT AS OTHERWISE PROVIDED IN THIS LEASE AGREEMENT**. However, Landlord agrees that in the event that any defect in the construction of the Leasehold Improvements are discovered, Landlord will diligently pursue and seek to enforce any warranties of the contractor(s) and/or the manufacturer of any defective materials incorporated therein.

7. Cost of Leasehold Improvements. Landlord shall pay all costs and expenses of the Leasehold Improvements (including labor, materials, construction management, architectural and engineering costs) up to the aggregate amount of $45.00 per square foot of Net Rentable Area of the Leased Premises (the "**Improvement Allowance**"). Landlord shall pay any invoices for consultants engaged directly by Tenant out of the Improvement Allowance within thirty (30) days after delivery. In the event that the cost and expense of constructing and installing any portion of the Leasehold Improvements exceeds the Improvement Allowance (the "**Excess Cost**"), then prior to Landlord's awarding of the construction contract with respect to the Leasehold Improvements or, as applicable, Landlord performing any change order work, Tenant shall deposit with Landlord, one hundred ten percent (110%) of the amount of Landlord's good faith, reasonable estimate of any Excess Cost, or security therefor in a form reasonably acceptable to Landlord. No more frequently than monthly, Landlord shall invoice Tenant for the portion of the Excess Cost expended by Landlord and unpaid by Tenant. Tenant shall pay the invoiced amount within ten (10) business days thereafter. Tenant shall be entitled to authorize Landlord to draw on its security for the invoice amount (plus any costs incurred by Landlord as a result of the draw), provided that the remaining security shall at all times be at least one hundred ten percent (110%) of the then-projected Excess Cost not yet expended. If Tenant pays the invoice amount, Landlord shall approve a reduction in the amount of the security, to an amount equal to one hundred ten percent (110%) of the then-projected Excess Cost not yet expended. In the event that any portion of the Improvement Allowance remains unused on the Leasehold Improvements Completion Date, Tenant shall have the option to have such unused amounts applied to Base Rent first due under this Lease Agreement. Notwithstanding anything in this Paragraph 7 to the contrary, the Improvement Allowance shall be reduced by an amount equal to the actual, reasonable cost (including labor, materials, construction management, architectural and engineering costs) of two (2) replacement restrooms to be constructed by Landlord on the eighth (8th) floor outside the Leased Premises, which replacement restrooms will be substantially similar in finish-out to the existing restrooms on the eighth (8th) floor and meet all applicable governmental codes, laws and regulations.

8. Construction Management Fee. Tenant acknowledges and agrees to pay Landlord a construction management fee equal to five percent (5%) of the total costs and expenses of the Leasehold Improvements, excluding "soft" costs incurred by Tenant, such as Tenant's interior architect and third-party consultants retained directly by Tenant. Such construction management fee may be paid for by Tenant out of the Improvement Allowance.

9. Builder's Risk Insurance. Landlord shall cause the general contractor to obtain and maintain Builder's Risk insurance on an "all risk" basis and on a completed value form including a Permission to Complete and Occupy endorsement, for full replacement value of the Leasehold Improvements, such policy naming Landlord and Tenant as additional insureds. The cost of such insurance shall be paid for out of the Improvement Allowance.

EXHIBIT H

AIR CONDITIONING AND HEATING SERVICES

Landlord will furnish Building standard chilled water for air conditioning and heating at such temperatures and in such amounts as are considered to be standard for other comparable medical office buildings in and in the vicinity of the Texas Medical Center area of Houston, Texas, twenty-four (24) hours per day, seven (7) days per week, to be paid for by Tenant as described below. Landlord shall install, as part of the Leasehold Improvements, to be paid for out of the Improvement Allowance, separate metering for all of Tenant's HVAC air handling units, heat exchangers and fan coil units (such HVAC air handling units, heat exchangers and fan coil units are hereinafter collectively referred to as the "**HVAC Equipment**" and such meters are hereinafter referred to as the "**BTU Meters**"). Tenant shall maintain and repair the HVAC Equipment and BTU Meters at Tenant's expense. The BTU Meters measure the energy consumed by the HVAC Equipment in British Thermal Units **(**"**BTUs**"). Tenant will pay Landlord the cost of the energy consumed by the HVAC Equipment (the "**Submetered BTU Charges**"), which cost shall be the product of (x) the BTUs (in millions) consumed during such month by the HVAC Equipment (as evidenced by the BTU Meters), multiplied by (y) the then-current per million BTU amount charged by Landlord in the Building generally to tenants leasing space in the tower portion of the Building, which amount shall be determined using the formula shown on **Exhibit H-1** attached hereto and made a part hereof for all purposes. Tenant acknowledges that **Exhibit II-I** applies the formula to the information available to Landlord as of the Effective Date, and that the amounts will be adjusted as of the Commencement Date based on updated information and thereafter from time to time based on the Kilowatt Hour Rate (as defined below). The "**Kilowatt Hour Rate**" shall mean the actual average cost per kilowatt hour charged by the utility company providing electricity to Landlord in the Building or, if said utility company shall cease charging for electricity on the basis of a kilowatt hour, then the Kilowatt Hour Rate shall mean the actual average cost per unit of measurement substituted therefor by said utility company. Tenant acknowledges that, during the Term, the Kilowatt Hour Rate is subject to fluctuation as prescribed by the applicable utility company. Landlord shall provide an invoice to Tenant for the Submetered BTU Charges on a monthly basis in arrears, which shall be paid by Tenant as Additional Rent on or before the first day of the calendar month following the month the invoice is provided, along with the remainder of the Additional Rent then due and owing by Tenant.

EXHIBIT H – I

HVAC CALCULATIONS

Summary Calculations — Last updated: 4/16/2012
Assumed Electrical Rate, $/KWHr **$0.07919** — Last printed: 4/16/2012

Power consumption at Full load	kw/ton	horsepower/ ton	watts/ton	kw/ton	kwh cost	Cost/ton per hour
Chillers	0.6505			0.6505	$ 0.792	$0.0515
Condenser water pumps		0.0833	62.25	0.0623	$ 0.792	$0.0049
Cooling towers		0.0694	51.875	0.0519	$ 0.792	$0.0041
Chilled water pumps		0.1111	83	0.0830	$ 0.792	$0.0066
Accessories and misc, items			4	0.0040	$ 0.792	$0.0003
				0.8516		$0.0674

Depreciation of Equipment	Years of service	Standard Hours/year	Total hours of service	Cost/ton	Cost/ton per hour
Chillers	20	8,760	175,200	$1,000	$0.0057
Cooling towers	20	8,760	175,200	$ 500	$0.0029
Air handling units	20	8,760	175,200	$1,250	$0.0071
Piping & ductwork	30	8,760	262,800	$ 600	$0.0023
Controls	10	8,760	87,600	$ 900	$0.0103
				$4,250	$0.0283

Return on Investment	ROI goal	Standard Hours/year	Cost/ton	Aver, Cost/ ton/year	Cost/ton per hour
Chillers	6.75%	8760	$1,000	$ 67.50	$0.0077
Cooling towers	6.75%	8760	$ 500	$ 33.75	$0.0039
Air handling units	6.75%	8760	$1,250	$ 84.38	$0,0096
Piping & ductwork	6.75%	8760	$ 600	$ 40.50	$0.0046
Controls	6.75%	8760	$ 900	$ 60.75	$0.0069
			$4,250	$ 286.88	$0.0327

Make up and Blow down Water	Cost/year	Standard Hours/year	Plant tonnes	Cost/ton per hour
Water cost, yr. 2011	$ 60,15	8,760	720	$0.0096

Total Costs	Cost/ton per hour	BTU/ton	Cost of MBTU
Power consumption	$0.0674	12,000	$ 5.62
Depreciation	$0.0283	12,000	$ 2.35
Return on Investment	$0.0327	12,000	$ 2.73
Make up and Blow down water	$0.0096	12,000	$ 0.80
	$0.1380		$ 11.50

EXHIBIT I

INSURANCE REQUIREMENTS

1. Tenant's Insurance.

a. Tenant, at its expense, shall obtain and keep in full force and effect during the Term:

i. a policy of commercial general liability insurance on an occurrence basis against claims for personal injury, bodily injury, death and/or property damage occurring in or about the Complex, under which Tenant is named as the insured and (a) Landlord, (b) Landlord's property manager, (c) any lender whose loan is secured by a lien against the Complex, (d) their respective shareholders, members, partners, affiliates and subsidiaries, successors and assigns, and (e) any directors, officers, employees, agents, or contractors of such persons or entities are named as additional insureds (collectively, the "**Landlord Parties**"). Such insurance shall provide primary coverage without contribution from any other insurance carried by or for the benefit of the Landlord Parties, and Tenant shall obtain blanket broad-form contractual liability coverage to insure its indemnity obligations set forth in Section 28 of the Lease Agreement. The minimum limits of liability applying exclusively to the Leased Premises shall be a combined single limit with respect to each occurrence in an amount of not less than $5,000,000; provided, however, that Landlord shall retain the right to require Tenant to increase such coverage from time to time to that amount of insurance which in Landlord's reasonable judgment is then being customarily required by landlords for similar office space in buildings comparable to the Building. The deductible or self insured retention amount for such policy shall not exceed $10,000;

ii. insurance against loss or damage by fire, and such other risks and hazards as are insurable under then available standard forms of "Special Form Causes of Loss" or "All Risk" property insurance policies with extended coverage, insuring Tenant's movable fixtures and movable partitions, telephone and other equipment, computer systems, trade fixtures, furniture, furnishings, and other items of personal property which are removable without material damage to the Building ("**Tenant's Property**") and all alterations and improvements to the Leased Premises (including the Leasehold Improvements constructed pursuant to Exhibit G to the Lease Agreement) to the extent such alterations and improvements exceed the cost of the improvements typically performed in connection with the initial occupancy of tenants in the Building ("**Building Standard Installations**"), for the full insurable value thereof or replacement cost thereof, having a deductible amount (or self-insured retention amount), not in excess of $25,000;

iii. during the performance of any alteration made after the Commencement Date, until completion thereof, Builder's Risk insurance on an "all risk" basis and on a completed value form including a Permission to Complete and Occupy endorsement, for full replacement value covering the interest of Landlord and Tenant (and their respective contractors and subcontractors) in all work incorporated in the Building and all materials and equipment in or about the Leased Premises;

iv. Workers' Compensation Insurance, as required by law;

v. Business Interruption Insurance in an amount equal to at least one year's Rent; and

vi. such other insurance in such amounts as the Landlord Parties may reasonably require from time to time.

b. All insurance required to be carried by Tenant (i) shall contain a provision that (x) no act or omission of Tenant shall affect or limit the obligation of the insurance company to pay the amount of any loss sustained, and (y) it shall be noncancellable and/or no material change in coverage shall be made thereto unless the Landlord Parties receive thirty (30) days' prior notice of the same via US mail, and (ii) shall be effected under valid and enforceable policies issued by reputable insurers permitted to do business in the State of Texas and rated in Best's Insurance Guide, or any successor thereto as having a "Best's Rating" of at least "A-" and a "Financial Size Category" of at least "X" or, if such ratings are not then in effect, the equivalent thereof or such other financial rating as Landlord may at any time consider appropriate.

c. On or prior to the Commencement Date, Tenant shall deliver to Landlord appropriate policies of insurance, including evidence of waivers of subrogation required to be carried pursuant to this **Exhibit I** and that the Landlord Parties are named as additional insureds (the "**Policies**"). Evidence of each renewal or replacement of the Policies shall be delivered by Tenant to Landlord at least ten (10) days prior to the expiration of the Policies. In lieu of the Policies, Tenant may deliver to Landlord a certification from Tenant's insurance company (on the form currently designated "Acord 27" (Evidence of Property Insurance) and "Acord 25-S" (Certificate of Liability Insurance), or the equivalent, provided that attached thereto is an endorsement to Tenant's commercial general liability policy naming the Landlord Parties as additional insureds) which shall be binding on Tenant's insurance company, and which shall expressly provide that such certification conveys to the Landlord Parties all the rights and privileges afforded under the Policies as primary insurance. Tenant will notify Landlord immediately upon receipt of any notice from its insurance carrier of cancellation or non-renewal of the coverages required under this Lease Agreement.

2. Landlord's Insurance.

a. Landlord shall keep the Building insured against damage and destruction by fire, vandalism, and other perils in the amount of the full replacement value of the Building (as determined for insurance purposes) as the value may exist from time to time, exclusive of foundations and footings, or such lesser amount as will avoid coinsurance.

b. Landlord shall maintain contractual and commercial general liability insurance, including bodily injury and property damage, with a minimum combined single limit of liability of $1,000,000 for bodily injury or death of any person occurring in or about the Building and $3,000,000 for injury, death, or damages resulting to more than one person in any one occurrence.

c. Notwithstanding the foregoing, in the event Landlord is an institutional owner, then Landlord may elect to self-insure with respect to the insurance coverages required by the terms of the Lease Agreement.

3. Waiver of Subrogation.

Landlord and Tenant shall each procure an appropriate clause in or endorsement to any property insurance covering the Complex and personal property, fixtures and equipment located therein, wherein the insurer waives subrogation or consents to a waiver of right of recovery, and Landlord and Tenant agree not to make any claim against, or seek to recover from, the other for any loss or damage to its property or the property of others resulting from fire or other hazards to the extent covered by the property insurance that was required to be carried by that party under the terms of the Lease Agreement. Tenant acknowledges that Landlord shall not carry insurance on, and shall not be responsible for, (i) damage to any alterations or improvements exceeding Building Standard Installations, (ii) Tenant's Property, and (iii) any loss suffered by Tenant due to interruption of Tenant's business.

EXHIBIT J

PREVIOUSLY GRANTED EXCLUSIVE USES

1. A full service health club and fitness facility offering such fitness programs, recreational facilities, personal training and other related services as Tenant may determine which may include, without limitation, the following primary permitted uses: a jogging track, weight and aerobic training, racquetball and other racquet sports, gymnasiums, basketball, swimming pool, jacuzzi, sauna and whirlpool facilities, steam rooms, aerobics and/or floor exercise, strength training, cardio fitness training, free weights, exercise machinery and equipment, martial arts, spinning, boxing, yoga, circuit training and personal training.

2. A long term acute care hospital.

3. A first class delicatessen style sandwich shop.

4. A medical facility having in the Building a linear accelerator, CT scan imaging equipment, PET scan imaging equipment and/or MRI equipment, all for oncological diagnosis and treatment purposes.

EXHIBIT K

MODIFIED BOMA STANDARD

Life Science Plaza Modified BOMA Standards

The following items constitute the "**Modified BOMA Standard**" as noted in the Lease Agreement. For the items not addressed in this modification, the BOMA standard **BOMA Z65.1-2010** or its successor shall prevail. A copy of the BOMA standards will be available for review in the management office located on the Penthouse floor, suite 1300 at Life Science Plaza.

The following are the modifications to the BOMA standard. Page numbers refer o the original BOMA document.

1. Definition: Major Vertical Penetrations, pg.2 shall read:

'Major vertical penetrations shall mean stairs, elevator shafts, flues, pipe shafts, vertical ducts and the like, and their enclosing walls. Atria, light-wells and similar penetrations above the finished floor are included in this definition. Not included, however, are vertical penetrations built for the private use of a tenant occupying office areas. These major vertical penetrations shall be considered private. Exclusive use of these spaces shall be directed by the Owner. If the tenant uses part of any or all of the vertical penetrations, the area used shall viewed as leasable/rentable space. Not withstanding the above, structural columns, openings for vertical electrical cable or telephone distribution are not considered to be major vertical penetrations.'

2. Definition: Office Area, pg.2 shall read:

'Office area shall mean the area where a tenant normally houses personnel, furniture, equipment and/or other items for the exclusive use of the tenant.'

3. Definition: Measuring Usable Area, pg.16 shall read:

'Usable area of an interior office area, interior store area or interior building common area shall be computed by the measuring the area enclosed by: the center line of the corridor and other permanent walls; tenant spaces abutting building common areas are measured to the centerline of walls that separate them; the dominant portion or a major vertical penetration; and the center of partitions that separate the area being measured from adjoining office areas, store areas and/or building common areas.'

4. Definition: Calculating Store Area, pg.20 shall read:

'Store area shall be computed by measuring the area enclosed by: the building line in the case of all exterior outside face/ façade wall surfaces; the center-line surface of the store area side of the corridor and other permanent walls; and the center of interior partitions that separate the store area from adjoining interior store areas, interior office areas and/or interior building common areas'.

EXHIBIT L

LIST OF PREVIOUSLY GRANTED RENEWAL OPTIONS, EXPANSION OPTIONS, RIGHTS OF FIRST OFFER AND RIGHTS OF FIRST REFUSAL,

1. Renewal Option granted to Houston Diagnostic Cath Lab, LP

EXHIBIT M

FORM OF SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

MassMutual Loan No. 0642101

Massachusetts Mutual Life Insurance Company
c/o Cornerstone Real Estate Advisers
One Financial Plaza
Hartford, Connecticut 06103
Attention: Finance Group Loan Servicing

Re: Life Science Plaza located at 2130 West Holcombe Boulevard, Houston, Texas 77030

The undersigned, Bellicum Pharmaceuticals, Inc., **(**"**Tenant**") understands that Massachusetts Mutual Life Insurance Company **(**"**Lender**") has made or will be making a loan (the "**Loan**") to Sheridan Hills Developments L.P. **(**"**Landlord**") secured by a mortgage or deed of trust (the "**Mortgage**") encumbering the real property (the "**Property**") described on Exhibit A, attached hereto and made a part hereof. Tenant and Landlord entered into a lease agreement (the "**Lease**") dated June 1, 2012 by which Tenant leased from Landlord certain premises commonly known as Suite 850 located on the eighth (8th) floor of that certain medical office building located at 2130 West Holcombe Boulevard, Houston, Harris County, Texas 77030 (the "**Leased Premises**"), and constituting a portion of the Property. Tenant desires to be able to obtain the advantages of the Lease and occupancy thereunder in the event of foreclosure of the Mortgage and Lender wishes to have Tenant confirm the priority of the Mortgage over the Lease.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, the parties hereto agree as follows:

1. Tenant hereby subordinates all of its right, title and interest under the Lease to the lien, operation and effect of the Mortgage s (as the same may be modified and/or extended from time to time) now or hereafter in force against the Property, and to any and all existing and future advances made under such Mortgage.

2. In the event that Lender becomes the owner of the Property by foreclosure, deed in lieu of foreclosure, or otherwise, Tenant agrees to unconditionally attorn to Lender and to recognize it as the owner of the Property and the Landlord under the Lease. The Lender agrees not to terminate the Lease or disturb or interfere with Tenant's possession of the Leased Premises during the term of the Lease, or any extension or renewal thereof, so long as Tenant is not in default under the Lease beyond applicable notice, grace and cure periods, if any.

3. Tenant agrees to commence paying all rents, revenues and other payments due under the Lease directly to Lender after Lender notifies Tenant that Lender is the owner and holder of the Loan and is invoking Lender's rights under the Loan documents to directly receive from Tenant all rents, revenues and other payments due under the Lease. By making such payments to Lender, Tenant shall be deemed to have satisfied all such payment obligations to Landlord under the Lease.

4. This Agreement shall inure to the benefit of and be binding upon Lender's affiliates, agents, co-lenders and participants, and each of their respective successors and assigns (each a "**Lender Party**" and collectively, the "**Lender Parties**").

IN WITNESS WHEREOF, the parties hereto have caused this Subordination, Non-Disturbance and Attornment Agreement to be duly executed as of the day of June, 2012.

TENANT:

Bellicum Pharmaceuticals, Inc.

By: _____
Name: _____
Title: _____

LANDLORD:

Sheridan Hills Developments L.P.,
a Texas limited partnership

By: Pouncet Sheridan Inc., an Ontario,
Canada corporation, its general partner

By: _____
Name: _____
Title: _____

LENDER:

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

By: Cornerstone Real Estate Advisers LLC,
its authorized agent

By: _____
Name:
Title:

NOTARY ACKNOWLEDGEMENTS

STATE OF_____)
) ss.
COUNTY OF_____)

On this, the day of June, 2012, before me, the undersigned party, personally appeared who acknowledged himself/herself to be the of Bellicum Pharmaceuticals, Inc., a Delaware corporation, and that he/she as such , being authorized to do so, executed the foregoing Subordination, Non-disturbance and Attornment Agreement for the purposes therein contained by signing the name of the by himself/herself as .

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public
My Commissions Expires:

STATE OF_____)
) ss.
COUNTY OF_____)

On this, the day of June, 20 , before me, the undersigned party, personally appeared who acknowledged himself/herself to be the of , a , and that he/she as such , being authorized to do so, executed the foregoing Subordination, Non-disturbance and Attornment Agreement for the purposes therein contained by signing the name of the by himself/herself as .

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public
My Commissions Expires:

STATE OF_____)
) ss.
COUNTY OF_____)

On this, the day of June, 20 , before me, the undersigned party, personally appeared who acknowledged himself/herself to be the of Cornerstone Real Estate Advisoers LLC, a Delaware limited liability company, and that he/she as such , being authorized to do so, executed the foregoing Subordination, Non-disturbance and Attornment Agreement for the purposes therein contained by signing the name of the corporation by himself/herself as .

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

My Commissions Expires:

EXHIBIT A

LEGAL DESCRIPTION

All that certain 2.3391 acres being all of Restricted Reserve “A”, Block 1, Twenty-One Thirty West Holcombe Boulevard Replat No. 1 according to the plat thereof as filed in Film Code Number 595196, Harris County Map Records, in the P. W. Rose Survey, Abstract - 645, Houston, Harris County, Texas, and being more particularly described by metes and bounds as follows (bearings based on Texas Coordinate System of 1983, South Central Zone);

Commencing at Harris County Floodplain Reference Mark Number 040110 being a brass disc stamped “040110” having published coordinates of (X: 3,110,377.78) and (Y: 13,820,307.50) from which Harris County Floodplain Reference Mark Number 040115 being a brass disc stamped “D100 BM16” bears S 70° 42’ 24” W - 1,730.12’ for reference; Thence N 36° 12’ 56” W - 1,995.95’ to a found 3/4” iron pipe with cap (stamped C.L. DAVIS RPLS 4464) marking the southeast corner of said Restricted Reserve “A” from which a found 3/4” iron pipe bears N 79° 32’ 53” E - 0.69’ for reference and marking the POINT OF BEGINNING of herein described tract;

1. Thence S 87° 49’ 11” W - 932.20’ with the north right-of-way line of West Holcombe Boulevard (120’ wide) to a found 1” iron pipe marking the southwest corner of said Restricted Reserve “A”;

2. Thence N 02° 10’ 49” W - 104.62’ with the east right-of-way line of Mont Clair Drive (60’ wide) to a 1” pinch top pipe marking the southwest corner of Lot 22, Block 7, Replat of Southgate Addition Section No. 3 according to the plat thereof as filed in Volume 26, Page 16, Harris County Map Records;

3. Thence N 87° 52’ 11” E - 798.90’ north line of said Reserve “A” to a found 5/8” iron rod for corner;

4. Thence N 59° 45’ 09” E - 151.07’ with the south line of Lots 9 - 11, Block 7 of said Replat of Southgate Addition, Section No. 3 to a found 5/8’ iron rod for corner;

5. Thence S 02° 10’ 49” E - 175.00’ with the west line of that certain tract described in a deed dated 06-301986 from Miller Hotel Development, Incorporated to Burger King Corporation as filed in Official Records of Real Property of Harris County at Clerk’s File Number K-700805, Film Code 056-71-1646 to the POINT OF BEGINNING and containing 2.3391 (101,892 square feet) of land more or less.

Exhibit 10.14

FIRST AMENDMENT TO LEASE AGREEMENT

THIS FIRST AMENDMENT TO LEASE AGREEMENT (this "***First Amendment***") is made and entered into as of the 13th day of September, 2013 (the "***Amendment Effective Date***") by and between SHERIDAN HILLS DEVELOPMENTS L.P. ("***Landlord***") and BELLICUM PHARMACEUTICALS, INC. ("***Tenant***").

W I T N E S S E T H :

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement dated June 1, 2012 (the "***Lease***"), with a Commencement Date of December 17, 2012, whereby Landlord leased to Tenant 10,611 square feet of net rentable area on the eighth (8th) floor, as indicated on the floor plan attached as Exhibit A to the Lease (the "***Original Leased Premises***") in the office building located at 2130 West Holcombe Boulevard, Houston, Harris County, Texas 77030 (the "***Building***"); and

WHEREAS, Tenant has, as of the date hereof, exercised the Hold Option provided for in Section 1.E of the Lease, pursuant to which the Hold Space [being that area containing approximately 3,644 square feet of net rentable area on the eighth (8th) floor of the Building, as indicated on the floor plan attached as Exhibit A-1 to the Lease] is being added to the Original Leased Premises (the Original Leased Premises, together with the Hold Space is hereinafter collectively referred to as the "***Leased Premises***"); and

WHEREAS, Landlord and Tenant desire to amend the Lease to reflect the addition of the Hold Space.

NOW, THEREFORE, in consideration of Ten and No/100 Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [the parties hereto agree as follows:

1. Delivery. The parties confirm that: the Hold Space has been delivered to Tenant in accordance with Section 1.E of the Lease and accepted by Tenant; that the Hold Space Delivery Date is September 23, 2013; and that the Hold Space Commencement Date is November 22, 2013.

2. Net Rentable Area. Landlord confirms the Net Rentable Area of the Hold Space to be exactly 3,644 square feet, in accordance with the provisions of Section 1.B of the Lease.

3. Tenant Improvement Allowance. Tenant shall be entitled to a tenant improvement allowance in the amount of $133,989.88 [being $36.77 per square foot of Net Rentable Area of the Hold Space], to be paid by Landlord to Tenant in accordance with the provisions of Section 7 of Exhibit G to the Lease.

4. Leased Premises. As of November 22, 2013, the Net Rentable Area of the Leased Premises shall be 14,255 square feet.

5. Security Deposit. Tenant agrees to pay Landlord the further sum of $9,185.92 on the Hold Space Commencement Date, to be held as security in accordance with Section 4 of the Lease. Subject to Landlord's timely receipt of such sum, the amount of the Security Deposit referred to in Section 4 of the Lease is amended to $36,330.25.

6. Base Rent. The parties hereby amend Section 5 of the Lease such that the monthly payments of Base Rent to be paid by Tenant to Landlord are adjusted as follows:

Month beginning:
November 1, 2013 – $27,553.64
December 1, 2013 – $33,846.05
Each month from January 1, 2014 to November 1, 2014 – $34,152.60
December 1, 2014 – $34,440.00
Each month from January 1, 2015 to November 1, 2015 – $34,746.56
December 1, 2015 – $35,033.96
Each month from January 1, 2016 to November 1, 2016 – $35,340.52
December 1, 2016 – $35,627.92
Each month from January 1, 2017 to November 1, 2017 – $35,934.48
December 1, 2017 – December 16, 2017 (Expiration Date) – $18,546.83

7. Additional Rent. The amount of Additional Rent payable under the Lease is hereby revised to reflect the new area of the Leased Premises, effective as of the Hold Space Commencement Date.

8. Miscellaneous.

(a) Amendment to Lease. The parties acknowledge and agree that the Lease has not been amended or modified in any respect, other than by this First Amendment, and there are no other agreements of any kind currently in force and effect between the parties with respect to the Premises or the Building. The term "***Lease***" shall mean the Lease as so amended, unless the context requires otherwise.

(b) Counterparts. This First Amendment may be executed in multiple counterparts, and each counterpart when fully executed and delivered shall constitute an original instrument, and all such multiple counterparts shall constitute but one and the same instrument.

(c) Entire Agreement. The Lease as amended by this First Amendment sets forth all covenants, agreements and understandings among the parties with respect to the subject matter hereof and there are no other covenants, conditions or understandings, either written or oral, between the parties hereto except as set forth in the Lease.

(d) Full Force and Effect. Except as expressly amended hereby, all other items and provisions of the Lease, as amended, remain unchanged and continue to be in full force and effect.

(e) Conflicts. The terms of this First Amendment shall control over any conflicts between the terms of the Lease and the terms of this First Amendment.

(f) Authority of Tenant. Tenant warrants and represents unto Landlord that (i) Tenant has full right and authority to execute, deliver and perform this First Amendment; and (ii) the person executing this First Amendment was authorized to do so.

(g) Capitalized Terms. Capitalized terms not defined herein shall have the same meanings attached to such terms under the Lease.

(h) Successors and Assigns. This First Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

(i) Governing Law. This First Amendment shall be governed by, and construed in accordance with, the laws of the State of Texas.

IN WITNESS WHEREOF, executed by each party hereto on the date set forth beside such party's signature, to be effective as of the Amendment Effective Date.

"***Landlord***"

Sheridan Hills Developments L.P.,
a Texas limited partnership

By: Pouncet Sheridan, Inc, an Ontario,
Canada corporation, its general partner

By: /s/ L. Lubin
Name: L. Lubin
Title: Vice President

"***Tenant***"

BELLICUM PHARMACEUTICALS, INC., a Delaware corporation

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & CEO

Address: Suite 850, 2130 West Holcombe, Houston, TX 77030

Exhibit E-1

ACCEPTANCE OF PREMISES MEMORANDUM

This Memorandum is an Amendment to the First Amendment To Lease Agreement for space in 2130 West Holcombe, Harris County, Texas 77030 executed on the 13th day of September, 2013 for space in 2130 West Holcombe Boulevard, Houston, Harris County, Texas, between Sheridan Hills Developments L.P., a Texas limited partnership, as "Landlord" and Bellicum Pharmaceuticals, Inc. a Delaware corporation, "Tenant".

Landlord and Tenant hereby agree that:

1. The First Amendment Leased Premises consists of approximately 3,644 square feet of Net Rentable Area. The total Leased Premises consists of 14,255 square feet of Net Rentable Area.
2. The Security Deposit is agreed to be increased $9,185.92 in accordance with Section 4 of the Lease.
3. Tenant shall be entitled to an Improvement Allowance for the Hold Space in the amount of $133,989.88 to be paid by Landlord to the Tenant in accordance with the provisions of Section 7 of Exhibit G to the Lease.
4. The Delivery Date of the First Amendment to Lease Agreement is hereby agreed to be September 23, 2013.
5. The Commencement Date of the Hold Space in the First Amendment to Lease Agreement is hereby agreed to be November 22, 2013.
6. The Expiration Date of the Hold Space in First Amendment to Lease Agreement is hereby agreed to be December 16, 2017.

All other terms and conditions of the Lease Agreement are hereby ratified and acknowledged to be unchanged.

Agreed and Executed this 21st day of November, 2013.

LANDLORD:

SHERIDAN HILLS DEVELOPMENTS, L.P.
a Texas limited partnership

By: Pouncet Sheridan Inc., an Ontario Canada corporation
Its general partner

By: _____
Print Name: _____
Print Title: _____

TENANT:

Bellicum Pharmaceuticals, Inc.

By: /s/ Thomas J. Farrell
Thomas J. Farrell
President and CEO

Exhibit 10.15

*****Text Omitted and Filed Separately**
with the Securities and Exchange Commission
Confidential Treatment Requested
Under 17 C.F.R. Sections 200.80(b)(4)
and 230.406

AMENDED AND RESTATED LICENSE AGREEMENT

This Amended and Restated License Agreement (this "**Agreement**") is made effective as of March 7, 2011 (the "**Effective Date**") by and between ARIAD Pharmaceuticals, Inc., a Delaware corporation with its principal place of business at 26 Landsdowne Street, Cambridge, MA 02139 ("**ARIAD**"), and Bellicum Pharmaceuticals, Inc., a Delaware corporation with a place of business at 6400 Fannin St., Suite 2300, Houston, TX 77030 ("**Bellicum**"). ARIAD and Bellicum are each hereafter referred to individually as a "**Party**" and together as the "**Parties**".

WHEREAS, ARIAD is the owner of or otherwise controls certain proprietary Licensed Patent Rights and Licensed Technology (each as defined below); and

WHEREAS, Bellicum owns or otherwise controls the Bellicum Patent Rights and Bellicum Technology (as defined below); and

WHEREAS, the Parties and ARIAD Gene Therapeutics, Inc. ("**AGTI**") previously entered into that certain License Agreement, dated July 25, 2006 (the "**2006 Agreement**"), under which ARIAD and Bellicum each granted certain licenses to the other, subject to the terms and conditions of the 2006 Agreement; and

WHEREAS, AGTI has merged into ARIAD; and

WHEREAS, ARIAD has certain rights pursuant to its […***…] with […***…], including a non-exclusive license to certain intellectual property and a separate right to enter negotiations to obtain an exclusive license to intellectual property, both cases involving […***…]; and

WHEREAS, Bellicum desires that ARIAD waive the right to pursue an exclusive license to intellectual property relating to […***…] so that Bellicum may obtain a license to that intellectual property from […***…]; and

WHEREAS, Bellicum desires to convert its non-exclusive license to Licensed Patent Rights and Licensed Technology under the 2006 Agreement to an exclusive license to develop and commercialize Licensed Products (as defined below) and to expand the Primary Indications to which such exclusive license will apply; and

WHEREAS, the Parties now desire to amend and restate the 2006 Agreement in its entirety as of the Effective Date as set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

1. DEFINITIONS

Whenever used in the Agreement with an initial capital letter, the terms defined in this Article 1 shall have the meanings specified.

1.1 "Additional Indication" shall mean each specific cancer indication (other than […***…]) which Bellicum elects to include in the Licensed Field pursuant to the provisions of Section 2.1.2(a).

1.2 "**Affiliate**" shall mean any corporation, firm, Limited Liability Company, partnership or other entity that directly controls or is controlled by or is under common control with a Party to this Agreement. For purposes of this Section 1.2, "control" means ownership, directly or indirectly through one or more Affiliates, of fifty percent (50%) or more of the shares of stock entitled to vote for the election of directors, in the case of a corporation, or fifty percent (50%) or more of the equity interests in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby a Party controls or has the right to control the Board of Directors or equivalent governing body of a corporation or other entity.

1.3 "**Adverse Event**" shall mean any untoward medical occurrence in a patient or subject who is administered a Licensed Product, whether or not considered related to the Licensed Product, including, without limitation, any undesirable sign (including abnormal laboratory findings of clinical concern), symptom or disease temporally associated with the use of such Licensed Product.

1.4 "**Antigen**" shall mean a molecule that causes an immune system response.

1.5 "**ARIAD Data**" shall have the meaning set forth in Section 2.1.6.

1.6 "**ARIAD Dimerizer**" shall mean the compound known as AP1903, all analogs and derivatives of AP1903 and any Dimerizer or salt thereof, where the composition of matter thereof or its use as a divalent ligand is, at any time during the Primary License Term, within the scope of a claim in any patent or patent application within the Licensed Patent Rights.

1.7 "**ARIAD Dimerizer Product**" shall mean (i) an ARIAD Dimerizer or (ii) a Licensed Product in which dimerization is effected with an ARIAD Dimerizer.

1.8 "**ARIAD Indemnitees**" shall have the meaning set forth in Section 8.1.1.

1.9 "**ARIAD Products**" shall mean any product (a) that comprises or incorporates an ARIAD Dimerizer or Non-ARIAD Dimerizer or (b) that comprises a cell transfected with both (but not limited to) a gene for an Antigen and a gene for an Inducible Costimulatory Molecule where the gene for the Inducible Costimulatory Molecule is activated using an ARIAD Dimerizer or a Non-ARIAD Dimerizer.

1.10 "**ARIAD Regulatory Information**" shall have the meaning set forth in Section 2.1.6.

1.11 "[…***…]" shall mean […***…].

1.12 "[…***…]-**ARIAD MTA Technologies**" shall mean technologies resulting from experiments conducted with the materials provided pursuant to any of the […***…] Agreements whether or not the quantities of such materials used in the experiments were manufactured by ARIAD, including without limitation, the technologies known as […***…], […***…], […***…], […***…], […***…], […***…], […***…], […***…], and any other technologies disclosed in the patent applications or patents listed in "Licensed Patent Rights Covering […***…]-ARIAD MTA Technologies in Schedule A.

1.13 "[…***…] **Agreement**" shall mean each and any of (a) the […***…] between […***…] and ARIAD, (b) the […***…] between […***…] and ARIAD, (c) the […***…] between […***…] and ARIAD, (d) the […***…] between […***…] and ARIAD, (e) the […***…] between […***…] and ARIAD, and (f) the […***…] between […***…] and ARIAD, each as amended, which collectively cover, inter alia, the […***…]-ARIAD MTA Technologies.

1.14 "**Bellicum Data**" shall have the meaning set forth in Section 2.2.2.

1.15 "**Bellicum Indemnitees**" shall have the meaning set forth in Section 8.1.2.

1.16 "**Bellicum Information**" shall have the meaning set forth in Section 3.1.1.

1.17 "**Bellicum Patent Rights**" shall mean all Patent Rights Controlled by Bellicum as of the Original Effective Date or during the period from the Original Effective Date through the end of the Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of any ARIAD Product or Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer; provided, however, that Bellicum Patent Rights does not include any Patent Rights claiming (a) the composition of matter of any Antigen or Inducible Costimulatory Molecule, or (b) the composition of matter of any product (or treatment regime or process using a product) comprising a dendritic cell transfected with both (i) a gene for any Antigen, a peptide or protein that is an Antigen or an RNA that induces the expression of any Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any method of manufacture or use for such Antigen, Inducible Costimulatory Molecule or product described in clause (b) (or treatment regime or process using such product). Bellicum Patent Rights excludes all Patent Rights licensed to Bellicum or ARIAD by […***…] that cover any of the […***…]-ARIAD MTA Technologies.

1.18 "**Bellicum Regulatory Information**" shall have the meaning set forth in Section 2.2.2.

1.19 "**Bellicum Technology**" shall mean all Technology, whether or not patentable, Controlled by Bellicum as of the Original Effective Date or during the period from the Original Effective Date through the end of the Term, which is necessary or useful to practice any patent or patent application included in the Bellicum Patent Rights or is necessary or useful for the development, manufacture, use, sale, offer for sale or import of any ARIAD Product or any Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer. Bellicum Technology includes, without limitation, the Bellicum Information described in Section 3.1.1; provided, however, that

Bellicum Technology does not include any Technology specifically pertaining to (a) any Antigen or Inducible Costimulatory Molecule, or (b) any product, or treatment regime or process using any product, comprising a dendritic cell transfected with both (i) a gene for any Antigen, a peptide or protein that is an Antigen or an RNA that induces the expression of any Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any manufacture or use of such Antigen, Inducible Costimulatory Molecule or product described in clause (b) (or treatment regime or process using such product). Bellicum Technology excludes all Technology licensed to Bellicum or ARIAD by […***…] that covers any of the […***…]-ARIAD MTA Technologies.

1.20 "**BLA**" shall mean a biologics license application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed with the FDA seeking Regulatory Approval to market and sell any Licensed Product in the United States for a particular indication within the Licensed Field.

1.21 "**Cell Transplantation Indication**" shall mean (i) GvHD or (ii) any other acute or chronic adverse clinical effect in a human being resulting from transplantation of bone marrow, hematopoietic or stem cells that can be treated by inducing apoptosis of transplanted cells, or (iii) in the case of a bone marrow, hematopoietic or stem cell product for transplantation that includes cells containing a gene coding for an Inducible Caspase, any disease or condition in a human being that can be treated by such product, where such treatment can lead to an indication in subsection (i) or (ii).

1.22 "**Common Stock**" shall mean (i) the common stock, par value $0.01 per share, of Bellicum and (ii) any other securities into which or for which any of the securities described in the foregoing clause (i) may be converted or exchanged pursuant to a plan of recapitalization, reorganization, merger, consolidation, sale of assets or other similar transaction.

1.23 "**Competition**" shall mean, with respect to a Licensed Product sold by Bellicum or an Affiliate or Sublicensee thereof in a given country, that one or more Third Parties are selling any product for the same indication, which product (a) would infringe a Valid Claim of the Licensed Patent Rights Listed in Part I of Schedule A but for the expiration of those Licensed Patent Rights in that country, (b) contains the same or equivalent (by applicable Regulatory Authority standards) active pharmaceutical ingredient(s) as contained in such Licensed Product in such country, and (c) sales of such product(s) represent at least […***…] percent ([…***…]%) of the total market share by volume for all sales of such product(s) and the Licensed Product in such country for any calendar quarter (as measured by reputable published data for such country, e.g. by reference to market share data collected by IMS).

1.24 "**Confidential Information**" shall mean with respect to a Party (the "Receiving Party"), all information which is disclosed by the other Party (the "Disclosing Party") to the Receiving Party hereunder or to any of its employees, consultants, Affiliates, licensees or sublicensees, except to the extent that the Receiving Party can demonstrate by written record or other suitable physical evidence that such information, (a) as of the date of disclosure is demonstrably known to the Receiving Party or its Affiliates other than by virtue of a prior confidential disclosure to such Party or its Affiliates; (b) as of the date of disclosure is, or subsequently becomes, publicly known, through no fault or omission of the Receiving Party; (c) is obtained from a Third Party having a lawful right to make such disclosure free from any obligation of confidentiality to the Disclosing Party; or (d) is independently developed by or for the Receiving Party without reference to or reliance upon any Confidential Information of the Disclosing Party.

1.25 "**Confidentiality Agreement**" shall have the meaning set forth in Section 5.1.

1.26 "**Control**" or "**Controlled**" shall mean with respect to any Patent Rights or Technology, the possession by a Party of the ability to grant a license or sublicense of such Patent Rights or Technology as provided for herein, without violating the terms of any arrangement or agreement between such Party and any Third Party.

1.27 "Convertible Securities" shall mean any stock, notes, warrants, options or other securities, including without limitation, all Options, entitling the holder to convert, exercise, or exchange such security for an ascertainable number of shares of Common Stock. For the avoidance of doubt, the Notes shall not be deemed to be Convertible Securities unless and until they are not repaid on the Maturity Date (as defined in the Note), and the Warrants shall not be deemed to be Convertible Securities until they become exercisable.

1.28 "**Dimerizer**" shall mean any molecule that is not a […***…] Analog and that induces the interaction or proximity of two or more proteins, modified to contain a dimerizer-binding domain, resulting in the activation of specific cell signaling, gene transcription, or protein secretion events in cultured cells, whole animals or humans.

1.29 "**Drug Approval Application**" shall mean any application for Regulatory Approval (including pricing and reimbursement approvals) required prior to any commercial sale or use of a Licensed Product in any country or jurisdiction in the Territory, including, without limitation, any BLA, NDA, MAA or equivalent application for Regulatory Approval filed with the FDA or any other Regulatory Authority required prior to any commercial sale or use of a Licensed Product in any country or jurisdiction in the Territory.

1.30 "**Equity Financing**" shall mean a bona fide issuance and sale of Common Stock or Convertible Securities other than upon the grant or exercise of any Option.

1.31 "**Existing Bellicum Product**" shall have the meaning set forth in Section 2.2.1(a).

1.32 "**Expansion Period**" shall have the meaning set forth in Section 2.1.2(a).

1.33 "**First Commercial Sale**" shall mean, on a country-by-country basis, the date of the first arm's length transaction, transfer or disposition for value to a Third Party of (i) a Licensed Product by or on behalf of Bellicum or any Affiliate of Bellicum or Sublicensee in such country or (ii) of an ARIAD Product by or on behalf of ARIAD or any Affiliate or sublicensee of ARIAD in such country.

1.34 "**FDA**" shall mean the United States Food and Drug Administration and any successor agency or authority thereto.

1.35 "**GvHD**" shall mean a clinical condition involving acute or chronic adverse effects or symptoms resulting from the allogenic transplantation of bone marrow, hematopoietic or stem cells into a human being in which engrafted donor cells attack the patient's organs and tissues which can be treated by activating cell signaling leading to apoptosis of the transplanted cells.

1.36 "[…***…]" shall mean the […***…].

1.37 "[…***…]" shall mean the […***…].

1.38 "**Improvement**" shall mean any invention or discovery created or otherwise Controlled by ARIAD or Bellicum during the period from the Original Effective Date through the end of the Term, which constitutes an enhancement or modification of any invention within the Licensed Technology or Licensed Patent Rights, together with the Patent Rights and Technology that claim or cover such invention or discovery; provided, however, that Improvement does not include (a) any Antigen or Inducible Co-Stimulatory Molecule, (b) any product (or treatment regime or process using a product), comprising (i) a dendritic cell transfected with both a gene for any Antigen, a peptide or a protein that is an Antigen or an RNA that induces the

expression of an Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any method of manufacture or use for such Antigen, Inducible Co- Stimulatory Molecule or product described in clause (b) (or treatment regime or process using such product), and, in each case, the Patent Rights and Technology that claim or cover such invention or discovery.

1.39 "**IND**" shall mean an investigational new drug application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed or to be filed with the FDA with regard to any Licensed Product.

1.40 "**Indemnitees**" and "**Indemnifying Party**" shall have the meaning set forth in Section 8.2.

1.41 "**Inducible Caspase**" shall mean iCASP9 or icp30CASP9 or another molecule that will activate signaling leading to apoptosis. For purposes of this definition, the following terms shall have the meanings set forth in the following literature references:

- […***…]
- […***…]

1.42 "**Inducible Costimulatory Molecule**" shall mean iCD40, iTLR or another molecule that will activate signaling leading to maturation and activation of dendritic cells, including any chimera of the foregoing. For purposes of this definition, the following terms shall have the meanings set forth in the following literature references:

- […***…]
- […***…]

1.43 "**Licensed Field**" shall mean the treatment or prevention of the progression or occurrence in humans of any Primary Indication and/or any Additional Indication, […***…] to the extent permitted under Section 2.1.1 or any non-cancer indication as provided in Section 2.1.2(b), as the case may be.

1.44 "**Licensed Patent Rights**" shall mean (a) all Patent Rights Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of Licensed Products or of Dimerizers used or incorporated in Licensed Products, including without limitation Patent Rights covering the […***…]- ARIAD MTA Technologies and (b) all Patent Rights whether or not controlled by ARIAD that are listed on Schedule A, attached hereto and made a part hereof, regardless of the ownership of such Patent Rights. The Licensed Patent Rights as of the Effective Date are listed in Schedule A, attached hereto and made a part hereof, which shall be updated, as necessary, from time to time by ARIAD by written notice to Bellicum.

1.45 "Licensed Product" shall mean: (a) cancer vaccines (whether used prophylactically or therapeutically), the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Patent Rights or by Technology, which Patent Rights or Technology are Controlled by Bellicum or its Affiliate (including, without limitation Patent Rights licensed or assigned to Bellicum that cover any of the […***…]-ARIAD MTA Technologies), either (x) containing both (but not limited to) (i) a gene for a […***…] Antigen or other Antigen directed to any indication within the Licensed Field and (ii) one or more genes for Inducible Costimulatory Molecules, (y) containing a dendritic cell transfected with both (but not limited to) (i) a gene for a […***…] Antigen or other Antigen directed to any indication within the Licensed Field and (ii) one or more genes for Inducible Costimulatory Molecules, or (z) containing (i) a peptide or protein that is a […***…] Antigen or other Antigen directed to any indication within the Licensed Field or an RNA that induces the expression of a […***…] Antigen or other Antigen

directed to any indication within the Licensed Field and (ii) a dendritic cell transfected with one or more genes for Inducible Costimulatory Molecule(s) where in any such case ((x), (y) or (z)) the encoded Inducible Costimulatory Molecule(s) are activated upon dimerization using a Dimerizer; (b) a gene or a cell transfected with such gene coding for an Inducible Caspase, either alone or in combination with other adjuvant genes (such as IL-12 or HSP), where the gene coding for such Inducible Caspase is activated upon dimerization of a Dimerizer; (c) Dimerizers for use with the products described in clauses (a) or (b) of this Section 1.45; and (d) any treatment regimen or process utilizing any products described in clauses (a), (b) or (c) of this Section 1.45; provided, however, that in the event the Licensed Field is expanded pursuant to Section 2.1.2(b) to include any non-cancer indication, clause (a) of this Section 1.45 shall include vaccines (as described therein) directed at such indication as well as cancer vaccines.

1.46 "**Licensed Technology**" shall mean and include all Technology, whether or not patentable, Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which (a) is necessary or useful to practice any patent or patent application included in the Licensed Patent Rights (including without limitation Patent Rights Controlled by ARIAD covering the […***…]-ARIAD MTA Technologies) or (b) is necessary or useful to practice any license granted to Bellicum hereunder. The Licensed Technology includes the ARIAD Regulatory Information and ARIAD know how and trade secrets including but not limited to the following technology for the manufacture of Dimerizers: optimum choice of synthetic route, optimized process steps and parameters, analytic methods using authentic standards to control chemical and chiral purity through the manufacturing path, background data supporting the chemical and chiral proof of structure of key intermediates, the structural identification of impurities characteristic of this route, their HPLC characteristics, and the qualification of these impurities for regulatory purposes.

1.47 "**Losses**" shall have the meaning set forth in Section 8.1.1.

1.48 "**MAA**" shall mean an application filed with the relevant Regulatory Authorities in Europe seeking Regulatory Approval to market and sell any Licensed Product in Europe or any country or territory therein for a particular indication within the Licensed Field.

1.49 "**NDA**" shall mean a new drug application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed with the FDA seeking Regulatory Approval to market and sell any Licensed Product in the United States for a particular indication within the Licensed Field.

1.50 "**Net Sales**" shall mean the gross invoiced sales price for each Licensed Product sold by Bellicum, its Affiliates or Sublicensees to Third Parties throughout the Territory, less the following amounts incurred or paid by Bellicum or its Affiliates or Sublicensees with respect to sales of Licensed Products:

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…];

(e) […***…]; and

(f) […***…].

"Net Sales" shall not include sales or transfers between Bellicum and its Affiliates or Sublicensees, unless the Licensed Product is consumed by the Affiliate or Sublicensee. All sales and dispositions of Licensed Product for clinical or pre-clinical studies and "compassionate use" sales shall also be disregarded for purposes of calculating Net Sales.

1.51 "**Non-ARIAD Dimerizer**" shall mean any Dimerizer other than an ARIAD Dimerizer that is, at any time during the Primary License Term, within the scope of a claim other than a claim covering the composition of matter thereof or its use as a divalent ligand, but including, without limitation, any manufacture or use claim, in any patent or patent application within the Licensed Patent Rights.

1.52 "**Non-ARIAD Dimerizer Product**" shall mean (i) a Non-ARIAD Dimerizer or (ii) a Licensed Product in which dimerization is effected with a Non- ARIAD Dimerizer.

1.53 "**Non-Cancer Expansion Period**" shall have the meaning set forth in Section 2.1.2(b).

1.54 "**Non-Cancer Negotiation Period**" shall have the meaning set forth in Section 2.1.2(b).

1.55 "**Notes**" shall mean the series of […***…].

1.56 "**Option**" shall mean options or other securities granted or issued pursuant to any Stock Plan.

1.57 "**Original Effective Date**" shall mean July 25, 2006.

1.58 "**Orphan Drug Designation**" shall mean the request for designation of AP1903 for the treatment of GvHD as an orphan drug under 21 C.F.R. §316.20 that has been granted by the FDA under 21 C.F.R. §316.24.

1.59 "**Patent Rights**" shall mean all patents and patent applications, including, without limitation, certificates of invention and applications for certifications of invention, registered designs and registered design applications, industrial designs and industrial design applications and registrations, reissues, reexaminations, extensions, substitutions, confirmations, registrations, revalidations, renewals, term restorations, additions, provisionals, continuations, continuations-in-part, divisions, continued prosecution applications, and requests for continued examination thereof.

1.60 "**Phase 1 Clinical Trial**" shall mean, as to a particular Licensed Product, a lawful study in humans of the safety and dose ranging of such Licensed Product, which is prospectively designed to generate sufficient data (if successful) to commence a Phase 2 Clinical Trial of such Licensed Product.

1.61 "**Phase 1/2 Clinical Trial**" shall have the meaning set forth in Section 4.1.3.

1.62 "**Phase 2 Clinical Trial**" shall mean, as to a particular Licensed Product for a particular indication, a controlled and lawful study in humans of the safety, dose ranging and efficacy of such Licensed Product for such indication, which is prospectively designed to generate sufficient data (if successful) to commence a Phase 3 Clinical Trial of such Licensed Product for such indication.

1.63 "**Phase 2/3 Clinical Trial**" shall have the meaning set forth in Section 4.1.3.

1.64 "**Phase 3 Clinical Trial**" shall mean as to a particular Licensed Product for a particular indication, a controlled and lawful study in humans of the safety and efficacy of such Licensed Product for such indication, which is prospectively designed to demonstrate statistically whether such Licensed Product is safe and effective for use in such indication in a manner sufficient to file a BLA or NDA for Regulatory Approval to market and sell that Licensed Product in the United States for the indication under investigation in such study.

1.65 "**Primary Indications**" shall mean (a) […***…] and (b) any Cell Transplantation Indication.

1.66 "**Primary License Term**" shall mean, with respect to each Licensed Product, the period commencing on the Original Effective Date and continuing on a country-by-country, and product-by-product basis until the later of (a) the last to expire Valid Claim covering the composition of matter of the Licensed Product or any component thereof, or the manufacture or use in the Licensed Field of the Licensed Product or any component thereof, or (b) twelve (12) years from the date of First Commercial Sale in such country.

1.67 "**Qualified Financing**" shall mean the last Equity Financing as a result of which Bellicum will have received cumulative gross proceeds from one or more Equity Financings equal to at least […***…] Dollars ($[…***…]).

1.68 "[…***…] **Analog**" shall mean a compound which is an analog or derivative of […***…] that induces the formation of a complex with […***…] and […***…], mutants or other variants thereof, or fusion proteins containing part or all of […***…] and […***…], respectively, or their respective mutants or other variants.

1.69 "**Regulatory Approval**" shall mean any and all approvals (including pricing and reimbursement approvals), product and establishment licenses, registrations or authorizations of any kind of the FDA or any other Regulatory Authority necessary for the development, pre-clinical and/or human clinical testing, manufacture, quality testing, supply, use, storage, importation, export, transport, marketing and sale of a Licensed Product (or any component thereof) for use in the Licensed Field in any country or other jurisdiction in the Territory. "Regulatory Approval" shall include, without limitation, any IND, BLA, NDA, MAA or other Drug Approval Application.

1.70 "**Regulatory Authority**" shall mean any applicable supranational, national, federal, state or local regulatory agency, department, bureau or other governmental entity of any country or jurisdiction (including the FDA in the United States), having responsibility in such country or jurisdiction for any Regulatory Approvals of any kind in such country or jurisdiction, and any successor agency or authority thereto.

1.71 "[…***…]" shall mean the Board of Trustees of the […***…].

1.72 "[…***…] **Agreement**" shall have the meaning set forth in Section 4.1.4.

1.73 "[…***…] IP" shall mean all Licensed Patent Rights and Licensed Technology licensed to ARIAD under the […***…] Agreement. […***…] IP does not include […***…].

1.74 "**Stock Plan**" shall mean Bellicum's 2006 Stock Option Plan, as may be amended, and any other plan adopted by Bellicum for the issuance of equity securities or options to acquire equity securities to employees, consultants, directors or advisors of Bellicum.

1.75 "**Sublicensee**" shall mean any Third Party to whom Bellicum grants a sublicense of some or all of the rights to the Licensed Patent Rights and Licensed Technology granted to Bellicum under this Agreement.

1.76 "**Technology**" shall mean and include any and all unpatented, proprietary ideas, inventions, discoveries, Confidential Information, biologic materials, data, results, formulae, designs, specifications, methods, processes, formulations, techniques, ideas, know-how, technical information (including, without limitation, structural and functional information), trade secrets, process information, pre-clinical information, clinical information, and any and all proprietary biological, chemical, pharmacological, toxicological, pre-clinical, clinical, assay, control and manufacturing data and materials.

1.77 "**Term**" shall have the meaning set forth in Section 9.1.

1.78 "**Territory**" shall mean all countries and jurisdictions of the world.

1.79 "**Third Party**" shall mean any person or entity other than Bellicum, ARIAD and their respective Affiliates.

1.80 "**Valid Claim**" shall mean a claim in an issued, unexpired patent or in a pending patent application that has been pending for […***…] since the first substantive office action of the relevant patent office on such patent application within the Licensed Patent Rights (including without limitation Patent Rights covering the […***…]-ARIAD MTA Technologies Controlled by ARIAD) that (a) has not been finally cancelled, withdrawn, abandoned or rejected by any administrative agency or other body of competent jurisdiction, (b) has not been revoked, held invalid, or declared unpatentable or unenforceable in a decision of a court or other body of competent jurisdiction that is unappealable or unappealed within the time allowed for appeal, (c) has not been rendered unenforceable through disclaimer or otherwise, and (d) is not lost through an interference proceeding.

1.81 "**Warrants**" shall mean the warrants for Common Stock issued in connection with the Notes.

2. GRANT OF RIGHTS

2.1 License to Bellicum.

2.1.1 Grant of License. ARIAD hereby grants to Bellicum an exclusive (even as to ARIAD), royalty-bearing license, including the right to grant sublicenses in accordance with Section 2.1.4, under the Licensed Patent Rights and Licensed Technology and ARIAD's interest in any Improvements, subject at all times to the restrictions and obligations under the […***…] Agreement with respect to the […***…] IP, (a) to research, develop, test, obtain Regulatory Approval for, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported Licensed Products (including, without limitation, any Dimerizer included or utilized therein) in the Territory, for any and all uses within the Licensed Field during the Term, subject to the terms and conditions of this Agreement, and (b) to make, have made, use, import and export, in each case solely for research purposes, including pre-clinical IND-enabling toxicology and other pre-clinical studies (but not to conduct clinical trials with respect to or to obtain Regulatory Approval for, sell or commercialize), Licensed Products (including, without limitation, any Dimerizer included or utilized therein) (i) for any indication other than the Primary Indications until the end of the Expansion Period and, (ii) if Bellicum elects to add Additional Indications to the Licensed Field during the Expansion Period, for any indication other than the Primary Indications and the Additional Indications until the end of the Non-Cancer Expansion Period. Bellicum may, pursuant to the license granted under Section 2.1.1(a), include patients with […***…] in clinical trials of a Licensed Product intended for use in
[…***…] where the Antigen is PSMA and if Bellicum files an IND to seek Regulatory Approval of such Licensed Product for
[…***…], then Bellicum may seek Regulatory Approval of such Licensed Product for the treatment or prevention of the progression or occurrence in humans of […***…], and, if Bellicum receives Regulatory Approval of such Licensed Product for the treatment or prevention of the progression or occurrence in humans of […***…], then the Licensed Field shall include […***…].

2.1.2 Expansion of Licensed Field to Obtain Additional Exclusive Rights. Bellicum may exercise its rights to expand (or request the expansion of) its exclusive license granted in Section 2.1.1 as follows:

(a) During the period commencing on the […***…] and continuing for […***…] thereafter (the "**Expansion Period**"), Bellicum may, at Bellicum's election, add Additional Indications to the Licensed Field by delivering written notice to ARIAD which describes each specific cancer indication to be included in the Additional Indications or states that all cancer indications (other than […***…]) are to be included in the Additional Indications.

(b) Within a […***…] day period commencing on the later to occur of (i) Bellicum's exercise of its option to expand the Licensed Field to include Additional Indications pursuant to Section 2.1.2(a) and (ii) Bellicum's or its Affiliate's or Sublicensee's commencing a […***…], or, […***…] (the "**Non-Cancer Expansion Period**"), Bellicum may, at Bellicum's election, request that ARIAD agree to expand the Licensed Field to specific non-cancer indications (other than Cell Transplantation Indications) by delivering written notice to ARIAD within such Non- Cancer Expansion Period which describes the specific products and associated product development plans, capabilities and resources for the specific non-cancer diseases and/or conditions it desires to include within the Licensed Field. Upon receipt of such written notice, ARIAD shall in good faith consider Bellicum's request. If ARIAD is willing to so expand the Licensed Field, the Parties will negotiate with respect to a possible amendment to this Agreement setting forth all relevant terms (including milestones and royalties) pertaining to the expansion for a period of […***…] days from the date of ARIAD's receipt of the written request (the "**Non-Cancer Negotiation Period**"). If the Parties do not agree upon terms and conditions mutually acceptable to both Parties on or before the expiration of such Non-Cancer Negotiation Period despite their respective good faith efforts, then Bellicum shall have no further rights with respect to such expansion and ARIAD shall have no further obligation to negotiate pursuant to this Section 2.1.2.

2.1.3 Certain Exclusivity Rights. Notwithstanding anything to the contrary in this Agreement:

(a) ARIAD will not license (or sublicense) to any Third Party or develop or commercialize itself or together with any Third Party, for use in the treatment or prevention of (i) the Primary Indication or (ii) any Additional Indication which Bellicum elects to include in the Licensed Field pursuant to the provisions of Section 2.1.2(a) or any non-cancer indication (other than Cell Transplantation Indications) that is included in the Licensed Field pursuant to the provisions of Section 2.1.2(b), any Dimerizer or other product involving the use of a Dimerizer covered by Bellicum Patent Rights or Bellicum Technology or any Patent Rights covering the […***…]-ARIAD MTA Technologies licensed to ARIAD by […***…] as of the Original Effective Date or during the Primary License Term.

(b) Bellicum will not develop (except as permitted pursuant to the license granted in Section 2.1.1), manufacture, promote or sell any Dimerizer for any use outside of the Licensed Field as in effect from time to time; provided, however, that, to the extent Bellicum demonstrates to ARIAD's reasonable satisfaction that off-label use of any Licensed Product outside the Licensed Field has occurred in the complete absence of any promotion thereof by or on behalf of, or at the request or with the approval of, any of Bellicum, its Affiliates or its or their directors, officers, consultants and clinical investigators, such off-label use shall not constitute a violation of this provision or this Agreement.

2.1.4 Right to Sublicense and Subcontract. Bellicum shall have the right to grant sublicenses to any Affiliate and/or Sublicensee to all or any portion of its rights under the license granted pursuant to Section 2.1.1; provided, however, that (a) such sublicense under the license granted pursuant to Section 2.1.1 shall be granted in connection with a license to all Patent Rights and Technology Controlled by Bellicum, which are necessary or useful in the manufacture, use or sale of the Licensed Product(s) covered by the sublicense, (b) no sublicense may include a right to further sublicense any […***…] IP unless […***…] has provided prior written consent to Bellicum and ARIAD allowing such further sublicense (and, if requested by Bellicum, ARIAD will assist Bellicum in obtaining such consent from […***…]), and all such sublicenses of […***…] IP shall be subject and subordinate to, and consistent with, the terms and conditions of the […***…] Agreement with respect to sublicenses of […***…] IP, (c) ARIAD shall be notified of the grant of a sublicense to any and all potential sublicenses, (d) any and all sublicenses shall be subject to, and consistent with, the terms and conditions of this Agreement, (e) Bellicum shall remain obligated for the payment to ARIAD of all of its payment obligations hereunder, including, without limitation, the payment of any royalties described in Section 4 hereof, (f) upon termination of this Agreement, any such sublicense shall be considered a direct license from ARIAD as provided in Section 9.3 and (g) Bellicum shall provide ARIAD with a copy of each such sublicense agreement (from which Bellicum may redact confidential terms that are not necessary to disclose to ARIAD for purposes of confirming compliance with this Agreement and the […***…] Agreement) within […***…] days of execution. In addition, Bellicum shall have the right to subcontract with any Third Party, including […***…] (provided that any Third Party manufacturer of AP1903 shall be subject to approval by ARIAD in its commercially reasonable discretion), to have such Third Party perform work on Bellicum's behalf pursuant to the license granted pursuant to Section 2.1.1(b) on terms which are subject to, and consistent with, the terms and conditions of this Agreement.

2.1.5 Technology Transfer. ARIAD disclosed to Bellicum after the Original Effective Date, and shall disclose to Bellicum from time to time during the Primary License Term, all Licensed Patent Rights and Licensed Technology. The matters to be disclosed or delivered to Bellicum pursuant to this Section 2.1.5 are

outlined in Schedule A. Such trade secrets and Technology are disclosed or delivered to Bellicum by ARIAD hereunder on an "as is" basis. ARIAD makes no representation or warranty that such trade secrets and Technology are all that is reasonably necessary to practice the licenses granted to Bellicum hereunder or as to their fitness for such purpose.

2.1.6 ARIAD Regulatory Information. Subject to applicable laws governing patient confidentiality and to the extent necessary for Bellicum or its Sublicensee(s) to comply with applicable statutes, laws, regulations, ordinances and guidelines governing Regulatory Approval of Licensed Products, ARIAD shall provide Bellicum or its Sublicensee (i) summaries of, and the right to cross-reference to, any safety data (including Adverse Events) reported to any Regulatory Authority by ARIAD relating to AP1903, (ii) copies of the clinical investigators' brochure, protocol and clinical study report in connection with a phase 1 study of AP1903 conducted by ARIAD, and (iii) summaries of relevant data generated by ARIAD in connection with its preclinical studies of AP1903 ("**ARIAD Data**") (collectively, "**ARIAD Regulatory Information**"). ARIAD Regulatory Information shall be treated as Confidential Information of ARIAD. Bellicum and its Sublicensee(s) shall maintain such ARIAD Data disclosed to it pursuant to this Section 2.1.6 in confidence and shall not use or disclose it to any Third Party other than (i) Bellicum or its Sublicensee(s), itself or through its agent, may provide a cross-reference to ARIAD Data reported by ARIAD under any filing to obtain Regulatory Approval for Licensed Products using AP1903 in any country or may disclose ARIAD Data in a written submission to any such Regulatory Authority, in each case solely as required to obtain Regulatory Approval of a Licensed Product in the Licensed Field, but only after obtaining prior written permission from ARIAD to make such disclosure which is conditioned upon Bellicum or its Sublicensee obtaining written assurances from the Regulatory Authorities to whom the information is being disclosed that such ARIAD Data will be afforded confidential treatment by such Regulatory Authority, and (ii) Bellicum or its Sublicensee, upon prior written notice to ARIAD, may verbally disclose ARIAD Data in

any teleconference or meeting with any Regulatory Authority, in each case solely as required to obtain Regulatory Approval of the Licensed Products in the Licensed Field, but only after obtaining prior written permission from ARIAD which is conditioned upon affording appropriate ARIAD personnel the opportunity to participate in each such teleconference or meeting.

2.1.7 Transfer of Orphan Drug Designation. Subject to applicable statutes, laws, regulations, ordinances and guidelines governing the transfer of the Orphan Drug Designation, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ARIAD hereby transfers, assigns and conveys all its ownership of and any beneficial interest in the Orphan Drug Designation to Bellicum, effective as of the Effective Date. Within ten (10) business days after the Effective Date, (i) ARIAD and Bellicum shall each submit the required information to the FDA to effect the change of the named sponsor of the Orphan Drug Designation from ARIAD to Bellicum in accordance with the applicable statutes, laws, regulations, ordinances and guidelines, and (ii) ARIAD shall transfer a complete copy of the Orphan Drug Designation, including any amendments or supplements thereto, and correspondence regarding the Orphan Drug Designation to Bellicum. ARIAD shall cooperate reasonably with Bellicum, as requested by Bellicum and at Bellicum's expense, in Bellicum's efforts to maintain the Orphan Drug Designation.

2.1.8 Reservation of Rights. As between the Parties, ARIAD shall retain ownership of or license rights to all right, title and interest in and to the Licensed Patent Rights and Licensed Technology, and no other license, either express or implied or by implication or estoppel, is granted hereunder with respect to any Technology or Patent Rights of ARIAD or its licensors except as expressly stated in this Section 2.1 and ARIAD reserves all rights in and to the same. Bellicum acknowledges that […***…] and
[…***…] and the inventors identified in the […***…] Agreement each retain the rights to, respectively: (i) practice the […***…] IP solely for non-commercial research purposes; (ii) publish any information included in the […***…] IP; and (iii) provide tangible materials included in the […***…] IP to academic or not-for-profit research

institutions under the terms of a material transfer agreement, subject to the restriction in the […***…] Agreement that no rights shall be granted by […***…] or […***…] to any inventions or technology incorporating or utilizing such materials for any commercial purpose. Bellicum acknowledges that the […***…] IP is subject to 35 U.S.C. §§ 200-204, including an obligation that Licensed Products that would be "Licensed Products" under the […***…] Agreement sold or produced in the United States be "manufactured substantially in the United States". Bellicum acknowledges that the […***…] IP is subject to certain obligations to […***…] as set forth in the […***…] Agreement, a complete copy of which obligations to […***…] ARIAD has provided to Bellicum.

2.1.9 […***…] Agreement. […***…], […***…] and […***…], as applicable, are intended Third Party beneficiaries of this Section and Sections 2.1.8, 4.2, 4.3, 5.4, 5.5, 7.3.1, 8.3 and 11.1 of this Agreement, and such parties have the right to bring any suit at law or equity for any matter governed by or subject to such provisions. If the […***…] Agreement is terminated, then from and after the effective date of such termination, the license granted by ARIAD to Bellicum under the […***…] IP shall be deemed a direct license from […***…] to Bellicum and all obligations of Bellicum under this Agreement with regard to such license under the […***…] IP, and all obligations of ARIAD under the […***…] Agreement with regard to Licensed Products (as defined herein) developed, made, used or sold by Bellicum or any Affiliate or Sublicensee of Bellicum that would be "Licensed Products" under the […***…] Agreement including the payment of royalties to […***…], shall be deemed obligations of Bellicum to […***…]. As long as Bellicum has not materially breached any material obligation or condition that would entitle ARIAD to terminate this Agreement, ARIAD will not voluntarily terminate or willfully breach the […***…] Agreement. In addition to specific provisions in this Agreement relating to the […***…] Agreement, the provisions of Articles 8, 9 and 10 of the […***…] Agreement, with Bellicum substituted for AGTI in such provisions, are expressly included in this Agreement for the benefit or […***…],
[…***…] and […***…]. To the extent the provisions of Articles 8, 9 and 10 of the […***…] Agreement cover the same subject matter as other provisions in this Agreement relating

to the […***…] Agreement, the provisions imposing the greatest obligation on Bellicum shall apply.

2.2 License to ARIAD.

2.2.1 Grant of License.

(a) Bellicum hereby grants to ARIAD a non-exclusive, royalty-free (subject only to Section 2.2.1(b)) license, including the right to grant sublicenses, under the Bellicum Patent Rights and Bellicum Technology, and Bellicum's interest in any Improvements, to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported ARIAD Products (including products comprising or utilizing AP1903) for any and all uses outside of the Licensed Field, subject to the terms and conditions of this Agreement. In no event will ARIAD practice any Bellicum Patent Rights or Bellicum Technology, or Bellicum's interest in any Improvements (excluding any Improvements licensed to Bellicum and ARIAD by […***…] that cover any of the […***…]-ARIAD MTA Technologies), for any use within the Licensed Field or to sell, offer for sale, have sold, import, have imported, export and have exported any ARIAD Product (including any product comprising or utilizing AP1903) for any use outside of the Licensed Field, if such ARIAD Product is the same (for regulatory purposes) as any Licensed Product listed on Schedule B pursuant to Section 3.2.1 prior to ARIAD's commencement of the development thereof and that is being developed or commercialized to ARIAD's knowledge by Bellicum or any of its Affiliates or Sublicensees for any use within the Licensed Field (an "**Existing Bellicum Product**"). In the event that Bellicum has not filed an IND for a particular Licensed Product within […***…] after such Licensed Product is listed on Schedule B, then the foregoing prohibition shall not apply to such Licensed Product. Notwithstanding the foregoing, ARIAD shall be free to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported, any Dimerizer for any purpose without restriction, except that ARIAD shall not sell, offer for sale, have sold, import, have imported, export or have exported any Dimerizer covered by Bellicum Patent Rights that is specifically labeled by ARIAD for use with an Existing Bellicum Product.

(b) If any Bellicum Patent Rights or Bellicum Technology licensed to Bellicum by any Third Party would require payment to such Third Party upon ARIAD's practice thereof pursuant to the license granted under this Section 2.2.1, then Bellicum shall so notify ARIAD in writing promptly after obtaining the license. ARIAD may, by written notice to Bellicum provided at any time prior to the First Commercial Sale of any ARIAD Product utilizing the subject matter of the Bellicum Patent Rights or Bellicum Technology licensed to Bellicum by the Third Party, (i) elect to accept the license to such Bellicum Patent Rights or Bellicum Technology, in which case, ARIAD shall be responsible for making any payment to such Third Party resulting from ARIAD's practice of such Bellicum Patent Rights or Bellicum Technology pursuant to the license granted under this Section 2.2.1 and shall provide Bellicum written notice confirming that it has made such payments (and, if it fails to make any such payment in accordance with the terms of the agreement with such Third Party, the license to such Bellicum Patent Rights or Bellicum Technology under this Section 2.2.1 shall terminate), or (ii) elect to decline the license to such Bellicum Patent Rights or Bellicum Technology (and shall be deemed to decline the license to such Bellicum Patent Rights or Bellicum Technology if it does not provide Bellicum written notice of its election as set forth above), in which case such Bellicum Patent Rights or Bellicum Technology shall be excluded from the license granted to ARIAD under this Section 2.2.1.

2.2.2 Bellicum Regulatory Information. To facilitate the development of ARIAD Products by ARIAD or its sublicensee(s) pursuant to the license granted under this Section 2.2, and subject to applicable laws governing patient confidentiality and to the extent necessary for ARIAD or its sublicensee(s) to comply with applicable statutes, laws, regulations, ordinances and guidelines governing Regulatory Approval of ARIAD Products, Bellicum shall provide, and shall require its Sublicensees to provide, to ARIAD or its sublicensee (i) the right to cross-reference to any safety data (including Adverse Events) reported to the FDA by Bellicum under any

IND relating to a Licensed Product using AP1903, (ii) copies of all investigator safety letters provided by Bellicum to its clinical investigators in connection with clinical studies of Licensed Products using AP1903 and (iii) summaries of relevant data generated by Bellicum in connection with its preclinical studies of a Licensed Product using AP1903 ("**Bellicum Data**") (collectively, "**Bellicum Regulatory Information**"). Bellicum Regulatory Information should be treated as Confidential Information of Bellicum. ARIAD and its sublicensee(s) shall maintain such Bellicum Data disclosed to it pursuant to this Section 2.2.2 in confidence and shall not use or disclose it to any Third Party other than (i) ARIAD or its sublicensee(s), themselves or through their agents, may provide a cross-reference to Bellicum Data reported to the FDA by Bellicum under any IND or corresponding foreign country filing to obtain Regulatory Approval for ARIAD Products using AP1903 in any country or may disclose Bellicum Data in a written submission to any such Regulatory Authority, in each case solely as required to obtain Regulatory Approval of a ARIAD Product using AP1903 outside the Licensed Field, but only after obtaining prior written permission from Bellicum to make such disclosure which is conditioned upon ARIAD or its sublicensee obtaining written assurances from the Regulatory Authorities to whom the information is being disclosed that such Bellicum Data will be afforded confidential treatment by such Regulatory Authority, and (ii) ARIAD or its sublicensee, upon prior written notice to Bellicum, may verbally disclose Bellicum Data in any teleconference or meeting with any Regulatory Authority, in each case solely as required to obtain Regulatory Approval of the ARIAD Products using AP1903 pursuant to the license granted in Section 2.2, but only after obtaining prior written permission from Bellicum which is conditioned upon affording appropriate Bellicum personnel the opportunity to participate in each such teleconference or meeting.

2.2.3 Reservation of Rights. As between the Parties, Bellicum shall retain ownership of or license rights to all right, title and interest in and to the Bellicum Patent Rights and Bellicum Technology, and no other license, either express or implied or by implication or estoppel, is granted hereunder with respect to any Technology or Patent Rights of Bellicum or its licensors except as expressly stated in this Section 2.2 and Bellicum reserves all rights in and to the same.

3. DEVELOPMENT AND COMMERCIALIZATION OF LICENSED PRODUCTS.

3.1 Commercialization.

3.1.1 Responsibility. From and after the Original Effective Date, Bellicum shall have full control and authority over the development and commercialization of Licensed Products in the Licensed Field in the Territory, including without limitation, (a) all pre-clinical development activities (including any pharmaceutical development work on formulations or process development relating to any Licensed Product), (b) all activities related to human clinical trials (including all clinical studies), (c) all activities relating to manufacture and supply of all Licensed Products (including all required process development and scale up work with respect thereto), (d) all marketing, promotion, sales, distribution, import and export activities relating to any Licensed Product, and (e) all activities relating to any regulatory filings, registrations, applications and Regulatory Approvals relating to any of the foregoing (including any INDs or foreign equivalents, any manufacturing facility validation and/or licensure, any Drug Approval Applications and any other Regulatory Approvals). Bellicum shall own all data, results and all other information arising from any such activities of Bellicum with respect to Licensed Products in the Licensed Field in the Territory under this Agreement, including without limitation, all regulatory filings, registrations, applications and Regulatory Approvals relating to Licensed Products (including any INDs or foreign equivalents, any Drug Approval Applications and any other Regulatory Approvals) (collectively, "**Bellicum Information**"), and all of the foregoing Bellicum Information shall be considered Confidential Information and Technology solely owned by Bellicum. Bellicum Information which is necessary or useful for the development, manufacture, use, sale, offer for sale or import of any Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer, or any ARIAD

Product, shall be included in Bellicum Technology and subject to the license granted to ARIAD in Section 2.2.1. All activities relating to development and commercialization of Licensed Products under this Agreement shall be undertaken at Bellicum's sole cost and expense, except as otherwise expressly provided in this Agreement.

3.2 Diligence. Bellicum will exercise commercially reasonable efforts and diligence in developing and commercializing at least one Licensed Product that is a cancer vaccine described in clause (a) of Section 1.45 and one Licensed Product that is a gene or a cell transfected with such gene coding for an Inducible Caspase described in clause (b) of Section 1.45 and in undertaking investigations and actions required to obtain Regulatory Approvals necessary to market such Licensed Products in the Licensed Field in the Territory, taking into account the competitiveness of the marketplace, the proprietary position of the Licensed Product, the relative potential safety and efficacy of the Licensed Product, the cost of goods and availability of capacity to manufacture and supply the Licensed Product at commercial scale, the profitability of the applicable Licensed Product, and other relevant factors including, without limitation, technical, legal, scientific or medical factors.

3.3 Updates and Reports.

3.3.1 Updates and Reports. Bellicum shall update Schedule B each time Bellicum or any Sublicensee determines to manufacture (or have manufactured) GLP or GMP Quality Licensed Product for use in GLP toxicology studies for any potential Licensed Product and shall furnish such updated Schedule B to ARIAD. Bellicum shall provide ARIAD with written reports no less frequently than […***…] during the Term summarizing Bellicum's efforts to develop and commercialize Licensed Products hereunder. Such reports shall include, at a minimum, information sufficient to enable […***…] to satisfy its reporting requirements to the United States Government, and shall contain a tabulation and key results of clinical trials, clinical plans, and summaries of the results of preclinical and clinical studies relating to Licensed Products for the then preceding half-year. Bellicum shall provide ARIAD with

at least […***…] prior written notice of the intended filing, prior to any public disclosure of such filing, by Bellicum or, to the extent Bellicum is aware, a Sublicensee with the FDA or any other Regulatory Authority of any IND or equivalent application with regard to any Licensed Product or any Drug Approval Application or the intended commencement by Bellicum of any clinical trial of any Licensed Product and will notify ARIAD of any such filing or commencement of a clinical trial within […***…] after such filing is made or such clinical trial is commenced. In addition, Bellicum shall provide ARIAD with prompt written notice of the occurrence of the First Commercial Sale of any Licensed Product in any country. In addition to such reports, Bellicum agrees (i) upon request by ARIAD, to provide ARIAD with copies of all documents submitted to, or received from, Regulatory Authorities, relating to Licensed Products, including without limitation, INDs and their foreign equivalent, and correspondence to and from Regulatory Authorities, and (ii) to provide ARIAD with Adverse Event information and product complaint information relating to Licensed Products as compiled and prepared by Bellicum in the normal course of business in connection with the development, commercialization or sale of any Licensed Product, within time frames consistent with reporting obligations under applicable laws and regulations. All reports, updates, Adverse Event, product complaint and other information provided by one party to the other Party under this Agreement (including under this Section 3), shall be considered Confidential Information of the Disclosing Party, subject to the terms of Section 5 hereof.

3.4 Manufacturing. Bellicum shall have the right to manufacture or have manufactured such quantities of any Dimerizer as it may require in order to develop and commercialize any Licensed Product pursuant to the terms of this Agreement. Bellicum will notify ARIAD in writing of its intent to manufacture (or have manufactured by a Third Party) any Dimerizer at least […***…] prior to commencement of manufacture by itself or through a Third Party. Upon ARIAD's request at any time, the Parties will negotiate in good faith a supply agreement under which ARIAD will provide […***…] rolling […***…] forecasts of its anticipated need

for such Dimerizer (of which an agreed number of months will be binding) provided that, under such supply agreement, either (a) Bellicum will use commercially reasonable efforts to supply all quantities of Dimerizer ordered by ARIAD and will supply such Dimerizer to ARIAD and ARIAD's licensees on at a price equal to fully burdened manufacturing costs plus […***…] percent ([…***…]%); or (b) if a Third Party manufactures such Dimerizer for Bellicum, then Bellicum shall (i) procure for ARIAD and its Affiliates and licensees the right to purchase such Dimerizers from the Third Party on terms no less favorable than those granted to Bellicum, giving ARIAD and its Affiliates and licensees equal priority with respect to quantity or lead time for delivery of such Dimerizers as given to Bellicum, its Affiliates and its Sublicensees, and (ii) grant to such Third Party all licenses to Patent Rights and Technology Controlled by Bellicum (without Bellicum incurring additional expense or obligations to Third Party licensors of Bellicum) as may be required in order for the Third Party to supply ARIAD and ARIAD's licensees with such Dimerizers. In addition, the supply agreement will provide that, if Bellicum or its Third Party manufacturer fails to supply Dimerizer as required thereby, Bellicum or its Third Party manufacturer will transfer to ARIAD or its designee all technology necessary to manufacture such Dimerizer and will grant all necessary licenses to ARIAD or its designee on a royalty fee basis.

3.5 Compliance With Law. Each Party shall comply with all applicable laws, rules, regulations and guidelines, including without limitation, rules and guidelines of all institutions at which any work relevant to this Agreement or Licensed Products is conducted and rules and guidelines of relevant professional societies, including without limitation the American Society of Gene Therapy.

4. PAYMENTS AND ROYALTIES

4.1 Payment of Royalties; Royalty Rates; Minimum Royalties

4.1.1 Initial Payment. In consideration of (i) the conversion of Bellicum's license for […***…] from a non-exclusive license to an exclusive license, and (ii) the inclusion of Cell Transplantation Indications as Primary Indications and the consequent

grant to Bellicum of an exclusive license for Cell Transplantation Indications, Bellicum agrees to pay to ARIAD the non-refundable amount of two hundred fifty thousand dollars ($250,000) within […***…].

4.1.2 Royalty Payments. In consideration of (i) the grant of the license by ARIAD under this Agreement, and (ii) the Licensed Technology and Orphan Drug Designation provided and/or transferred hereunder, and subject to the other terms of this Agreement (including the remainder of this Section 4), Bellicum shall pay to ARIAD royalty on annual Net Sales for such Licensed Product at the percentage rates as follows:

(a) subject to Section 4.1.2(b) and (c) below, commencing on the date of the First Commercial Sale of each Licensed Product in each country in the Territory and continuing until expiration of the Primary License Term with respect to such Licensed Product:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…]%	[…***…]%
>$[…***…]MM	[…***…]%	[…***…]%

(b) if either (x) the only remaining Valid Claim with respect to such Licensed Product in a country is a claim in Patent Rights covering the […***…]-MTA Technologies and there is Competition or (y) all Valid Claims covering the composition of matter of such Licensed Product or any component thereof, or the use in the Licensed Field of such Licensed Product or any component thereof, in such country have expired but the Primary License Term with regard to such Licensed Product in such country has not expired and there is no Competition, then the following royalty rates shall instead apply until the end of the Primary

License Term with regard to such Licensed Product in such country:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…]%	[…***…]%
>$[…***…]MM	[…***…]%	[…***…]%

(c) If all Valid Claims covering the composition of matter of such Licensed Product or any component thereof, or the use in the Licensed Field of such Licensed Product or any component thereof, in such country have expired but the Primary License Term with regard to such Licensed Product has not expired and there is Competition, then in consideration of the Licensed Technology and Orphan Drug Designation provided and/or transferred hereunder, the following royalty rates shall instead apply until the end of the Primary License Term with regard to such Licensed Product in such country:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…] %	[…***…] %
>$[…***…]MM	[…***…] %	[…***…] %

Following expiration of the Primary License Term with regard to a Licensed Product in a country, Bellicum shall have a fully paid up, perpetual, irrevocable license under Section 2.1.1 with regard to such Licensed Product in such country.

4.1.3 Milestone Payments. Bellicum shall make the following milestone payments to ARIAD within […***…] after the occurrence of the following events:

Event	**Payment**
[…***…]	

[…***…]	$[…***…]
[…***…]	$[…***…]
[…***…]	$[…***…]

In the event of a […***…], the milestone payable upon the occurrence of […***…] shall be payable by Bellicum (x) upon commencement of […***…] or (y) upon commencement of […***…]; provided that the foregoing shall not apply to any […***…] of a Licensed Product commenced prior to the Effective Date.

In the event of a […***…], the milestone payable upon occurrence of commencement of the […***…] shall be payable by Bellicum upon commencement of […***…] and the milestone payable upon occurrence of commencement of […***…] shall be payable by Bellicum upon the later of (i) commencement of […***…], or (ii) the date (which may during or after such […***…]) when […***…].

4.1.4 Royalty Payments to Certain Third Parties. Any royalty payments owed and payable with respect to the Licensed Products to […***…] University pursuant to that certain […***…], by and between the […***…] and ARIAD Gene Therapeutics, Inc., as amended from time to time (the "[…***…] **Agreement**"), shall be the sole responsibility and obligation of ARIAD. All other royalty or other payments owed and payable with respect to the Licensed Products, including without limitation any royalty or other payments due to […***…], will be the sole responsibility and obligation of Bellicum.

4.1.5 Acknowledgement. Bellicum recognizes and acknowledges that each of the following, separately and together, has substantial economic benefit to Bellicum: (i) ARIAD's expertise concerning the discovery and understanding of Dimerizers and dimerization technology; (ii) the licenses granted to Bellicum hereunder with respect to Licensed Technology that is not within the claims of any Licensed Patent Rights; (iii) the licenses granted to Bellicum under Licensed Patent Rights; (iv) the Orphan Drug Designation transferred to Bellicum hereunder; and (v) the exclusivity, if any, which may be afforded to Bellicum by each of the foregoing. The Parties agree that the royalty rates set forth in Section 4.1.2 reflect a fair and reasonable blended allocation of the values provided by ARIAD to Bellicum, regardless of whether any particular Licensed Product utilizes any ARIAD Dimerizer or is covered by Licensed Patent Rights.

4.2 Payment Terms.

4.2.1 Payment of Royalties. Unless otherwise expressly provided, Bellicum shall make any license or royalty payments owed to ARIAD hereunder in arrears, within […***…] from the end of each quarter in which such payment accrues. For purposes of determining when a sale of any Licensed Product occurs under this Agreement, the sale shall be deemed to occur on the earlier of (a) […***…] or (b) on the date of […***…]. Each royalty payment shall be accompanied by a report for each country in the Territory in which sales of Licensed Products occurred in the calendar

quarter covered by such statement, specifying: the gross sales (if available) and Net Sales in each country's currency; the applicable royalty rate under this Agreement; the royalties payable, including an accounting of deductions taken in the calculation of Net Sales; the applicable exchange rate to convert from each country's currency to United States Dollars under this Section 4.2, if any; and the royalties payable in United States Dollars.

4.2.2 Overdue Payments. Subject to the other terms of this Agreement, any payments not paid within the time period set forth in this Section 4 shall bear interest at a rate of […***…] percent ([…***…]%) per […***…] from the due date until paid in full, provided that in no event shall said annual rate exceed the maximum interest rate permitted by law in regard to such payments. Such payment when made shall be accompanied by all interest so accrued. Said interest and the payment and acceptance thereof shall not negate or waive the right of ARIAD to any other remedy, legal or equitable, to which it may be entitled because of the delinquency of the payment.

4.2.3 Accounting. All payments hereunder shall be made by Bellicum in the United States in United States dollars. Conversion of foreign currency to United States dollars shall be made at the conversion rate existing in the United States (as reported in […***…]) on the last business day of the quarter immediately preceding the applicable calendar quarter. If […***…] ceases to be published, then the rate of exchange to be used shall be that reported in such other business publication of national circulation in the United States as the Parties reasonably agree.

4.2.4 Tax Withholding; Restrictions on Payment. All payments hereunder shall be made free and clear of any taxes, duties, levies, fees or charges, except for withholding taxes (to the extent applicable). Bellicum shall make any applicable withholding payments due on behalf of ARIAD and shall provide ARIAD with such written documentation regarding any such payment as available to Bellicum relating to an application by ARIAD for a foreign tax credit for such payment with the United States Internal Revenue Service.

4.3 Records Retention; Review.

4.3.1 Royalties. Commencing as of the date of First Commercial Sale of the first Licensed Product hereunder, Bellicum and its Affiliates and Sublicensees shall keep for at least […***…] from the end of the calendar year to which they pertain complete and accurate records of sales by Bellicum or its Affiliates and Sublicensees, as the case may be, of each Licensed Product, in sufficient detail to allow the accuracy of the payments hereunder to be confirmed.

4.3.2 Review. Subject to the other terms of this Section 4.3.2, at the request of ARIAD, which shall not be made more frequently than […***…] during the Term, upon at least […***…] prior written notice from ARIAD, and at the expense of ARIAD (except as otherwise provided herein), Bellicum shall permit an independent certified public accountant reasonably selected by ARIAD and reasonably acceptable to Bellicum to inspect (during regular business hours) the relevant records required to be maintained by Bellicum under this Section 4.3 (provided no records may be reviewed more than once under this Section 4.3.2). Results of any such review shall be binding on both Parties absent manifest error. ARIAD agrees to treat the results of any such accountant's review of records under this Section 4.3 as Confidential Information of Bellicum subject to the terms of Section 5. If any review reveals a deficiency in the calculation and/or payment of royalties by Bellicum, then (a) Bellicum shall promptly pay ARIAD the amount remaining to be paid, and (b) if such underpayment is by […***…] percent ([…***…]%) or more, Bellicum shall pay the reasonable out-of- pocket costs and expenses incurred by ARIAD in connection with the review. If any review reveals an overpayment of royalties by Bellicum, ARIAD shall promptly remit such overpaid amounts to Bellicum.

4.3.3 Other Parties. Bellicum shall include in any agreement with its Affiliates or Sublicensees terms requiring such party to retain records as required in this Section 4.3 and to permit ARIAD to inspect such records as required by this Section 4.3.

4.4 Initial Issuance of Common Stock. The Parties hereby acknowledge that in connection with the 2006 Agreement and pursuant to the Stock Purchase Agreement, dated July 25, 2006, between the Parties, Bellicum issued to ARIAD and ARIAD received 206,111 shares of Common Stock, which 206,111 shares of Common Stock constituted, after giving effect to such issuance,
[…***…] percent ([…***…]%) of Bellicum's Shares of Common Stock on a Fully Diluted Basis as of July 25, 2006.

5. TREATMENT OF CONFIDENTIAL INFORMATION

5.1 Confidential Obligations. The Mutual Non-Disclosure Agreement between the Parties dated October 16, 2004 (the "Confidentiality Agreement") shall apply to information provided under this Agreement. Each Party shall take such action, and shall cause its Affiliates or Sublicensees to take such action, to preserve the confidentiality of each other's Confidential Information as it would customarily take to preserve the confidentiality of its own Confidential Information, using, in all such circumstances, not less than reasonable care to prevent the Confidential Information of the other Party from being copied, used or disclosed to any Third Party without the other Party's prior written consent except for those Third Parties to whom disclosure of the Confidential Information is permitted pursuant to the terms of the Confidentiality Agreement. To the extent of any conflict between the provisions of this Article 5 and the Confidentiality Agreement, the provisions of this Article 5 shall control and pertain to all information provided under this Agreement and the Confidentiality Agreement, retroactive to October 16, 2004.

5.2 Limited Disclosure and Use. ARIAD and Bellicum each agree that any disclosure of the other Party's Confidential Information to any officer, employee, consultant or agent of the other Party or any of its Affiliates or Sublicensees shall be made only if and to the extent necessary to carry out its rights and responsibilities under this Agreement, shall be limited to the maximum extent possible consistent with such rights and responsibilities and shall only be made to the extent any such persons are bound by written confidentiality obligations to maintain the confidentiality thereof and not to use such Confidential Information except as expressly permitted by this Agreement. ARIAD and Bellicum each further agree not to disclose or transfer the other Party's Confidential Information to any Third Parties under any circumstance without the prior written approval from the other Party (such approval not to be unreasonably withheld), except as otherwise required by law, and except as otherwise expressly permitted by this Agreement. Each Party may disclose the Confidential Information of the other Party to any investors, prospective investors, lenders and other potential financing sources and Third Parties conducting due diligence in connection with any financing or acquisition transaction who are obligated to keep such information confidential. Each Party, upon the request of the other Party, will return all the Confidential Information disclosed or transferred to it by the other Party pursuant to this Agreement, including all copies and extracts of documents and all manifestations in whatever form, within […***…] of such request or, if earlier, the termination or expiration of this Agreement; provided however, that a Party may retain (a) any Confidential Information of the other Party relating to any license which expressly survives such termination and (b) one (1) copy of all other Confidential Information in inactive archives solely for the purpose of establishing the contents thereof.

5.3 Publicity. Neither Party may publicly disclose the existence or terms or any other matter of fact regarding this Agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed; provided, however, that (a) either party may issue a press release upon execution hereof, (b) either Party may make such a disclosure (i) to the extent required by law or by the requirements of any nationally recognized securities exchange, quotation system or over-the-counter market on which such Party has its securities

listed or traded, and (ii) to any investors, prospective investors, lenders and other potential financing sources who are obligated to keep such information confidential, provided that in the event that such disclosure is required under clause (b)(i) of this Section 5.3, the disclosing Party shall provide the other Party with notice beforehand and, to the extent reasonably practical, coordinate with the other Party with respect to the wording and timing of any such disclosure, and (c) ARIAD may disclose the filing by Bellicum or a Sublicensee with the FDA or any other Regulatory Authority of any IND, NDA, BLA or equivalent application or the commencement by Bellicum or a Sublicensee of any clinical trial, provided that ARIAD may only disclose such filing or commencement by a Sublicensee (x) if (i) Bellicum or the Sublicensee makes prior public disclosure of such filing or commencement and (ii) ARIAD provides Bellicum with notice beforehand and, to the extent reasonably practical, coordinates with Bellicum with respect to the wording and timing of any such disclosure or (y) if the Sublicensee consents. If Bellicum or the Sublicensee does not intend to make prior public disclosure of such filing or commencement, Bellicum will so notify ARAIAD with the notice thereof pursuant to Section 3.2.1 and will use good faith efforts to obtain the consent of the Sublicensee for ARIAD to make such disclosure. Once any press release or any other written statement is approved for disclosure by both Parties, either Party may make subsequent public disclosure of the contents of such statement without the further approval of the other Party.

5.4 Use of Name. Neither Party shall employ or use the name of the other Party or the name of […***…], […***…], […***…] or […***…] in any promotional materials or advertising without the prior express written permission of the other party.

5.5 […*…]**. Notwithstanding anything to the contrary in this Agreement, ARIAD may disclose the terms of this Agreement and Bellicum's Confidential Information (including the terms of any Bellicum sublicense) to […***…] as reasonable and necessary required to fulfill its obligations under the […***…] Agreement.

6. PROVISIONS CONCERNING THE FILING, PROSECUTION AND MAINTENANCE OF PATENT RIGHTS

6.1 Patent Filing, Prosecution, Maintenance and Enforcement. ARIAD shall have the sole right, but not the obligation, to prepare, file, prosecute, obtain and maintain, and a first right to enforce, any Licensed Patent Rights (excluding all Patent Rights licensed to Bellicum by […***…] that cover any of the […***…]-ARIAD MTA Technologies). In the event that ARIAD elects not to enforce any of the Licensed Patent Rights, if the alleged infringement is in the Licensed Field with a product that comprises a cell transfected with both (but not limited to) a gene for an Antigen and one or more genes for Inducible Costimulatory Molecule(s) where the gene or genes for the Inducible Costimulatory Molecule(s) are activated using an ARIAD Dimerizer or a Non-ARIAD Dimerizer, Bellicum may do so at its sole expense; provided that, if the Licensed Patent Right alleged to be infringed is a patent other than a Licensed Patent Right covering any of the […***…]-ARIAD MTA Technologies, Bellicum may do so only with the advance written consent of ARIAD, which may be granted or withheld in ARIAD's sole discretion. Bellicum may recover, collect and keep any damages collected as a result of such enforcement by Bellicum. Bellicum shall have the sole right, but not the obligation, to prepare, file, prosecute, obtain, maintain and enforce any Bellicum Patent Rights, and as between Bellicum and ARIAD, Bellicum shall have the sole right to prepare, file, prosecute, obtain and maintain any Patent Rights licensed to Bellicum by […***…] that cover any of the […***…]-ARIAD MTA Technologies in accordance with the terms and conditions agreed upon between Bellicum and
[…***…]. Subject to any rights granted, at any time, by Bellicum to its Affiliates and/or Sublicensees, in the event that Bellicum elects not to enforce any of the Bellicum Patent Rights, ARIAD may do so only at its own expense and only with the advance written consent of Bellicum, which may be granted or withheld in Bellicum's sole discretion. ARIAD may recover, collect and keep any damages collected as a result of such enforcement by ARIAD.

To the extent Bellicum assumes enforcement of Licensed Patent Rights or ARIAD assumes enforcement of Bellicum Patent Rights under this Section 6, and later elects not to enforce such rights, such Party will notify the other Party in writing promptly upon such election not to so enforce, and in any event, at least […***…] prior to the deadline to submit any filing related thereto.

7. REPRESENTATIONS AND WARRANTIES

7.1 ARIAD Representations. ARIAD represents and warrants to Bellicum that:

(a) the execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all appropriate ARIAD corporate action and will not require the consent or approval of ARIAD's stockholders;

(b) this Agreement is a legal and valid obligation binding upon ARIAD and enforceable in accordance with its terms, and the execution, delivery and performance of this Agreement by the Parties does not conflict with any agreement, instrument or understanding to which ARIAD is a party or by which it is bound;

(c) ARIAD has the full right and legal capacity to grant the rights granted to Bellicum hereunder without violating the rights of any Third Party;

(d) ARIAD has provided a true and complete copy of the […***…] Agreement and each […***…] Agreement to Bellicum, and ARIAD is not in material default of the […***…] Agreement or any […***…] Agreement; and

(e) No royalty or other payment is due under any agreement between ARIAD and a Third Party, as a result of the license granted by ARIAD herein or the practice of the rights granted to Bellicum hereunder, other than any remuneration which may be due pursuant to the […***…] Agreement and the […***…] Agreements.

7.2 Bellicum Representations. Bellicum represents and warrants to ARIAD that:

(a) the execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all appropriate Bellicum corporate action and will not require the consent or approval of Bellicum's stockholders;

(b) this Agreement is a legal and valid obligation binding upon Bellicum and enforceable in accordance with its terms, and the execution, delivery and performance of this Agreement by the Parties does not conflict with any agreement, instrument or understanding to which Bellicum is a party of or by which it is bound;

(c) Bellicum has the full right and legal capacity to grant the rights granted to ARIAD hereunder without violating the rights of any Third Party; and

(d) No royalty or other payment is due under any agreement between Bellicum and a Third Party, as a result of the license granted by Bellicum herein or the practice of the rights granted to ARIAD hereunder; and

(e) To Bellicum's knowledge, after due investigation, […***…] is the owner of all of the Patent Rights listed in Schedule A under "Part II: For […***…]-ARIAD MTA Technologies", except for rights to the patents and patent applications entitled "induced activation in dendritic cells" in said Part II of Schedule A, which were partially released to the inventors and licensed to Bellicum by the inventors by license agreement dated as of […***…]. As of the Effective Date, Bellicum (i) has not filed any patent application, (ii) has no internal patent disclosures or similar documents, and (iii) has no license from […***…], except for license agreements dated as of […***…] and […***…], that in each case relates to any product or other discovery or invention conceived or reduced to practice using any proprietary materials provided under any […***…] Agreement, including without limitation, […***…] and any other Dimerizer or […***…] Analog, regardless of whether the quantities of such proprietary materials actually used were manufactured by ARIAD, Bellicum or […***…].

7.3 No Warranties.

7.3.1 Nothing in this Agreement is or shall be construed as:

(a) a warranty or representation by either Party as to the validity or scope of any patent application or patent licensed hereunder;

(b) a warranty or representation that anything made, used, sold or otherwise disposed of under any license granted pursuant to this Agreement is or will be free from infringement of patents, copyrights, and other rights of third parties;

(c) a warranty or representation by ARIAD that any information, trade secrets or Technology provided by ARIAD to Bellicum under any license granted pursuant to this Agreement is sufficient to practice the Licensed Patent Rights granted hereunder.

(d) any warranty or representation regarding (i) an obligation of ARIAD or […***…] to bring or prosecute actions or suits against Third Parties for infringement; (ii) granting by implication, estoppel or otherwise any licenses or rights under patents or other rights of […***…] or […***…] or other persons other than the […***…] IP, regardless of whether such patents or other rights are dominant or subordinate to any Licensed Patent Right.

7.3.2 EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF NON-INFRINGEMENT OF ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER RIGHTS OF THIRD PARTIES, OR ANY OTHER IMPLIED WARRANTIES.

8. INDEMNIFICATION

8.1 Indemnification.

8.1.1 Bellicum Indemnity. Bellicum shall indemnify, defend and hold harmless ARIAD, […***…], […***…], and their respective Affiliates, directors, officers, employees, stockholders and agents, the inventors identified in the […***…] License Agreement, and each of their respective successors, heirs and assigns, its Affiliates and their respective directors, officers, employees, stockholders and agents, and their respective successors, heirs and assigns (the "**ARIAD Indemnitees**") from and against any liability, damage, loss or expense (including reasonable attorneys' fees and expenses of litigation) (collectively, "**Losses**") incurred by or imposed upon such ARIAD Indemnitees, or any of them, in connection with any Third Party claims, suits, actions, demands or judgments, including, without limitation, personal injury and product liability matters, to the extent arising out of (a) the development, testing, production, manufacture, supply, promotion, import, sale or use by any person of any Licensed Product (or any component thereof) manufactured or sold by Bellicum or any Affiliate or Sublicensee under this Agreement, or (b) gross negligence or willful misconduct on the part of Bellicum or any of its Affiliates or Sublicensees, except to the extent that such Losses are attributable to the breach by ARIAD of any of its representations, warranties or covenants set forth in this Agreement or the gross negligence or willful misconduct of an ARIAD Indemnitee.

8.1.2 ARIAD Indemnity. Subject to Section 8.1.1 above, ARIAD shall indemnify, defend and hold harmless Bellicum, its Affiliates and Sublicensees and their respective directors, officers, employees, and agents, and their respective successors, heirs and assigns (the "**Bellicum Indemnitees**"), from and against any Losses incurred by or imposed upon such Bellicum Indemnitees, or any of them, in connection with any Third Party claims, suits, actions, demands or judgments, including, without limitation, personal injury and product liability matters, to the extent arising out of (a) the development, testing, production, manufacture, supply,

promotion, import, sale or use by any person of any ARIAD Product (or any component thereof) manufactured or sold by ARIAD or any Affiliate or ARIAD sublicensee under this Agreement, or (b) gross negligence or willful misconduct on the part of ARIAD or any of its Affiliates or sublicensees, except to the extent that such Losses are attributable to the breach by Bellicum of any of its representations, warranties or covenants set forth in this Agreement or the gross negligence or willful misconduct of a Bellicum Indemnitee.

8.2 Indemnification Procedures. In the event that any ARIAD Indemnitee or Bellicum Indemnitee (each, an "**Indemnitee**") is seeking indemnification under Section 8.1 above from a Party (the "**Indemnifying Party**"), the Indemnitee shall notify the Indemnifying Party of such claim with respect to such Indemnitee as soon as reasonably practicable after the Indemnitee receives notice of the claim, and the Indemnitee shall permit the Indemnifying Party to assume direction and control of the defense of the claim (including the right to settle the claim solely for monetary consideration) and shall cooperate as reasonably requested (at the expense of the Indemnifying Party) in the defense of the claim. The indemnification obligations under Article 8 shall not apply to any harm suffered as a direct result of any delay in notice to the Indemnifying Party hereunder or to amounts paid in settlement of any claim, demand, action or other proceeding if such settlement is effected without the consent of the Indemnifying Party, which consent shall not be withheld or delayed unreasonably. The Indemnitee, its employees and agents, shall reasonably cooperate with the Indemnifying Party and its legal representatives in the investigation of any claim, demand, action or other proceeding covered by Section 8.1.

8.3 Limitation of Liability. Except for liability to a Third Party under Section 8.1, NEITHER PARTY NOR ITS AFFILIATES OR LICENSORS SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES ARISING OUT OF THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

9. TERM AND TERMINATION

9.1 Term; Expiration. The term of this Agreement shall commence upon the Effective Date and shall expire upon the expiration of the last Primary License Term, unless terminated as set forth herein (the "**Term**").

9.2 Termination Rights for Breach.

9.2.1 Termination for Breach. Subject to the other terms of this Agreement, this Agreement and the rights and options granted herein may be terminated by either Party upon any material breach by the other Party of any material obligation or condition, effective thirty (30) days after giving written notice to the breaching Party of such termination in the case of a payment breach and ninety (90) days after giving written notice to the breaching Party of such termination in the case of any other breach, which notice shall describe such breach in reasonable detail. The foregoing notwithstanding, if such default or breach is cured or remedied or shown to be non-existent within the aforesaid thirty (30) or ninety (90) day period, the notice shall be automatically withdrawn and of no effect.

9.2.2 Voluntary Termination. Bellicum shall have the right to terminate this Agreement at any time after two (2) years from the Effective Date in the event that Bellicum determines not to develop or commercialize any Licensed Product.

9.2.3 Termination for Bankruptcy. In the event that either Party files for protection under bankruptcy laws, makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it which is not discharged within sixty (60) days of the filing thereof, then the other Party may terminate this Agreement effective immediately upon written notice to such Party.

9.3 Effects of Termination. Upon any termination of this Agreement by ARIAD or Bellicum under Section 9.2.1 or by Bellicum pursuant to Section 9.2.2, as of the effective date of such termination all relevant licenses and sublicenses granted by ARIAD to Bellicum shall terminate automatically. Upon any termination of this Agreement by ARIAD or Bellicum under Section 9.2.1 or by Bellicum pursuant to Section 9.2.2, subject to applicable statutes, laws, regulations, ordinances and guidelines governing the transfer of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903, Bellicum will transfer, assign and convey all its ownership of and any beneficial interest in the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903 to ARIAD, effective as of the date of termination, and within ten (10) days of such termination, ARIAD and Bellicum shall each submit the required information to the FDA and any other relevant Regulatory Authority to effect the change of the named sponsor of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903 from Bellicum to ARIAD in accordance with the applicable statutes, laws, regulations, ordinances and guidelines, and Bellicum shall transfer a complete copy of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903, including any amendments or supplements thereto, and correspondence relating thereto, to ARIAD. No termination of this Agreement shall affect ARIAD's rights pursuant to the Investor Rights Agreement, dated as of July 25, 2006, as amended, except as stated therein. Notwithstanding the foregoing, and subject at all times to the provisions of the […***…] Agreement with respect to the […***…] IP to the extent a license under such […***…] IP is granted to Bellicum under this Agreement, (a) no such termination of this Agreement shall be construed as a termination of any valid sublicense of any Sublicensee hereunder, and thereafter each such Sublicensee shall be considered a direct licensee of ARIAD, provided that (i) such Sublicensee is then in full compliance with all terms and conditions of its sublicense, (ii) all accrued payments obligations of such Sublicensee to ARIAD have been paid, and (iii) such Sublicensee agrees in writing to assume all applicable obligations of Bellicum under this Agreement arising thereafter to the extent

of the scope of the sublicense, and (b) Bellicum and its Affiliates and Sublicensees shall have the right, for six (6) months or such longer time period (if any) on which the Parties mutually agree in writing, to sell or otherwise dispose of all Licensed Products then on hand, with royalties to be paid to ARIAD on all Net Sales of such Licensed Products as provided for in this Agreement.

9.4 Remedies. Except as otherwise expressly set forth in this Agreement, the termination provisions of this Article 9 are in addition to any other relief and remedies available to either Party at law.

9.5 Surviving Provisions. Notwithstanding any provision herein to the contrary, the rights and obligations of the Parties set forth in Sections 1, 2.1.8, 2.1.9, 2.2.1, 2.2.2, 2.2.3, 4.1.2 (last sentence and with respect to events occurring before termination or sales after termination permitted by Section 9.3), 4.1.4, 4.3.1 (for the period stated therein), 4.3.2, 4.3.3, 5, 6, 7, 8, 9.3, 9.4, 9.5, 10 and 11, as well as any rights or obligations otherwise accrued hereunder (including any accrued payment obligations), shall survive the expiration or termination of the Term. Without limiting the generality of the foregoing, Bellicum shall have no obligation to make any milestone or royalty payment to ARIAD that has not accrued prior to the effective date of any termination of this Agreement, but shall remain liable for all such payment obligations accruing prior to the effective date of such termination.

10. DISPUTES

10.1 Negotiation. The Parties recognize that a bona fide dispute as to certain matters may from time to time arise during the Term that relates to either Party's rights and/or obligations hereunder. In the event of the occurrence of such a dispute, either Party may, by written notice to the other Party, have such dispute referred to their respective senior officials designated below or their successors, for attempted resolution by good faith negotiations within […***…] after such notice is received. Said designated senior officials are as follows:

For Bellicum: Chief Executive Officer

For ARIAD: Chief Executive Officer

In the event the designated senior officials are not able to resolve such dispute within the […***…] period, either Party may invoke the provisions of Section 10.2.

10.2 Arbitration. Subject to Section 10.1, any dispute, controversy or claim initiated by either Party arising out of, resulting from or relating to this Agreement, or the performance by either Party of its obligations under this Agreement (other than bona fide Third Party actions or proceedings filed or instituted in an action or proceeding by a Third Party against a Party), whether before or after termination of this Agreement, shall be finally resolved by binding arbitration. Whenever a Party shall decide to institute arbitration proceedings, it shall give written notice to that effect to the other Party. Any such arbitration shall be conducted under the Commercial Arbitration Rules of the American Arbitration Association by a panel of three arbitrators appointed in accordance with such rules. Any such arbitration shall be held in Boston, Massachusetts. The method and manner of discovery in any such arbitration proceeding shall be governed by the laws of the State of New York. The arbitrators shall have the authority to grant injunctions and/or specific performance and to allocate between the parties the costs of arbitration in such equitable manner as they determine. Judgment upon the award so rendered may be entered in any court having jurisdiction or application may be made to such court for judicial acceptance of any award and an order of enforcement, as the case may be. In no event shall a demand for arbitration be made after the date when institution of a legal or equitable proceeding based upon such claim, dispute or other matter in question would be barred by the applicable statute of limitations. Notwithstanding the foregoing, either Party shall have the right, without waiving any right or remedy available to such Party under this Agreement or otherwise, to seek and obtain from any court of competent jurisdiction any interim or provisional relief that is necessary or desirable to protect the rights or property of such Party, pending the selection of the arbitrators hereunder or pending the arbitrators' determination of any dispute, controversy or claim hereunder.

11. MISCELLANEOUS

11.1 Insurance.

11.1.1 To the extent and for so long as any […***…] IP is licensed to Bellicum under Section 2.1.1 and as required by the […***…] Agreement, Bellicum shall comply with the terms of this Section 11.1.1. Bellicum shall comply, through insurance written by reputable and financially secure insurance carriers, with all statutory workers' compensation and employers' liability requirements covering any and all employees with respect to its activities performed under this Agreement. In addition to the foregoing, Bellicum shall maintain Comprehensive General Liability Insurance, including Products Liability Insurance, covering Bellicum's indemnification obligations hereunder, with reputable and financially secure insurance carrier(s) to cover the activities of Bellicum, its Affiliates and Sublicensees. Such insurance shall provide minimum limits of liability considered to be standard for Bellicum's industry prior to human clinical trials. Commencing with human clinical trials of a Licensed Products, Bellicum shall maintain such insurance with minimum limits of liability of […***…] dollars ($[…***…]) per occurrence and […***…] dollars ($[…***…]) in aggregate and shall include ARIAD and […***…], […***…], […***…], […***…] and their respective trustees, directors, officers, employees, students, and agents as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during and after the Term. At ARIAD's request, Bellicum shall furnish a Certificate of Insurance evidencing primary coverage and requiring […***…] prior written notice of cancellation or material change to ARIAD. Bellicum shall advise ARIAD, in writing, that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All such insurance of Bellicum shall be primary coverage; insurance of the above additional insureds shall be excess and noncontributory. ARIAD acknowledges

that the insurance specified in this Section 11.1.1 may be or become unavailable or unavailable on commercially practicable terms. In such event, ARIAD agrees to discuss with Bellicum commercially reasonable alternatives. Each Party shall carry appropriate insurance covering such Party's indemnification obligations under this Agreement, through insurance written by reputable and financially secure insurance carriers.

11.2 Notification. All notices, requests and other communications hereunder shall be in writing, shall be addressed to the receiving party's address set forth below or to such other address as a party may designate by notice hereunder, and shall be either (i) delivered by hand, (ii) made by facsimile transmission (to be followed with written fax confirmation), (iii) sent by private courier service providing evidence of receipt, or (iv) sent by registered or certified mail, return receipt requested, postage prepaid. The addresses and other contact information for the parties are as follows:

If to ARIAD:	ARIAD Pharmaceuticals, Inc. 26 Landsdowne Street Cambridge, MA 02139 Attn: Chief Executive Officer
With a copy to:	Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 Attn: Jeffrey M. Wiesen, Esq.
If to Bellicum:	Bellicum Pharmaceuticals, Inc. 6400 Fannin St., Suite 2300 Houston, TX 77030 Attn: Chief Executive Officer
With a copy to:	Cooley LLP 4401 Eastgate Mall San Diego, CA 92121 Attn: L. Kay Chandler, Esq.

All notices, requests and other communications hereunder shall be deemed to have been given either (i) if by hand, at the time of the delivery thereof to the receiving party at the address of such party set forth above, (ii) if made by telecopy or facsimile transmission, at the time that receipt thereof has been acknowledged by the recipient, (iii) if sent by private courier, on the day such notice is delivered to the recipient, or (iv) if sent by registered or certified mail, on the fifth (5th) business day following the day such mailing is made.

11.3 Language. This Agreement has been prepared in the English language and the English language shall control its interpretation.

11.4 Governing Law. This Agreement will be construed, interpreted and applied in accordance with the laws of the State of New York (excluding its body of law controlling conflicts of law).

11.5 Limitations. Except as expressly set forth in this Agreement, neither Party grants to the other Party any right or license to any of its intellectual property.

11.6 Entire Agreement. This Agreement, together with the Confidentiality Agreement, constitute the entire agreement between the Parties with respect to the subject matter hereof and supersede all prior representations, understandings and agreements between the Parties with respect to the subject matter hereof. ARIAD and Bellicum agree that the 2006 Agreement is amended and restated in its entirety as set forth in this Agreement as of the Effective Date and that the 2006 Agreement was in effect from the Original Effective Date until the Effective Date. No modification shall be effective unless in writing with specific reference to this Agreement and signed by the Parties.

11.7 Waiver. The terms or conditions of this Agreement may be waived only by a written instrument executed by the Party waiving compliance. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a continuing waiver of such condition or term or of another condition or term.

11.8 Headings. Section and subsection headings are inserted for convenience of reference only and do not form part of this Agreement.

11.9 Assignment. Neither this Agreement nor any right or obligation hereunder may be assigned, delegated or otherwise transferred, in whole or part, by either Party without the prior express written consent of the other; provided, however, that either Party may, without the written consent of the other, assign this Agreement and its rights and delegate its obligations or sublicense its rights hereunder to its Affiliates, or in connection with the transfer or sale of all or substantially all of such Party's assets or business related to this Agreement, or in the event of its merger, consolidation, change in control or similar transaction. In the event of such transaction, however, intellectual property rights of the acquiring party in such transaction (if other than one of the Parties to this Agreement) shall not be included in the technology licensed hereunder. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 11.9 shall be void. The terms and conditions of this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the parties.

11.10 Force Majeure. Neither Party shall be liable for failure of or delay in performing obligations set forth in this Agreement, and neither shall be deemed in breach of its obligations, if such failure or delay is due to natural disasters or any causes beyond the reasonable control of such Party. In event of such force majeure, the Party affected thereby shall use reasonable efforts to cure or overcome the same and resume performance of its obligations hereunder.

11.11 Construction. The Parties hereto acknowledge and agree that: (i) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (ii) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (iii) the terms and provisions of this Agreement shall be construed fairly as to all Parties hereto and not in favor of or against any Party, regardless of which Party was generally responsible for the preparation of this Agreement.

11.12 Severability. If any provision(s) of this Agreement are or become invalid, are ruled illegal by any court of competent jurisdiction or are deemed unenforceable under then current applicable law from time to time in effect during the Term hereof, it is the intention of the Parties that the remainder of this Agreement shall not be affected thereby provided that a Party's rights under this Agreement are not materially affected. The Parties hereto covenant and agree to renegotiate any such term, covenant or application thereof in good faith in order to provide a reasonably acceptable alternative to the term, covenant or condition of this Agreement or the application thereof that is invalid, illegal or unenforceable, it being the intent of the Parties that the basic purposes of this Agreement are to be effectuated.

11.13 Status. Nothing in this Agreement is intended or shall be deemed to constitute a partner, agency, employer-employee, or joint venture relationship between the Parties.

11.14 Section 365(n). All licenses granted under this Agreement are deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of right to "intellectual property" as defined in Section 101 of such Code. The Parties agree that Bellicum may fully exercise all of its rights and elections under the U.S. Bankruptcy Code, regardless of whether either Party files for bankruptcy in the United States or other jurisdiction. The Parties further agree that, in the event Bellicum elects to retain its rights as a licensee under such Code, Bellicum shall be entitled to complete access to any technology licensed to it hereunder and all embodiments of such technology. Such embodiments of the technology shall be delivered to the Bellicum not later than:

(a) the commencement of bankruptcy proceedings against the licensor, upon written request, unless the licensor elects to perform its obligations under the Agreement, or

(b) if not delivered under Section 11.14(a) above, upon the rejection of this Agreement by or on behalf of Bellicum, upon written request.

11.15 Export Compliance. Each Party, and its Affiliates and sublicensees shall comply with all United States laws and regulations controlling the export of certain commodities and technical data, including without limitation all Export Administration Regulations of the United States Department of Commerce. Among other things, these laws and regulations prohibit or require a license for the export of certain types of commodities and technical data to specified countries. Bellicum hereby gives written assurance that it will comply with, and will cause its Affiliates and Sublicensees to comply with, all United States export control laws and regulations, that it bears sole responsibility for any violation of such laws and regulations by itself or its Affiliates or Sublicensees, and that it will indemnify, defend, and hold ARIAD harmless (in accordance with Section 8) for the consequences of any such violation.

11.16 Further Assurances. Each Party agrees to execute, acknowledge and deliver such further instructions, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

11.17 Counterparts. This Agreement may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representative in two (2) originals.

Bellicum Pharmaceuticals, Inc.

By: /s/ Thomas J. Farrell
Thomas J. Farrell
Title: Chief Executive Officer

ARIA Pharmaceuticals, Inc.

By: /s/ Harvey J. Berger, M.D.
Harvey J. Berger, M.D.
Title: Chairman and Chief Executive Officer

Schedule A—Licensed Patent Rights

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*****Confidential Treatment Requested**

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*****Confidential Treatment Requested**

Schedule B

Licensed Products

1. BPX-101 (formerly BP-GMAX-CD1)

2. CaspaCIDe Donor Lymphocyte Infusion

Exhibit 10.16

*****Text Omitted and Filed Separately with the Securities and Exchange Commission Confidential Treatment Requested Under 17 C.F.R. Sections 200.80(b)(4) and 230.406**

OMNIBUS AMENDMENT AGREEMENT

THIS OMNIBUS AMENDMENT AGREEMENT (**"Agreement"**) is entered into and made effective as of October 3, 2014 (the **"Effective Date"**) by and between **ARIAD PHARMACEUTICALS, INC.**, a Delaware corporation with its principal place of business at 26 Landsdowne Street, Cambridge, MA 02139 (**"ARIAD"**), and **BELLICUM PHARMACEUTICALS, INC.**, a Delaware corporation with a place of business at 2130 Holcombe Boulevard, Suite 850, Houston, TX 77030 (**"Bellicum"**). ARIAD and Bellicum may be referred to herein individually as a **"Party"** and collectively as **"Parties**.**"**

WHEREAS, the Parties previously executed the following agreements: an Amended and Restated License Agreement, dated March 7, 2011 (the **"License Agreement"**); an Investor Rights Agreement, dated July 25, 2006, as amended on March 25, 2009 (the **"IRA"**); and a Stock Purchase Agreement, dated July 25, 2006 (the **"SPA"**) (collectively, these three agreements are referred to herein as the **"Current Agreements"**); and

WHEREAS, the Parties wish to restructure and amend the Current Agreements in accordance with the terms and conditions set forth herein, it being understood that certain provisions in the License Agreement are not being amended but may no longer be applicable.

NOW THEREFORE, in consideration of the foregoing premises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

1. DEFINED TERMS.

1.1 Any capitalized term used but not defined herein shall have the meaning ascribed to it under the Current Agreements.

2. PROMISSORY NOTE.

2.1 Payments by Bellicum. Bellicum will pay ARIAD Fifty Million US dollars ($50,000,000) in up to three installments pursuant to this Agreement and a promissory note that will be executed by the Parties contemporaneously with this Agreement (the **"Note"**).

(a) The first payment by Bellicum, in the amount of Fifteen Million US dollars ($15,000,000); the **"First Payment"**) shall be delivered to ARIAD on the Effective Date following execution of this Agreement.

(b) The second payment by Bellicum, in the amount of Twenty Million US dollars ($20,000,000; the **"Second Payment"**), is due on June 30, 2015.

(c) The third payment by Bellicum, in the amount of Fifteen Million US dollars ($15,000,000; the **"Third Payment"**), is due on June 30, 2016.

(d) Although specific due dates are recited in subsections (b) and (c) of this Section 2.1, Bellicum may prepay the Second Payment and/or the Third Payment at any time following the First Payment and prior to the applicable due date.

2.2 Bellicum's Other Obligations; Termination of the Note; Termination of this Agreement. Bellicum's obligations for the Second Payment and the Third Payment under the Note are absolute and unconditional, and such obligations of Bellicum are not affected by the expiration or termination of the Current Agreements (or any of them) and/or this Agreement, for any reason other than the termination of both the License Agreement by Bellicum in accordance with Section 9.2 of the License Agreement and this Agreement by Bellicum in accordance with the penultimate sentence of this Section 2.2 for an uncured material breach by ARIAD of at least one of the specific provisions of the License Agreement as listed and described in **Exhibit B** (attached hereto and incorporated herein; each a **"Section 2.2 Material Breach"**), wherein each such Section 2.2 Material Breach, if uncured, would constitute grounds for termination of the License Agreement by Bellicum under Section 9.2 of the License Agreement. In the event of an uncured Section 2.2 Material Breach, the Note will terminate upon delivery of written notice of termination by Bellicum to ARIAD referencing this Section 2.2, and thereafter the Note will have no further force or effect. In addition to automatic termination of this Agreement as set forth in Section 3.2(d) hereof, each of Bellicum and ARIAD, as applicable, has the right to terminate this Agreement solely in the event such Party terminates the License Agreement in accordance with Section 9.2.1 of the License Agreement based on an uncured material breach of the License Agreement by the other Party that would constitute grounds for termination under Section 9.2 of the License Agreement. For clarity, in the event of termination in accordance with Section 9.2.1 of the License Agreement, Section 9.3 of the License Agreement (as amended hereby) shall apply.

3. AMENDMENTS TO THE CURRENT AGREEMENTS.

3.1 Upon First Payment. From and after the date of ARIAD's receipt of the First Payment on the Effective Date:

(a) Each of the defined terms Dimerizer, Licensed Field, Licensed Patent Rights, Licensed Product and [...***...] Analog, as set forth in the License Agreement, is hereby deleted and replaced in its entirety with the following, corresponding new defined terms:

> **"Dimerizer"** shall mean any molecule that induces the interaction or proximity of two or more proteins, modified to contain a dimerizer-binding domain, resulting in the activation of specific signaling, gene transcription, or protein secretion events in cultured cells, whole animals or humans.
>
> **"Licensed Field"** shall mean the treatment or prevention of the progression or occurrence of any disease, disorder or condition in humans, other than a treatment or prevention achieved through an administration within the Excluded Field.
>
> **"Licensed Patent Rights"** shall mean (a) all Patent Rights Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of Licensed Products or of Dimerizers used or incorporated in Licensed Products, including without limitation Patent Rights covering the [...***...]-ARIAD MTA Technologies and (b) all Patent Rights whether or not controlled by ARIAD that are listed on Schedule A1 (**"Homodimerizer Patent Rights"**) and Schedule

A2 (**"Heterodimerizer Patent Rights"**), attached hereto and made a part hereof, regardless of the ownership of such Patent Rights. Schedule A3 sets forth Patent Rights under the [...***...]-ARIAD MTA Technologies. Schedules A1, A2 and A3 shall be updated, as necessary, from time to time by ARIAD by written notice to Bellicum.

"Licensed Product" shall mean any prophylactic or therapeutic product the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Licensed Patent Rights or by Licensed Technology (including, without limitation, Patent Rights licensed or assigned to Bellicum that cover any of the [...***...]-ARIAD MTA Technologies), and that (a) contains proteins or genes encoding proteins, the interaction or proximity of which proteins is induced by a Homodimerizer; (b) is a Homodimerizer for use with a product described in clause (a); or (c) is a treatment regimen or process utilizing any product described in clause (a) or (b). The definition of Licensed Product expressly includes those products that are within the definition of Licensed Product on or prior to the effective date of the Omnibus Amendment. For clarity, the term "Licensed Product," as amended by the Omnibus Amendment, shall have the foregoing meaning until such time as the Third Payment (as defined in the Omnibus Amendment) has been made pursuant to the terms of the Omnibus Amendment, and the term "Licensed Product" shall have the meaning set forth in Section 3.3(a) of the Omnibus Amendment after the Third Payment has been made pursuant to the terms of the Omnibus Amendment.

"[...*...] Analog"** shall mean a compound similar to [...***...] in [...***...].

and each of the following new defined terms (Academic MTA, Excluded Field, Heterodimerizer, Homodimerizer, Human Gene Therapy, MTA Technology and Omnibus Amendment) is hereby inserted into Section 1 of the License Agreement in the appropriate alphabetical location:

"Academic MTA" shall mean a material transfer agreement pursuant to which ARIAD provided a dimerizer or one or more genetic constructs encoding a dimerizer binding protein to a researcher at an academic institution or at a not-for-profit entity.

"Excluded Field" shall mean (1) Human Gene Therapy and (2) regulation of the expression of proteins or other macromolecules [...***...].

"Heterodimerizer" shall mean a Dimerizer that contains two structurally and functionally distinct binding motifs, and that induces the interaction or proximity of proteins containing structurally and functionally different dimerizer-binding domains. By way of non-limiting example, [...***...] Analogs are Heterodimerizers.

"Homodimerizer" shall mean a Dimerizer that contains two structurally and functionally identical binding motifs, and that induces the interaction or proximity of proteins containing functionally identical dimerizer-binding domains. By way of non-limiting example, [...***...] is a Homodimerizer.

"Human Gene Therapy" shall mean the *in vivo* administration of genetic material directly into a human being using viral vectors, including but not limited to AAV Vectors, to transfer such material into the patient's own cells for the purpose of producing proteins or other macromolecules that are expressed in or secreted from the transduced cells for therapeutic or prophylactic purposes, where (i) the expression of such proteins or other macromolecules is regulated through the administration of [...***...] or another [...***...] Dimerizer, or (ii) the inserted genetic material is not regulated through the administration of a Dimerizer. For clarity, "Human Gene Therapy" shall not include (a) any use where genetic material is inserted into a cell ex vivo, including without limitation any use for a cancer or non-cancer vaccine or immunotherapeutic product or (b) any use where activation of genetic material for any function other than expression is regulated through the administration of Dimerizer.

"MTA Technology" shall mean Homodimerizer and Heterodimerizer technology and related intellectual property rights related to Licensed Products in the Licensed Field which have been licensed or otherwise conveyed to ARIAD under an Academic MTA and which ARIAD has the right to sublicense or otherwise convey to Bellicum hereunder.

"Omnibus Amendment" shall mean the Omnibus Amendment Agreement, dated October 3, 2014, executed by the Parties.

(b) Section 2.1.1 of the License Agreement is hereby deleted and replaced with the following:

Grant of License. From and after the effective date of the Omnibus Amendment, ARIAD hereby grants to Bellicum an exclusive (even as to ARIAD), fully-paid, irrevocable (unless this Agreement is terminated in accordance with the terms of the Omnibus Amendment) license, including the right to grant sublicenses in accordance with Section 2.1.4, under the Licensed Patent Rights and Licensed Technology and ARIAD's interest in any Improvements, subject at all times to the restrictions and obligations under the [...***...] Agreement with respect to the [...***...] IP, (a) to research, develop, test, obtain Regulatory Approval for, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported Licensed Products (including, without limitation, any Dimerizer included or utilized therein) in the Territory, for any and all uses within the Licensed Field during the Term, subject to the terms and conditions of this Agreement, and (b) to research, develop, test, make, have made, use, import and export, in each case solely for research purposes, including pre-clinical IND-enabling toxicology and other pre-clinical studies (but not to conduct clinical

trials with respect to or to obtain Regulatory Approval for, sell or commercialize), a product that uses or incorporates a Heterodimerizer in the Licensed Field. For clarity, from and after the Effective Date, the term "Licensed Technology" includes MTA Technology relevant to Homodimerizers in the Licensed Field. From and after the effective date of the Omnibus Amendment, the term "Licensed Technology" includes MTA Technology relevant to Heterodimerizers in the Licensed Field.

(c) Section 2.1.4 of the License Agreement is hereby deleted and replaced with the following:

Right to Sublicense and Subcontract. Bellicum shall have the right to grant sublicenses to any Affiliate and/or Sublicensee to all or any portion of its rights under the license granted pursuant to Section 2.1.1; provided, however, that (a) such sublicense under the license granted pursuant to Section 2.1.1 shall be granted in connection with a license to all Patent Rights and Technology Controlled by Bellicum, which are necessary or useful in the manufacture, use or sale of the Licensed Product(s) covered by the sublicense, (b) no sublicense may include a right to further sublicense any [...***...] IP unless [...***...] has provided prior written consent to Bellicum and ARIAD allowing such further sublicense (and, if requested by Bellicum, ARIAD will assist Bellicum in obtaining such consent from [...***...]), and all such sublicenses of [...***...] IP shall be subject and subordinate to, and consistent with, the terms and conditions of the [...***...] Agreement with respect to sublicenses of [...***...] IP, (c) ARIAD shall be notified of the grant of a sublicense to any and all potential sublicenses, (d) any and all sublicenses shall be subject to, and consistent with, the terms and conditions of this Agreement, (e) upon termination of this Agreement, any such sublicense shall be considered a fully-paid, direct license from ARIAD, as provided in Section 9.3 as amended hereby, and (f) Bellicum shall provide ARIAD with a copy of each such sublicense agreement (from which Bellicum may redact confidential terms that are not necessary to disclose to ARIAD for purposes of confirming compliance with this Agreement and the [...***...] Agreement) within thirty (30) days of execution. In addition, Bellicum shall have the right to subcontract with any Third Party, including [...***...], to have such Third Party perform work on Bellicum's behalf pursuant to the license granted pursuant to Section 2.1.1 on terms which are subject to, and consistent with, the terms and conditions of this Agreement. ARIAD acknowledges and agrees that, after the effective date of the Omnibus Amendment, Bellicum has no obligation to ARIAD to collect payments from its current or future sublicensees in respect of any sublicense of the rights granted to Bellicum under this Agreement.

(d) Section 2.1.2 is hereby deleted from the License Agreement and replaced with the words "This section intentionally omitted." All other provisions of Section 2.1 of the License Agreement (Sections 2.1.3 and 2.1.5 through 2.1.9) remain unchanged and in full force and effect.

(e) Bellicum's obligation to develop and commercialize certain Licensed Products in the Licensed Field, as set forth in Section 3.2 of the License Agreement, will continue until ARIAD's parallel obligation to [...***...] terminates upon the expiry of the patents as set forth in the agreement between ARIAD and [...***...]. Upon the date of termination of such parallel obligation of ARIAD, all of Bellicum's obligations under Section 3.2 of the License Agreement are automatically terminated.

(f) Section 3.4 of the License Agreement is amended by adding the following sentence at the end thereof: "For clarity, ARIAD retains the right to manufacture or have manufactured any Dimerizer other than [...***...] for use outside the Licensed Field, and to grant licenses to Third Parties to do so, subject to ARIAD's compliance with Section 2.2.1(a)."

(g) All other provisions of Article 3 of the License Agreement (Sections 3.1, 3.3 and 3.5) remain unchanged and in full force and effect.

(h) With the exception of Section 4.1.4 (which continues in full force and effect), Sections 4.1 through 4.3 of the License Agreement have no further force and effect and are deleted from the License Agreement. Each such deleted section is hereby replaced with the words: "This section intentionally omitted."

(i) Under Section 6.1 of the License Agreement, ARIAD will continue to have the sole right, but not the obligation, to prepare, file, prosecute, obtain and maintain the Licensed Patent Rights, other than the Licensed Patent Rights covering the [...***...]-ARIAD MTA Technologies, which are currently being prepared, filed, prosecuted, obtained and maintained by Bellicum pursuant to ARIAD's delegation of such responsibility to Bellicum. ARIAD will give good faith consideration to Bellicum's requests and input regarding such activities in connection with the Licensed Patent Rights, and will not discontinue such activities or materially diminish the scope of claims within any Licensed Patent Rights without prior written notice to Bellicum and good faith consideration of Bellicum's interests and comments. If ARIAD wishes to discontinue payments for maintenance of any patent within the Licensed Patent Rights, ARIAD hereby grants to Bellicum the right to make such maintenance payments for such patent. Notwithstanding anything to the contrary in Section 6.1 of the License Agreement, the following will apply from and after the Effective Date: In relation to Section 6.1 of the License Agreement, ARIAD will continue to have the first right to enforce any Licensed Patent Rights, provided, however that (1) if ARIAD elects not to enforce any of the Licensed Patent Rights owned by ARIAD against alleged infringement by the manufacture, use, sale or import by a Third Party(ies) (as defined in the License Agreement) of a product within the definition of "Licensed Product" in the Licensed Field, Bellicum may do so at its sole expense without any further consent required from ARIAD; and (2) if ARIAD elects not to enforce any of the Licensed Patent Rights licensed by ARIAD from a Third Party(ies) against alleged infringement by the manufacture, use, sale or import by a Third Party(ies) of a product within the definition of "Licensed Product" in the Licensed Field, then to the full extent that ARIAD may do so under its license agreement with such Third Party(ies), but subject to any right of such Third Party(ies) to enforce such Licensed Patent Rights, ARIAD will delegate to Bellicum the right to enforce such Licensed Patent Rights at Bellicum's sole expense; provided that, if such consent is required under any license agreement from a Third Party(ies), ARIAD will use good faith efforts to obtain consent to delegate such enforcement right to Bellicum; and further provided that, if the Third

Party licensor agrees that ARIAD may enforce such Licensed Patent Rights on behalf of Bellicum, but will not consent to delegation of such enforcement right to Bellicum, then ARIAD will exercise its enforcement right on behalf of Bellicum, at Bellicum's direction and expense. In addition, any filing, prosecution and/or maintenance rights, and any enforcement rights, that ARIAD possesses under an Academic MTA shall be treated in the same manner as Licensed Patent Rights described in Section 6.1 of the License Agreement (as modified by this Section 3.1(i)).

(j) Section 9.3 of the License Agreement is hereby amended by deleting clause (a) (ii) thereof and by deleting from clause (b) the words "with royalties to be paid to ARIAD on all Net Sales of such Licensed Products as provided for in this Agreement."

(k) ARIAD will not sell, transfer, pledge or otherwise dispose of any shares of Bellicum Common Stock, unless (i) Bellicum has completed a registered public offering of its Common Stock (an **"IPO"**) at any time and has not made the Second Payment by October 31, 2015 (including applicable interest commencing July 1, 2015 as set forth in Section 3.2(b) of this Agreement); or (ii) each of the License Agreement and this Agreement has been terminated.

(l) ARIAD will not modify the [...***...] Agreement or the [...***...] Agreement in any manner, and will not take or fail to take any actions that would diminish Bellicum's rights or increase Bellicum's obligations under those agreements. Notwithstanding anything to the contrary in the License Agreement, ARIAD will be solely responsible for paying, and shall pay, any and all royalties, milestone payments and other payments owed under the [...***...] Agreement as a result of Net Sales or milestone achievements by Bellicum, its Affiliates or Sublicensees. If the [...***...] Agreement is terminated (as described in Section 2.1.9 of the License Agreement), ARIAD will remain responsible for making any payments to [...***...] that are owed as a result of Bellicum's activities as a direct licensee of [...***...].

(m) Bellicum recognizes that ARIAD has executed numerous Academic MTAs, pursuant to many of which ARIAD has obtained certain non-exclusive rights which may be useful to Bellicum in the practice of the licenses granted to Bellicum under the License Agreement (as amended by this Agreement). ARIAD has provided to Bellicum before the Effective Date a listing of such Academic MTAs which ARIAD believes (but does not represent) is complete. To the extent necessary and permitted by any Academic MTA, ARIAD consents to Bellicum contacting the researcher or his or her institution or entity under such Academic MTA to discuss or seek rights to the intellectual property rights resulting from the research conducted thereunder. Subject to any confidentiality obligation under any Academic MTA, ARIAD will notify Bellicum in writing of the existence of patents and patent applications relevant to the research, development, testing, manufacture, use, sale or import of Licensed Products in the Licensed Field, and disclosed to ARIAD in connection with such Academic MTAs. If ARIAD has a right to negotiate for any option or license rights to such patents and patent applications, then at Bellicum's written request, ARIAD will reasonably cooperate with Bellicum to seek to obtain a right for Bellicum to negotiate for such option or license rights to such patents and patent applications; provided that if ARIAD has a right to convey such option or license rights to another party, but is unable to obtain such negotiation right for Bellicum after good faith efforts, then if the other party to the Academic MTA agrees that ARIAD may negotiate such option of license rights on behalf of Bellicum, but will not consent to delegation of such negotiation right

to Bellicum, ARIAD will cooperate with Bellicum in negotiating such option or license rights on behalf of Bellicum, and convey to Bellicum the negotiated rights, all at Bellicum's sole expense. If Bellicum believes that a researcher, or his or her institution or entity, is not complying with his/her Academic MTA, ARIAD and Bellicum will cooperate to ensure that such researcher is in compliance.

3.2 Upon Second Payment. From and after the date of ARIAD's receipt of the Second Payment (together with any applicable interest payable pursuant to subsection (b) below) **("Second Payment Date")**:

(a) ARIAD will surrender to Bellicum all shares of Bellicum Common Stock held by ARIAD as of the Second Payment Date, provided that the Second Payment Date is no later than December 31, 2015, and concurrently with such surrender of shares, each of the SPA and IRA will terminate and have no further force or effect (unless the SPA and/or the IRA has/have previously terminated in accordance with its/their respective terms).

(b) If the Second Payment is not delivered by Bellicum on or before June 30, 2015, then, from July 1, 2015 until such time as the Second Payment, plus interest from July 1, 2015 (at the rate of ten percent (10%) per annum or the maximum rate allowed by applicable law, if lower), is paid in full: (i) ARIAD will not surrender the Bellicum Common Stock held by ARIAD; (ii) each of the SPA and IRA will continue in full force and effect, unless terminated upon an IPO in accordance with their respective terms; (iii) under Section 2.1.4 of the License Agreement, any right of Bellicum to grant sublicenses without ARIAD's consent will be suspended until the Second Payment is delivered; (iv) Bellicum shall pay ARIAD, from an escrow account held by an independent third party to be established at the time of the first receipt of Cash Consideration (defined below) to provide funds for such payment, (A) on July 1, 2015, fifty percent (50%) of any cash consideration received by Bellicum under sublicense agreements and directly related contemporaneous agreements executed by Bellicum with such sublicensees (**"Cash Consideration"**) subsequent to August 22, 2014 and prior to July 1, 2015; provided that the following are expressly excluded from such Cash Consideration described in this Section 3.2(b) and in Section 3.3(b) below: amounts received by Bellicum (1) in arrears and based on reported expenditures of time and materials for the performance of bona fide product development work or research work, (2) for equity (including, convertible equity, such as warrants and convertible debt) at fair market value, and (3) in arrears and based on reported expenditures for patent expenses incurred by Bellicum; and (B) one hundred percent (100%) of any milestone payments that would have been owed by Bellicum to ARIAD under the License Agreement as it existed prior to the Effective Date, if the corresponding milestone event is achieved subsequent to the Effective Date of this Agreement and prior to the Second Payment Date.

(c) For avoidance of doubt, Bellicum's failure to deliver the Second Payment on or before June 30, 2015 does not give ARIAD the right to terminate the License Agreement in response to such failure.

(d) If the Second Payment is not delivered by Bellicum on or before June 30, 2016, ARIAD will have the right, in its sole discretion, to terminate the License Agreement in its entirety upon delivery to Bellicum of written notice of termination that makes reference to this Section 3.2(d). In the event of such termination, this Agreement shall be terminated automatically. For clarity, termination of this Agreement pursuant to this Section 3.2(d) shall not terminate the Note, which shall continue in full force and effect.

3.3 Upon Third Payment. From and after the date of ARIAD's receipt of the Third Payment (together with any applicable interest payable pursuant to subsection (b) below) **("Third Payment Date")**:

(a) If the Third Payment is delivered by Bellicum on or before June 30, 2016, the defined term Licensed Product will be further amended and expanded in scope to the extent permitted by ARIAD's pre-existing obligations and agreements, as follows:

> **"Licensed Product"** shall mean any prophylactic or therapeutic product the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Licensed Patent Rights or by Licensed Technology (including, without limitation, Patent Rights licensed or assigned to Bellicum that cover any of the [...***...]-ARIAD MTA Technologies) and that (a) contains proteins or genes encoding proteins, the interaction or proximity of which proteins is induced by either a Homodimerizer or a Heterodimerizer; (b) is a Homodimerizer or Heterodimerizer for use with a product described in clause (a); or (c) is a treatment regimen or process utilizing any product described in clause (a) or (b). For clarity, this definition of Licensed Product expressly includes those products that are within the definition of Licensed Product as of the effective date of the Omnibus Amendment.

(b) If the Third Payment is not delivered by Bellicum on or before June 30, 2016, then from July 1, 2016 until such time as the Third Payment, plus interest from July 1, 2016 (at the rate of ten percent (10%) per annum or the maximum rate allowed by applicable law, if lower), is paid in full: (i) under Section 2.1.4 of the License Agreement, any right of Bellicum to grant sublicenses without ARIAD's consent will be suspended until the Third Payment is delivered; (ii) Bellicum shall pay ARIAD, from an escrow account to be established to provide funds for such payment, (A) on July 1, 2016, fifty percent (50%) of any Cash Consideration received by Bellicum subsequent to the date of the Second Payment and prior to July 1, 2016 (excluding amounts paid to ARIAD pursuant to Section 3.2(b)(iv)(A) above), and (B) one hundred percent (100%) of any milestone payments that would have been owed by Bellicum to ARIAD under the License Agreement as it existed prior to the effective date of the Omnibus Amendment, if the corresponding milestone event is achieved subsequent to the Second Payment Date and prior to the Third Payment Date (excluding amounts paid to ARIAD pursuant to Section 3.2(b)(iv)(B) above).

(c) During any period in which the Second Payment or the Third Payment, as applicable, remains unpaid past its due date, fifty percent (50%) of any funds raised by Bellicum in any private equity or debt financing for capital raising purposes (i.e., not including bank line-of-credit or equipment financings) ("**Raised Capital**") will be applied against such past due, unpaid amount. If all of the Second Payment and Third Payment have not been delivered by Bellicum on or before June 30, 2017, ARIAD will have the right, in its sole discretion, to terminate the License Agreement, upon delivery to Bellicum of written notice of termination that makes reference to this Section 3.3(c). In the event of such termination, this Agreement shall be terminated automatically.

(d) Bellicum shall maintain and keep, until the Third Payment has been delivered to ARIAD, complete and accurate records of (i) all Cash Consideration received by Bellicum as set forth in Sections 3.2(b)(iv)(A) and 3.3(b)(ii)(A), (ii) all Raised Capital as set forth in Section 3.3(c) and (iii) achievement of milestone events as set forth in Sections 3.2(b)(iv)(B) and 3.3(b)(ii)(B). Subject to the other terms of this Section 3.3(d), at the request of ARIAD, which request shall not be made more than once per calendar year during the Term, then upon at least thirty (30) days' prior written notice from ARIAD, and at the expense of ARIAD (except as otherwise provided herein), Bellicum shall permit an independent certified public accountant reasonably selected by ARIAD and reasonably acceptable to Bellicum to inspect (during regular business hours) the relevant records required to be maintained by Bellicum under this Section 3.3(d) (provided no records may be reviewed more than once under this Section 3.3(d)). Results of such inspection shall be binding on both Parties absent manifest error. ARIAD shall treat the results of any such accountant's review of records under this Section 3.3(d) as Confidential Information of Bellicum subject to the terms of Section 5.1 of the License Agreement. If any such inspection reveals a deficiency in the calculation of amounts deposited in the escrow account and/or payment by Bellicum required by Section 3.2(b)(iv) or 3.3(b)(ii), then Bellicum shall promptly add such deficiency to the escrow account or pay ARIAD the amount remaining to be paid.

4. BELLICUM COMPANY SALE AND PUBLIC OFFERINGS.

4.1 Payment Due Date Modification in the Event of Company Sale or Certain Registered Public Offerings. In the event of a Company Sale (as defined in the SPA) of Bellicum, any remaining balance of the Second Payment and the Third Payment that has not been paid shall become due and payable at the closing of the Company Sale. In the event Bellicum raises (a) Seventy-Five Million US dollars ($75,000,000) or more in one or more registered public offerings (a **"Public Offering"**) on or before March 31, 2015, or (b) One Hundred Million US dollars ($100,000,000) or more in one or more Public Offerings subsequent to March 31, 2015, then, the Third Payment will become due and payable on the date that is the earlier of (x) nine (9) months after the closing of the Public Offering that brings the aggregate proceeds received by Bellicum (before expenses, discounts and commissions and other deductions from the gross amount of the Public Offering (**"Gross Proceeds"**)) to at least $75 million or $100 million, as applicable; or (y) in the event of a Public Offering resulting in aggregate Gross Proceeds received by Bellicum of at least $100 Million, December 31, 2015. Notwithstanding the foregoing, if Bellicum completes an IPO and a secondary Public Offering that alone or together raise aggregate Gross Proceeds of at least One Hundred Twenty-Five Million US dollars ($125,000,000), the Third Payment shall become due and payable within five (5) days of the closing of the IPO or secondary Public Offering that results in aggregate Gross Proceeds received by Bellicum of at least One Hundred Twenty-Five Million US dollars ($125,000,000). In no event shall the Third Payment be due later than June 30, 2016.

5. Construction of Agreement.

5.1 Entire Agreement. (a) This Agreement shall be effective for all purposes as of the Effective Date. To the extent that there are any inconsistencies between the express provisions of this Agreement and any of the Current Agreements, the terms of this Agreement shall supersede those set forth in the Current Agreements. Except as expressly modified by this Agreement, each of the Current Agreements shall remain in full force and effect in accordance with its terms. As of the Effective Date, the term "Agreement" as used in the Current Agreements shall mean the Current Agreements as amended by this Agreement. (b) This Agreement, together with the Current Agreements, as amended hereby, constitutes the entire agreement between the Parties with respect to the subject matter of the Current Agreements and this Agreement. No modification shall be effective unless in writing with specific reference to this Agreement and signed by the Parties. (c) The terms of this Agreement are hereby deemed confidential information of each Party, and this confidential information shall be treated in the same manner under this Agreement as "Confidential Information" is treated under the License Agreement; provided, however, that subject to the following sentence, the Parties intend to issue a joint press release upon full execution of this Agreement, and thereafter either Party may issue a press release upon delivery of the Second Payment and the Third Payment, and in the event of termination of this Agreement. Each Party shall provide any proposed press release in connection with this Agreement, the Second Payment or the Third Payment to the other Party at least five (5) days prior to issuing such proposed press release, and shall give good faith consideration to comments from the other Party.

5.2 Disputes. In the event of the occurrence of a dispute as to either Party's rights and/or obligations hereunder, the resolution of the dispute will be governed by Article 10 of the License Agreement.

5.3 Governing Law. This Agreement will be construed, interpreted and applied in accordance with the laws of the State of New York (excluding its body of law controlling conflicts of law).

5.4 Counterparts. This Agreement may be executed in any number of counterparts by original, facsimile or PDF signature, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument, binding on the Parties notwithstanding that each of the Parties may have signed different counterparts.

5.5 Waiver. The terms or conditions of this Agreement may be waived only by a written instrument executed by Bellicum and ARIAD. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a continuing waiver of such condition or term or of another condition or term.

5.6 Assignment. Neither this Agreement nor any right or obligation hereunder may be assigned, delegated or otherwise transferred, in whole or part, by either Party without the prior written consent of the other Party; provided, however, that either Party may, without the written consent of the other, assign this Agreement and its rights and delegate its obligations to its Affiliates or in connection with the transfer or sale of all or substantially all of such Party's

assets or business related to this Agreement, or in the event of its merger, consolidation, change in control or similar transaction. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 5.5 shall be void. The terms and conditions of this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the Parties.

6. Hedging Transactions.

6.1 Until such time as all payments due hereunder or under the Note have been made by Bellicum to ARIAD, Bellicum will not engage in any Hedging Transaction with Comerica Bank, any affiliate of Comerica Bank, or any successor in interest to the rights of Comerica Bank under the Subordination Agreement dated October 3, 2014 by and among Comerica Bank, ARIAD and Bellicum. As used herein, "Hedging Transaction" means any interest rate swap transaction, basis swap transaction, forward rate transaction, equity transaction, equity index transaction, foreign exchange transaction, cap transaction, floor transaction (including any option with respect to any of these transactions and any combination of any of the foregoing).

Signature page follows.

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Omnibus Amendment Agreement as of the Effective Date.

ARIAD PHARMACEUTICALS, INC.

/s/ Hugh M. Cole
(signature)

By: Hugh M. Cole
(print or type name)

Title: Chief Business Officer

Date: October 3, 2014

BELLICUM PHARMACEUTICALS, INC.

/s/ Thomas J. Farrell
(signature)

By: Thomas J. Farrell
(print or type name)

Title: President and CEO

Date: October 3, 2014

Schedule A1

Homodimerizer Patent Rights

Technologies Other Than [...***...]-ARIAD MTA Technologies

Title	Country	Serial No.	Patent No.
[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	[...***...]
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	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	
	[...***...]	[...***...]	

*****Confidential Treatment Requested**

Schedule A2

Heterodimerizer Patent Rights

Technologies Other Than [...***...]-ARIAD MTA Technologies

Title	Country	Serial No.	Patent No.	Issued
[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
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	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	[...***...]	[...***...]

*****Confidential Treatment Requested**

Schedule A3

[...***...]-ARIAD MTA Technologies

Country	Publication No.	Serial No.	Title	Patent No.
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]		[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
[...***...]		[...***...]	[...***...]	

Exhibit B

Section 2.2 Material Breaches

Section 2.1.1 — any act or omission by ARIAD that is inconsistent with, or that materially adversely affects, the rights and licenses granted to Bellicum as set forth in Section 2.1.1;

Section 2.1.3(a) – any act by ARIAD that is inconsistent with the prohibitions imposed on ARIAD pursuant to Section 2.1.3(a), including, but not limited to, any such act that materially adversely changes any such prohibition, or that to any extent releases ARIAD from any such prohibition;

Section 2.1.4 — any act or omission by ARIAD that is inconsistent with, or that materially adversely affects, Bellicum's right to grant sublicenses and to subcontract with Third Parties, as set forth in Section 2.1.4, including, but not limited to, any act or omission whereby ARIAD fails to take steps to assist Bellicum in obtaining consent from [...***...], as set forth in clause (b) of Section 2.1.4;

Section 2.1.5 – any willful or intentional material breach of ARIAD's obligation to disclose all Licensed Patent Rights and Licensed Technology as set forth in Section 2.1.5;

Section 2.1.6 – any act or omission by ARIAD that materially adversely affects Bellicum's right to receive, or Bellicum's receipt of, ARIAD Regulatory Information as set forth in Section 2.1.6;

Section 2.2.1(a) – any act by ARIAD that constitutes a material breach of Section 2.2.1(a) solely due to (i) the practice by ARIAD of any Bellicum Patent Rights, Bellicum Technology or Bellicum's interest in any Improvements, or (ii) the grant by ARIAD to a Third Party of a sublicense to practice Bellicum Patent Rights, Bellicum Technology and or Bellicum's interest in any Improvements, in either case (i) or (ii) to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export or have exported ARIAD Products in the Licensed Field;

Section 4.1.4 – any willful or intentional material breach of ARIAD's royalty payment obligation set forth in the first sentence of Section 4.1.4;

Sections 5.1, 5.2 and 5.3 – any material breach of ARIAD's confidentiality obligations owed to Bellicum that materially adversely affects the Licensed Patent Rights licensed to Bellicum by ARIAD; and

Section 6 — any act or omission by ARIAD that constitutes a material breach of ARIAD's obligations under Section 6.1, and where such material breach materially adversely affects the Licensed Patent Rights licensed to Bellicum by ARIAD

*****Confidential Treatment Requested**

Exhibit 10.17

*****Text Omitted and Filed Separately**
with the Securities and Exchange Commission
Confidential Treatment Requested
Under 17 C.F.R. Sections 200.80(b)(4)
and 230.406

EXCLUSIVE LICENSE AGREEMENT
BAYLOR COLLEGE OF MEDICINE
BELLICUM PHARMACEUTICALS, INC.

RE: 1. **OTA # 01.085**, entitled "Induced CD40 Activation in Dendritic Cell-based Prostate Cancer Vaccines." Developers: David M. Spencer, Kevin M. Slawin, Brent A. Hanks.

2. **BLG # 08-024**, entitled, "Development of an Improved, Inducible CD-40 — "iCD40 Turbo." Developer: David M. Spencer.

This Exclusive License Agreement (hereinafter called "Agreement"), to be effective as of the day of March, 2008 (hereinafter called "Agreement Date"), is by and between Baylor College of Medicine (hereinafter called "BAYLOR"), a Texas nonprofit corporation having its principal place of business at One Baylor Plaza, Houston, Texas 77030, and Bellicum Pharmaceuticals, Inc., a corporation organized under the laws of Delaware and having a principal place of business at Twelve Greenway Plaza, Suite 1380, Houston, TX 77046, and its Affiliates (hereinafter, collectively referred to as "BELLICUM"),

WITNESSETH:

WHEREAS, BAYLOR, by virtue of its relationship with its faculty, staff and students and conveyances with the Developers (as defined below) and under and pursuant to the terms and provisions of its Policy on Inventions and Patents, is the owner of certain right, title and interest in and to the Subject Technology and Patent Rights (as defined below); and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to David M. Spencer, Kevin M. Slawin and Brent A. Hanks by the written release dated February 11, 2004 and by the Assignment from BAYLOR to assignees David M. Spencer, Kevin M. Slawin and Brent A. Hanks, dated April 6, 2004; and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...]; and

WHEREAS, BAYLOR is willing to grant a worldwide, exclusive license to all of the right, title and interest owned by BAYLOR as of the Agreement Date in the Subject Technology and Patent Rights to BELLICUM on the terms set forth herein; and

*****Confidential Treatment Requested**

NOW, THEREFORE, for and in consideration of the foregoing and rights and obligations hereafter, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto expressly agree as follows:

1. DEFINITIONS AS USED HEREIN

1.1 “Affiliates” shall mean any corporation, partnership, joint venture or other entity of which the common stock or other equity ownership thereof is 50% or more owned by BELLICUM.

1.2 “Common Stock” shall have the meaning given in Paragraph 4.1.

1.3 “Confidential Information” shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information. Neither Party shall have an obligation of confidentiality with respect to Confidential Information that:

(i) at the time of its disclosure or thereafter is disclosed in a publicly available document through no fault of the receiving Party;

(ii) at the time of its disclosure is, or thereafter becomes without fault of the receiving Party, part of the public domain;

(iii) was in the possession of the receiving Party prior to disclosure by the disclosing Party hereunder and was not acquired directly or indirectly from any third party under obligation of confidentiality to the disclosing Party;

(iv) subsequent to its disclosure, is obtained from a third party not subject to a contractual or fiduciary obligation for confidentiality to the disclosing Party; or

(v) is required by court or governmental order, law or regulation to be disclosed.

1.4 “Developers” shall mean David M. Spencer, employee of BAYLOR, and Kevin M. Slawin and Brent A. Hanks, past employees of BAYLOR.

1.5 “Legal Costs” shall mean all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the Patent Rights in the United States and foreign countries.

1.6 “Licensed Method(s)” will mean any method the practice of which would constitute, but for the license granted to BELLICUM under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.7 “Licensed Product(s)” will mean any product that the manufacture, use or sale of which would constitute, but for the license granted to BELLICUM under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.8 ‘Party” shall mean either BELLICUM or BAYLOR, and the “Parties” shall mean BELLICUM and BAYLOR.

1.9 “Patent Rights” shall mean all right, title and interest owned by BAYLOR as of the Agreement Date in patent applications filed before, on or after the Agreement Date, that pertain to the Subject Technology, including without limitation United States Patent Application No. 10/781,384 (entitled “Induced Activation in Dendritic Cells,” filed 02/18/2004), European Patent Application No. 4712328.9, and Canadian Patent Application No. 2,516,320, the inventions described and claimed therein, and all other pending United States or foreign patent applications or parts thereof and any United States or foreign patent which issues from any such patent applications, and any and all divisions, reissues, re-examinations, renewals, continuations, continuations-in-part to the extent the claims are directed to subject matter specifically described in the aforementioned patent applications, and extensions thereof, and all other counterpart, pending or issued patents in all other countries.

1.10 “Subject Technology” shall mean and include all right, title and interest owned by BAYLOR as of the Agreement Date in any technology, biological materials, methods, documents, materials, tests, know-how and all confidential information existing as of the Agreement Date pertaining to the following technology disclosures (as listed in Appendix A):

1. **OTA # 01-085**, entitled “Induced Activation in Dendritic Cell-based Prostate Cancer Vaccines.” Developers: David M. Spencer, Kevin M. Slawin, Brent A. Hanks.

2. **BLG # 08-024**, entitled, “Development of an Improved, Inducible CD-40 — “iCD40 Turbo,” Developer: David M. Spencer.

1.11 “Valid Claim” means a claim of an issued unexpired patent within the Patent Rights that has not been held unenforceable, unpatentable or invalid by a final decision of a court of competent jurisdiction or by a final decision of a patent office, and that has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

2. GRANT OF LICENSE

2.1 **Grant.** Subject to the reservations of rights set forth in Paragraph 2.2, BAYLOR hereby grants to BELLICUM, and BELLICUM hereby accepts, an exclusive, worldwide, sublicensable, fully paid-up license under the Patent Rights and Subject Technology, to make, have made, use, import, export, distribute, research, develop, obtain regulatory approval, manufacture, have manufactured, offer for sale and sell Licensed Products and Licensed Methods.

2.2 **Restrictions.** The grant in Paragraph 2.1 shall be further subject to, restricted by and non-exclusive with respect to:

(i) the making or use of the Subject Technology and Patent Rights by BAYLOR for non-commercial research, patient care, teaching and other educationally related purposes;

(ii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR grants to other academic or research institutions for non-commercial research purposes; and

(iii) any non exclusive license of the Subject Technology and/or Patent Rights that BAYLOR is required by law or regulation to grant to the United States of America or to a foreign state pursuant to an existing or future treaty with the United States of America; and

(iv) the non-exclusive, worldwide, paid-up license granted to [...***...] under the terms of the [...***...] between Baylor College of Medicine and [...***...], dated [...***...].

The grant in Paragraph 2.1 also is subject to BAYLOR'S grant of certain rights in the Subject Technology and Patent Rights to David M. Spencer, Kevin M. Slawin and Brent A. Hanks by the written release dated February 11, 2004 and by the Assignment from BAYLOR to assignees David M. Spencer, Kevin M. Slawin and Brent A. Hanks, dated April 6, 2004.

2.3 **Government Reservation.** Rights under this Agreement are subject to rights required to be granted to the Government of the United States of America pursuant to 35 USC Section 200-212, including a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world.

3. PAYMENTS

3.1 **Common Stock.** As full consideration for the rights conveyed by BAYLOR under this Agreement, BELLICUM shall issue to BAYLOR forty-thousand (40,000) shares of its common stock, $0.01 par value (the "Common Stock"), within sixty (60) days after the Agreement Date. Such Common Stock shall be distributed as per Appendix A.

3.2 **Legal Costs.** BELLICUM will be responsible for payment of all Legal Costs incurred after the Agreement Date, which BELLICUM will pay directly to each legal service provider on invoices for such legal costs received by BELLICUM.

*****Confidential Treatment Requested**

4. REPORTING

4.1 **Annual Reports.** BELLICUM shall provide to BAYLOR a summary commercialization plan of research for each Licensed Product and Licensed Method in clinical development [...***...] days after the commencement of clinical development of the first Licensed Product, and it will provide an activity report to BAYLOR on [...***...]. Information in the summary commercialization plan and the activity reports is Confidential Information of BELLICUM.

4.2 **Notification of Merger.** In the event of acquisition, merger, change of corporate name, or change of make-up, organization, or identity, BELLICUM shall notify BAYLOR in writing within [...***...] days of such event.

5. TRANSFER OF SUBJECT TECHNOLOGY

Upon receipt of the Common Stock described in Paragraph 3.1, BAYLOR shall, upon written request by BELLICUM, provide BELLICUM with reasonable quantities of the Subject Technology. The Subject Technology shall be sent to such address and using such shipping method as may be specified by BELLICUM in the request.

6. SUBLICENSES

All sublicenses granted by BELLICUM of its rights hereunder shall be subject to the terms of this Agreement. BELLICUM shall be responsible for its sublicensees and shall not grant any rights which are inconsistent with the rights granted to and obligations of BELLICUM hereunder. Should BELLICUM become aware of an act or omission of a sublicensee that would be a material breach of this Agreement, BELLICUM shall use reasonable business efforts to cause the sublicensee to cure the breach. No such sublicense agreement shall contain a provision that illegally extends the term of Patent Rights under this Agreement. BELLICUM shall give BAYLOR prompt notification of the identity and address of each sublicensee with whom it concludes a sublicense agreement and shall supply BAYLOR with a copy of each such sublicense agreement in which BELLICUM may redact financial information.

7. PATENTS AND INFRINGEMENT

7.1 **Patent Prosecution Responsibility.** From the Agreement Date and for the term of this Agreement, BELLICUM shall have primary responsibility, at its sole cost, to use patent counsel of its choice that is reasonably acceptable to BAYLOR for filing, prosecuting and maintaining all patent applications and patents included in the Patent Rights and Subject Technology licensed hereunder, except that BAYLOR may assume responsibility at its sole expense for pursuing any protection which BELLICUM declines to prosecute pursuant to Paragraph 7.2 of this Agreement.

7.2 **Notification of Intent Not to Pursue.** In the event that BELLICUM decides not to pay for the costs associated with either: (i) the prosecution of patent applications in the Patent Rights or (ii) maintenance of any United States or foreign issued patent in the Patent Rights, BELLICUM shall provide BAYLOR [...***...] days written notice thereof. BELLICUM's right under this Agreement to practice an invention claimed in an issued patent not pursued under this Section 7.2 shall terminate [...***...] days of such notice in the jurisdiction of the patent not pursued.

7.3 **Obligation to Inform.** BELLICUM agrees to keep BAYLOR reasonably informed, at [...***...]'s expense, of prosecution and other actions pursuant to this Section 7, including submitting to BAYLOR copies of all official actions and responses thereto.

7.4 **Obligation to Cooperate.** BAYLOR agrees to reasonably cooperate with BELLICUM to whatever extent is reasonably necessary to provide BELLICUM the full benefit of the license granted herein.

7.5 **Infringement Procedures.** During the term of this Agreement, each Party shall promptly inform the other of any suspected infringement of any claims in the Patent Rights or the misuse, misappropriation, theft or breach of confidence of other proprietary rights in the Subject Technology and/or Patent Rights by a third party, and with respect to such activities as are suspected. Any action or proceeding against such third party shall be instituted as follows:

(i) BAYLOR and BELLICUM may agree to jointly institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. Such joint action shall be brought in the names of both BAYLOR and BELLICUM. If BAYLOR or BELLICUM decide to jointly prosecute an action or proceeding after it has been instituted by one Party, the action shall be continued in the name or names they both agree is expedient for efficient prosecution of such action. BELLICUM and BAYLOR shall agree to the manner in which they shall exercise control over any joint action or proceeding, providing however that if they cannot agree BAYLOR shall have the right to unilaterally decide on control. In such joint action or proceeding, the out-of-pocket costs shall be borne equally, and any recovery or settlement shall be shared equally.

(ii) If BELLICUM does not agree to participate in a joint action or proceeding then BAYLOR shall have the right, but not the obligation, to institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. If BAYLOR elects to institute action, it does so at its own cost. If BAYLOR fails to bring such an action or proceeding within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then BELLICUM shall have the right, but not the obligation, to prosecute the same at its own expense. Should either BAYLOR or BELLICUM commence action under the provisions of this Paragraph 7.5 and

thereafter elect to abandon the same, it shall give timely notice to the other Party who may, if it so desires, continue prosecution of such action or proceeding. All recoveries, whether by judgment, award, decree or settlement, from infringement or misuse of Subject Technology and/or Patent Rights shall be apportioned as follows: (a) the Party bringing the action or proceeding shall first recover an amount equal the costs and expenses incurred by such Party directly related to the prosecution of such action or proceeding, (b) the Party cooperating in such action or proceeding shall then recover costs and expenses incurred by such Party directly related to its cooperation in the prosecution of such action or proceeding and (c) the remainder will be divided proportionately between BAYLOR and BELLICUM according to the fraction of the costs and expenses incurred by each Party.

7.6 **Consent to Settle.** Neither BAYLOR nor BELLICUM shall settle any action covered by Paragraph 7.5 without first obtaining the consent of the other Party, which consent will not be unreasonably withheld.

7.7 **Liability for Losses.** BAYLOR shall not be liable for any losses incurred as the result of an action for infringement brought against BELLICUM as the result of BELLICUM's exercise of any right granted under this Agreement. The decision to defend or not defend shall be in BELLICUM's sole discretion.

8. TERM AND EXPIRATION

Upon issuance of the Common Stock to Baylor as per the terms of Paragraph 3.1, BELLICUM shall have a perpetual, paid-in-full (i.e., royalty free) license in and to the Subject Technology and Patent Rights.

9. TERMINATION

9.1 **Termination by Baylor: Breach.** In the event of default or failure by BELLICUM to perform any of the terms, covenants or provisions of this Agreement, BELLICUM shall have ninety (90) days after the receipt by BELLICUM of written notice of such default by BAYLOR to correct such default. If such default is not corrected within the said ninety (90) day period, BAYLOR shall have the right, at its option, to cancel and terminate this Agreement. The Parties may mutually agree, in writing, to extend the cure period for a default if BELLICUM has demonstrated good faith efforts to cure said default. However, BAYLOR is not obligated to grant such an extension. The failure of BAYLOR to exercise such right of termination shall not be deemed to be a waiver of any right BAYLOR might have, nor shall such failure preclude BAYLOR from exercising or enforcing said right upon any subsequent failure by BELLICUM.

9.2 **Termination by Baylor: Insolvency.** BAYLOR shall have the right, at its option, to cancel and terminate this Agreement in the event that BELLICUM shall (i) become involved in insolvency, dissolution, bankruptcy or receivership proceedings affecting the operation of its business or (ii) make an assignment of all or substantially

all of its assets for the benefit of creditors, or in the event that (iii) a receiver or trustee is appointed for BELLICUM and BELLICUM shall, after the expiration of thirty (30) days following any of the events enumerated above, have been unable to secure a dismissal, stay or other suspension of such proceedings.

9.3 **Termination by Bellicum.** BELLICUM, upon thirty (30) days prior written notice to BAYLOR, may terminate this Agreement with or without cause.

9.4 **Effects of Termination.** In the event of termination of this Agreement, all rights to the Subject Technology and Patent Rights shall revert to BAYLOR. At the date of any termination of this Agreement, BELLICUM shall immediately cease using any of the Subject Technology and Patent Rights and BELLICUM shall immediately destroy the Subject Technology and send to BAYLOR a written affirmation of such destruction signed by an officer of BELLICUM; provided, however, that BELLICUM may sell any Licensed Products actually in the possession of BELLICUM on the date of termination.

9.5 **Termination: Sublicenses.** Upon termination of this Agreement by BELLICUM or BAYLOR, BAYLOR agrees to accept as a successor to BELLICUM, any existing sublicense that is in compliance with the terms of this Agreement at the date of termination, *provided however*, that for each sublicense to be accepted the sublicensee agrees in writing to be bound to BAYLOR by the provisions of this Agreement. The sublicensee for each sublicense to be accepted shall also agree that the license from BAYLOR to such sublicensee shall be adjusted to conform to the scope of the sublicense rights granted to the sublicensee by BELLICUM.

9.6 **No Refund.** In the event this Agreement is terminated pursuant to this Section 9, BAYLOR is under no obligation to refund any consideration made by BELLICUM to BAYLOR, as set forth in Section 3, prior to the effective date of such termination or expiration.

9.7 **Survival of Termination.** No termination of this Agreement shall constitute a termination or a waiver of any rights of either Party against the other Party accruing at or prior to the time of such termination. The obligations of Sections 12, 15 and 16 shall survive termination of this Agreement,

10. ASSIGNABILITY

BELLICUM may assign this Agreement as part of:

(i) A sale or other transfer of BELLICUM's entire business; or

(ii) A sale or other transfer of that part of BELLICUM's business to which the license granted hereby relates;

BELLICUM shall give BAYLOR [...***...] days prior written notice of such assignment, including the new contact information of assignee. BAYLOR, however, shall not be

deemed to have approved such assignment and transfer unless and until such assignee has agreed in writing to BAYLOR to be bound by all the terms and provisions of this Agreement, in which event BELLICUM shall be released of liability hereunder. Upon such assignment of this Agreement by such assignee, the term " BELLICUM" as used herein (i) will include the name of the assignee should BELLICUM assign a partial right and/or interest hereunder to the assignee, or (ii) will be replaced by the name of the assignee should BELLICUM assign its full right and interest hereunder to the assignee.

11. GOVERNMENTAL COMPLIANCE

11.1 **Compliance with Laws.** BELLICUM shall, during the term of this Agreement and for so long as it shall use the Subject Technology or Patent Rights or sell Licensed Products, comply with and cause its sublicensees to comply with all laws that may control the import, export, manufacture, use, sale, marketing, distribution and other commercial exploitation of the Subject Technology, Patent Rights, Licensed Products or any other activity undertaken pursuant to this Agreement.

11.2 **Export Control Regulations.** The Subject Technology is subject to, and BELLICUM agrees to use commercially reasonable efforts to comply with, U.S. law including but not limited to U.S. export controls under the Export Administration Regulations (15 C.F.R. Part 734 et seq.) and U.S. economic sanctions and embargoes codified in 31 C.F.R. Chapter V. BELLICUM agrees that BELLICUM bears sole responsibility for understanding and complying with current U.S. trade controls laws and regulations as applicable to its activities subject to this Agreement. Without limitation on the general agreement to comply set forth in the first sentence of this Paragraph 13.3, BELLICUM agrees not to sell any goods, services, or technologies subject to this Agreement, or to re-export the same: (1) to any destination prohibited by U.S. law, including any destination subject to U.S. economic embargo; (2) to any end-user prohibited by U.S. law, including any person or entity listed on the U.S. government's Specially Designated Nationals list, Denied Parties List, Debarred Persons List, Unverified List, or Entities List. Furthermore, any transfer of Patent Rights from BAYLOR to BELLICUM under this Agreement may be subject to U.S. export license authorization under U.S. law, and BAYLOR agrees to comply with applicable laws for such transfer.

11.3 **Requirement for U.S. Manufacture.** BAYLOR represents and certifies that research giving rise to the Patent Rights was funded by Federal funds, and that such Federal funds were solely from the National Institutes of Health (NIH) and the Department of Defense (DOD). BELLICUM agrees that Licensed Products developed as a result of such Federal funds and are leased or sold in the United States shall be manufactured substantially in the United States, unless a written waiver is obtained from the NIH and/or the DOD. At the request of BELLICUM, BAYLOR agrees to the best of its abilities to assist BELLICUM should BELLICUM seek such a waiver.

12. ARBITRATION

12.1 **Amicable Resolution.** The Parties shall attempt to settle any controversy between them amicably. To this end, a senior executive from each Party shall consult and negotiate to reach a solution. The Parties agree that the period of amicable resolution shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing mediation if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that these amicable resolution negotiations have commenced.

12.2 **Mediation.** If a controversy arises out of or relates to this agreement, or the breach thereof, and if the controversy cannot be settled through amicable resolution, the Parties agree to try in good faith to settle the controversy by mediation before resorting to final and binding arbitration. The Party seeking mediation shall propose five mediators, each of whom shall be a lawyer licensed to practice by the state of Texas, having practiced actively in the field of commercial law for at least 15 years, to the other Party who shall select the mediator from the list. The Parties shall split the cost of the mediator equally. The Parties agree that the period of mediation shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing arbitration if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that amicable resolution negotiations have commenced,

12.3 **Arbitration.** Any dispute, controversy, or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, including claims for tortious interference or other tortious or statutory claims arising before, during or after termination, providing only that such claim touches upon matters covered by this Agreement shall be finally settled by arbitration administered by the American Arbitration Association pursuant to the Commercial Arbitration Rules in force at the time of the commencement of the arbitration, except as modified by the specific provisions of this Agreement. It is the specific intent of the Parties that this arbitration provision is intended to be the broadest form allowed by law.

12.4 **Parties to Arbitration.** This agreement to arbitrate is intended to be binding upon the signatories hereto, their principals, successors, assigns, subsidiaries and affiliates. This agreement to arbitrate is also intended to include any disputes, controversy or claims against any Party's employees, agents, representatives, or outside legal counsel arising out of or relating to matters covered by this Agreement or any agreement in which this Agreement is incorporated.

12.5 **Consolidation Permitted.** The Parties expressly agree that any court with jurisdiction may order the consolidation of any arbitrable controversy under this Agreement with any related arbitrable controversy not arising under this Agreement, as the court may deem necessary in the interests of justice or efficiency or on such other grounds as the court may deem appropriate.

12.6 **Entry of Judgment.** The Parties agree that a final judgment on the arbitration award may be entered by any court having jurisdiction thereof.

12.7 **Appointing Arbitrators.** The American Arbitration Association shall appoint the arbitrator(s) from its Large, Complex Claims Panel. If such appointment cannot be made from the Large, Complex Claims Panel, then from its Commercial Panel. The Parties hereby agree to and acquiesce in any appointment of an arbitrator or arbitrators that may be made by such appointing authority.

12.8 **Qualifications of the Arbitrator(s).** The arbitrator(s) must be a lawyer, having practiced actively in the field of commercial law for at least 15 years.

12.9 **Governing Substantive Law.** The arbitrator(s) shall determine the rights and obligations of the Parties according to the substantive laws of the State of Texas (excluding conflicts of law principles) as though acting as a court of the State of Texas.

12.10 **Governing Arbitration Law.** The law applicable to the validity of the arbitration clause, the conduct of the arbitration, including any resort to a court for provisional remedies, the enforcement of any award and any other question of arbitration law or procedure shall be the Federal Arbitration Act.

12.11 **Governing Convention.** The Parties elect to have the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958 (instead of the inter-American New York Convention on international Commercial Arbitration of August 15, 1990) govern any and all disputes that may be the subject of arbitration pursuant to this Agreement.

12.12 **Preliminary Issues of Law.** The arbitrator(s) shall hear and determine any preliminary issue of law asserted by a Party to be dispositive of any claim, in whole or part, in the manner of a court hearing a motion to dismiss for failure to state a claim or for summary judgment, pursuant to such terms and procedures as the arbitrator(s) deems appropriate.

12.13 **Confidentiality.** The Parties and the arbitrator(s) shall treat all aspects of the arbitration proceedings, including without limitation discovery, testimony and other evidence, briefs and the award, as strictly confidential. Further, except as may be required by law, neither Party nor the arbitrator(s) may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both Parties.

12.14 **Place of Arbitration.** The seat of arbitration shall be Houston, Texas, USA.

12.15 **Language.** The arbitration shall be conducted in the English language. All submissions shall be made in English or with an English translation. Witnesses may provide testimony in a language other than English, provided that a simultaneous English translation is provided. Each Party shall bear its own translation costs.

12.16 **Punitive Damages Prohibited.** The Parties hereby waive any claim to any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages, and the arbitrator(s) is/are specially divested of any power to award any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages.

12.17 **Costs.** The Party prevailing on substantially all of its claims shall be entitled to recover its costs, including attorneys' fees, for the arbitration proceedings, as well as for any ancillary proceeding, including a proceeding to compel or enjoin arbitration, to request interim measures or to confirm or set aside an award.

12.18 **Survival.** The provisions of this Section 12 shall survive expiration or termination of this Agreement

13. ADDRESSES

13.1 **Baylor Payment Address.** All certificates of common stock shall be sent to the address below, and shall reference the applicable **OTA numbers** listed on the front page of the Agreement.

BAYLOR Tax ID #: 74-1613878
Director, Baylor Licensing Group
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm.tmc.edu

13.2 **Bellicum Contact Address.** For questions about stock certificates, BAYLOR can contact BELLICUM at the address below:

Thomas J. Farrell, CEO
Bellicum Pharmaceuticals, Inc.
Twelve Greenway Plaza, Suite 1380
Houston, TX 77046

Telephone No. (512) 542-0010
Facsimile No. (512) 542-0062
E-Mail: tfarrell@bellicum.com

13.3 **Address for Notices.** All notices, reports or other communication pursuant to this Agreement shall be sent to such Party via (i) United States Postal Service postage prepaid, (ii) overnight courier, or (iii) facsimile transmission, addressed to it at its address set forth below or as it shall designate by written notice given to the other Party. Notice shall be sufficiently made, or given and received (a) on the date of mailing or (b) when a facsimile printer reflects transmission.

In the case of BAYLOR:
Patrick Turley
Associate General Counsel
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No.	713-798-6821
Facsimile No.	713-798-1252
E-Mail	blg@bcm,tmc.edu

In the case of BELLICUM:
Thomas J. Farrell, CEO
Bellicum Pharmaceuticals, Inc.
Twelve Greenway Plaza, Suite 1380
Houston, TX 77046

Telephone No.	(512) 542-0010
Facsimile No.	(512) 542-0062
E-Mail:	tfarrell@bellicum.com

14.4 **Baylor Reference Number.** Each such report, notice or other communication shall include the applicable Baylor reference numbers listed on the front page of the Agreement.

15. REPRESENTATIONS, INDEMNITY & INSURANCE

15.1 **BELLICUM Representations.** BELLICUM hereby represents and certifies that:

(i) it is a corporation duly organized and in good standing under the laws of the State of Delaware;

(ii) it is qualified to do business and in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(iii) the execution, delivery and performance of this Agreement by BELLICUM and the consideration provided for herein has been duly authorized by corporate action;

(iv) it has the full power and authority to enter into and carry out its obligations under this Agreement; and

(v) the Common Stock to be issued pursuant to this Agreement has been duly authorized and upon issuance, pursuant to the terms hereof and for the consideration herein set forth, will be validly issued, fully paid and non-assessable.

BELLICUM agrees to indemnify and hold BAYLOR and its officers, trustees, faculty, employees, agents and representatives, harmless from any liabilities, costs and expenses (including attorneys' fees and expenses), obligations or causes of action arising out of or related to any breach of the representations and certifications made by BELLICUM in this Section 15.1.

15.2 **BAYLOR Representations.** BAYLOR represents and certifies it controls the entire right, title and interest in the Patent Rights and the Subject Technology BAYLOR owns and is fully authorized to make the grant in Section 2.1 of the Agreement.

15.3 **GENERAL INDEMNITY.**

(I) EACH PARTY SHALL NOTIFY THE OTHER OF ANY CLAIM, LAWSUIT OR OTHER PROCEEDING RELATED TO THE SUBJECT TECHNOLOGY AND PATENT RIGHTS. BELLICUM AGREES THAT IT WILL DEFEND, INDEMNIFY AND HOLD HARMLESS BAYLOR, ITS FACULTY MEMBERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, OFFICERS, TRUSTEES AND AGENTS AND EACH OF THEM (THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ANY AND ALL CLAIMS, CAUSES OF ACTION, LAWSUITS OR OTHER PROCEEDINGS (THE "BAYLOR CLAIMS") FILED OR OTHERWISE INSTITUTED AGAINST ANY OF THE INDEMNIFIED PARTIES ARISING OUT OF THE DESIGN, PROCESS, MANUFACTURE OR USE BY BELLICUM OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS, OR LICENSED PRODUCTS; PROVIDED, HOWEVER, THAT SUCH INDEMNITY SHALL NOT APPLY TO ANY CLAIMS ARISING FROM THE NEGLIGENCE OR INTENTIONAL MISCONDUCT OF ANY INDEMNIFIED PARTY. BELLICUM WILL ALSO ASSUME RESPONSIBILITY FOR ALL COSTS AND EXPENSES RELATED TO SUCH CLAIMS FOR WHICH IT IS OBLIGATED TO INDEMNIFY THE INDEMNIFIED PARTIES PURSUANT TO THIS PARAGRAPH 15.3, INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE.

(II) BELLICUM FURTHER AGREES NOT TO SETTLE ANY CLAIM AGAINST A BAYLOR INDEMNITEE WITHOUT THE INDEMNITEE'S WRITTEN CONSENT WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD. BELLICUM FURTHER AGREES TO KEEP BAYLOR INDEMNITEES FULLY APPRISED OF THE BAYLOR CLAIMS.

15.4 **Insurance.**

(i) BELLICUM shall, for so long as BELLICUM manufactures, uses or sells any Licensed Product(s) for research applications, maintain in full force and effect policies of (a) general liability insurance with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]) and (b) products liability insurance, with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]).

(ii) BELLICUM shall provide to BAYLOR copies of certificates of insurance or copies of the policies of insurance within [...***...] days after BELLICUM receives a request from BAYLOR for such copies. It is the intention of the Parties hereto that BELLICUM shall, throughout the term of this Agreement, continuously and without interruption, maintain in force the required insurance coverages set forth in this Paragraph 15.4.

(iii) BAYLOR reserves the right to request additional policies of insurance where appropriate and reasonable in light of BELLICUM's business operations and availability of coverage.

15.5 **DISCLAIMER OF WARRANTY.** BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS OTHER THAN THOSE MADE ABOVE, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS OR MERCHANTABILITY, REGARDING OR WITH RESPECT TO THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS AND BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, OF THE PATENTABILITY OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS OR OF THE ENFORCEABILITY OF ANY PATENTS ISSUING THEREUPON, IF ANY, OR THAT THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS ARE OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT OR OTHER RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS CONFERRING BY IMPLICATION, ESTOPPEL OR OTHERWISE ANY LICENSE OR RIGHTS UNDER ANY PATENTS OF BAYLOR OTHER THAN THE PATENT RIGHTS, REGARDLESS OF WHETHER SUCH PATENTS ARE DOMINANT OR SUBORDINATE TO THE PATENT RIGHTS.

16. ADDITIONAL PROVISIONS

16.1 **Use of BAYLOR Name.** BAYLOR agrees that BELLICUM may publicly disclose the existence of this Agreement, the name "Baylor College of Medicine" and the names of scientists and researchers at BAYLOR associated with the Patent Rights and Technology Rights. BELLICUM will not disclose it has an affiliation with BAYLOR that does not exist at the time the name "Baylor College of Medicine" is publicly disclosed.

16.2 **Confidentiality.**

(i) Confidential Information will be marked "CONFIDENTIAL." The recipient of Confidential Information ("Recipient") agrees to retain in confidence and to prevent the disclosure of the Confidential Information from the discloser ("Discloser") to any third party without the prior written consent of the Discloser; provided, however, the Recipient may disclose Confidential Information to its officers, directors, employees, partners, investors, shareholders, lawyers, accountants, and consultants (collectively, the "Representatives") on a need-to-know basis only for the purpose of assisting the Recipient in evaluating the Confidential Information or in the discharge of its obligations under this Agreement. The Recipient will use the same degree of care with respect to the Confidential Information as it would with its own proprietary and confidential information, and in no event use less than a reasonable degree of care. The Recipient will use reasonable efforts to notify its Representatives about the Recipient's duties under this Agreement and to promote Representatives' maintenance of the confidentiality of the Confidential Information as if the Representatives were themselves parties to this Agreement. BELLICUM may disclose Confidential Information to potential licensees, purchasers, investors, joint venturers and the like so long as BELLICUM uses commercially reasonable efforts to make such disclosures subject to a confidentiality agreement. The Recipient agrees to retain in confidence and to prevent the disclosure of any document prepared by or for the Recipient that includes Discloser's Confidential Information, including without limitation any document that analyzes or summarizes Discloser's Confidential Information, to any third party without the prior written consent of the Discloser.

(ii) This Agreement imposes no obligations upon the Recipient with respect to any Confidential Information which (a) was in the Recipient's possession before receipt of such information from the Discloser, as evidenced by competent written proof; (b) is or becomes a matter of public knowledge through no fault or violation of this Agreement by the Recipient or its Representatives; (c) is rightfully received by the Recipient from a third party who, to the Recipient's knowledge, is not under a duty of confidentiality; (d) is approved in writing for release by the Discloser prior to such release; (e) is independently developed by the Recipient as evidenced by Recipient's written records without any use of or reference to Confidential Information of the Discloser; or (f) is orally disclosed and not confirmed in a writing to the Recipient within thirty (30) days after its initial disclosure by the Discloser. Notwithstanding any other provision of this Agreement, the Recipient may disclose Confidential Information which is required to be disclosed by law, rule, regulation, administrative, or legal process ("Compelled Request"); provided, however, the Recipient will give prompt written notice of any Compelled Request for such information to the Discloser and agrees to cooperate with the Discloser, at the Discloser's expense, to challenge the request or limit the scope of disclosure of such information, as the Discloser may request and deem appropriate.

(iii) Each Party agrees to notify the other Party in writing of any misuse or misappropriation of the other Party's Confidential Information that may come to its attention. The Parties hereby acknowledge and agree that in the event of any breach of this Section 16.2, including, without limitation, the actual or threatened disclosure or unauthorized use of Confidential Information without the prior express written consent of the Discloser, the Discloser would suffer an irreparable injury such that no remedy at law would adequately protect or appropriately compensate the disclosing party for such

injury. Accordingly, the Parties agree that the Discloser will have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond and without prejudice to any other rights and remedies that the Discloser may have for a breach of this Section 16.2.

16.3 **No Additional Rights.** BELLICUM acknowledges that, other than the specific rights granted hereunder, it is not entitled to any rights to any current or future technology, research or developments made at or owned by BAYLOR,

16.4 **BAYLOR's Disclaimers.** Neither BAYLOR, nor any of its faculty members, scientists, researchers, employees, officers, trustees or agents assume any responsibility for the manufacture, product specifications, sale or use of the Subject Technology or the Licensed Products which are manufactured by or sold by BELLICUM.

16.5 **Independent Contractors.** The Parties hereby acknowledge and agree that each is an independent contractor and that neither Party shall be considered to be the agent, representative, master or servant of the other Party for any purpose whatsoever, and that neither Party has any authority to enter into a contract, to assume any obligation or to give warranties or representations on behalf of the other Party. Nothing in this relationship shall be construed to create a relationship of joint venture, partnership, fiduciary or other similar relationship between the Parties.

16.6 **Non-Waiver.** The Parties covenant and agree that if a Party fails or neglects for any reason to take advantage of any of the terms provided for the termination of this Agreement or if a Party, having the right to declare this Agreement terminated, shall fail to do so, any such failure or neglect by such Party shall not be a waiver or be deemed or be construed to be a waiver of any cause for the termination of this Agreement subsequently arising, or as a waiver of any of the terms, covenants or conditions of this Agreement or of the performance thereof. None of the terms, covenants and conditions of this Agreement may be waived by a Party except by its written consent.

16.7 **Reformation.** The Parties hereby agree that neither Party intends to violate any public policy, statutory or common law, rule, regulation, treaty or decision of any government agency or executive body thereof of any country or community or association of countries, and that if any word, sentence, paragraph or clause or combination thereof of this Agreement is found, by a court or executive body with judicial powers having jurisdiction over this Agreement or any of the Parties hereto, in a final, unappealable order to be in violation of any such provision in any country or community or association of countries, such words, sentences, paragraphs or clauses or combination shall be inoperative in such country or community or association of countries, and the remainder of this Agreement shall remain binding upon the Parties hereto.

16.8 **Force Majeure.** No liability hereunder shall result to a Party by reason of delay in performance caused by force majeure, that is circumstances beyond the reasonable control of the Party, including, without limitation, acts of God, fire, flood, war, terrorism, civil unrest, labor unrest, or shortage of or inability to obtain material or equipment.

16.9 **Informed Review.** Each Party acknowledges that it and its counsel have received and reviewed this Agreement and that normal rules of construction, to the effect that ambiguities are to be resolved against the drafting Party, shall not apply to this Agreement or to any amendments, modifications, exhibits or attachments to this Agreement.

16.10 **Entire Agreement.** The terms and conditions herein constitute the entire agreement between the Parties and shall supersede all previous agreements, either oral or written, between the Parties hereto with respect to the subject matter hereof. No agreement of understanding bearing on this Agreement shall be binding upon either Party hereto unless it shall be in writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement in multiple originals by their duly authorized officers and representatives on the respective dates shown below, but effective as of the Agreement Date.

BELLICUM PHARMACEUTICALS, INC.

Name: /s/ Thomas J. Farrell
Thomas J. Farrell
Title: Chief Executive Officer

Date: 3/20/08

BAYLOR COLLEGE OF MEDICINE

Name: /s/ Cyndi M. Bailey
Cyndi M. Bailey
Title: Senior Vice President & General Counsel

Date: 3/8/08

Appendix A
Subject Technology Supplied by Baylor to Bellicum:

Exhibit 10.18

*****Text Omitted and Filed Separately**
with the Securities and Exchange Commission
Confidential Treatment Requested
Under 17 C.F.R. Sections 200.80(b)(4)
and 230.406

EXCLUSIVE LICENSE AGREEMENT
BAYLOR COLLEGE OF MEDICINE
BELLICUM PHARMACEUTICALS, INC.

RE: **BLG 06-028, "Inducible Toll-like Receptors and Composite Costimulatory Receptors for Unified, Broadly Applicable Immunotherapy"**, developed by David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan. Disclosed to BCM on [...***...].

This Exclusive License Agreement (hereinafter called "Agreement"), to be effective as of the 27th day of June, 2010 (hereinafter called "Agreement Date"), is by and between Baylor College of Medicine (hereinafter called "BAYLOR"), a Texas nonprofit corporation having its principal place of business at One Baylor Plaza, Houston, Texas 77030, and Bellicum Pharmaceuticals, Inc., a corporation organized under the laws of Delaware and having a principal place of business at 6400 Fannin Street, Suite 2300 Houston, TX 77030, and its Affiliates (hereinafter, collectively referred to as "BELLICUM").

WITNESSETH:

WHEREAS, BAYLOR, by virtue of its relationship with its faculty, staff and students and conveyances with the Developers (as defined below) and under and pursuant to the terms and provisions of its Policy on Inventions and Patents, is the owner of certain right, title and interest in and to the Subject Technology and Patent Rights (as defined below); and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...]; and

WHEREAS, BAYLOR is willing to grant a worldwide, exclusive license to all of the right, title and interest owned by BAYLOR as of the Agreement Date in the Subject Technology and Patent Rights to BELLICUM on the terms set forth herein; and

WHEREAS, BELLICUM desires to obtain said exclusive license under the Subject Technology and Patent Rights; and

NOW, THEREFORE, for and in consideration of the foregoing and rights and obligations hereafter, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto expressly agree as follows:

1. DEFINITIONS AS USED HEREIN

1.1 "Affiliates" shall mean any corporation, partnership, joint venture or other entity of which the common stock or other equity ownership thereof is 50% or more owned by BELLICUM.

1.2 "Confidential Information" shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information.

1.3 "Developers" shall mean David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan, employees of BAYLOR at the time the invention was disclosed.

1.4 "Field" shall mean all fields of use.

1.5 "Legal Costs" shall mean all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the Patent Rights in the United States and foreign countries.

1.6 "Licensed Product(s)" will mean (i) any product that the manufacture, use or sale of which would constitute, but for the license granted to BELLICUM, or sublicense granted to a sublicensee, under this Agreement, an infringement of any Valid Claim of the Patent Rights; and/or (ii) any method the practice of which would constitute, but for the license granted to BELLICUM, or sublicense granted to a sublicensee, under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.7 "Net Sales" shall mean the gross sales price invoiced to or received (whichever occurs first) from customers, who are not Affiliates, of Licensed Product by BELLICUM or sublicensees, less:

(i) [...***...];

(ii) [...***...];

(iii) [...***...];

(iv) [...***...]; and

(v) [...***...];

*****Confidential Treatment Requested**

The term “Net Sales” in the case of non-cash sales, shall mean the fair market value of all equivalent or other consideration received by BELLICUM or sublicensees for the sale, lease or transfer of Licensed Product.

1.8 “Party” shall mean either BELLICUM or BAYLOR, and the “Parties” shall mean BELLICUM and BAYLOR.

1.9 “Patent Rights” shall mean all right, title and interest owned by BAYLOR as of the Agreement Date in patent applications filed before, on or after the Agreement Date, that pertain to the Subject Technology, including:

(a) PCT Patent Application No. PCT/US2007/081963, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptors and Adaptors Thereof”,” naming David M. Spencer and Natalia Lapteva as inventors, and filed 10/19/2007, which claims priority to U.S. Provisional Patent Application No. 60/862,211, filed 10/19/2006; U.S. Provisional Patent Application No. 60/895,088, filed 03/15/2007; United States Patent Application No. 12/445,939, International filing date 10/19/2007; Australian Patent Application No. 2007310946, International filing date 10/19/2007; Canadian Patent Application No. 2,666,667, International filing date 10/19/2007; European Patent Convention Application No. 07844466.8, International filing date 10/19/2007; and Hong Kong Patent Application No. 10100140.7, International filing date 10/19/2008;

(b) United States Patent Application No. 12/563,991, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptor Adapters,” naming David Spencer and Priyadharshini Narayanan as inventors, and filed 9/21/09. Claims priority to U.S. Provisional Patent Application No. 61/099,163, filed 9/22/08, U.S. Provisional Patent Application No. 61/153,562, filed 2/18/09, and U.S. Provisional Patent Application No. 61/181,572, filed 5/27/09;

(c) PCT Patent Application No. PCT/US2009/057738, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptor Adapters,” naming David Spencer and Priyadharshini Narayan as inventors, and filed 9/21/09, which claims priority to U.S. Provisional Patent Application No. 61/099,163, filed 9/22/08, U.S. Provisional Patent Application No. 61/153,562, filed 2/18/09, and U.S. Provisional Patent Application No. 61/181,572, filed 5/27/09;

(d) United States Provisional Application No. 61/325,127, entitled “Method for Treating Solid Tumors,” naming Kevin Slawin, David Spencer and Natalia Lapteva as inventors, and filed April 16, 2010, subject to limitations described in Section 1.9(f); and

(e) (i) all United States counterparts and foreign counterparts of patent applications listed in the foregoing clauses (a) to (d); (ii) all other patents and patent applications in any country that claim, cover or describe the Subject Technology and/or subject matter disclosed in patent applications of (a) to (d) and (e)(i) and are owned or controlled by BAYLOR; (iii) all pending patent applications anywhere in the world that claim common priority with any patent or patent application of the foregoing clauses (a) to (d), (e)(i) and

(e) (ii); (iv) all patents that have issued or in the future issue from any of the patent applications described in the foregoing clauses (a) to (d) and (e)(i)-(iii), including without limitation, utility models, design patents and certificates of invention; and (v) all divisionals, continuations, continuations-in-part, reissues, reexaminations, renewals, extensions or additions to the patents and patent application listed and described in the foregoing clauses (a) to (d) and (e)(i)-(iv). As used herein, the phrase "pending patent applications" shall be construed to include provisional applications.

(f) Patent Rights provided in Section 1.9(d), and Sections 1.9(e)(i)-(v) as they pertain to Section 1.9(d), extend only to products containing a MyD88 nucleotide sequence or MyD88 amino acid sequence, compositions that include such products, and methods for making and using such compositions and products.

1.10 "Subject Technology" shall mean and include all right, title and interest owned by BAYLOR as of the Agreement Date in any technology, biological materials, methods, documents, materials, tests, know-how and all confidential information existing as of the Agreement Date pertaining to the following technology disclosures:

BLG 06-028, "Inducible Toll-like Receptors and Composite Costimulatory Receptors for Unified, Broadly Applicable Immunotherapy", developed by David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan. Disclosed to BCM on [...***...].

1.11 "Sublicensing Revenue" shall mean all cash and non-cash items not earmarked for a specific purpose, paid to BELLICUM which constitute advance considerations for sublicensing rights to Licensed Product(s) granted by BELLICUM, but exclude any amounts (i) [...***...], or (ii) [...***...], (iii) [...***...], (iv) [...***...], and (v) [...***...].

1.12 "Valid Claim" means a claim of an issued and unexpired patent within the Patent Rights that has not been held revoked, unenforceable, unpatentable or invalid by a final decision of a court of competent jurisdiction or by a final decision of a patent office and that has not been admitted to be invalid or unenforceable through reissue, reexamination, disclaimer or otherwise.

2. GRANT OF LICENSE

2.1 Grant. Subject to the reservations of rights set forth in Paragraph 2.2, BAYLOR hereby grants to BELLICUM, and BELLICUM hereby accepts, an exclusive, worldwide, sublicensable, fee-bearing and royalty-bearing license under the Patent Rights and Subject Technology, to make, have made, use, import, export, distribute, research, develop, obtain regulatory approval, manufacture, have manufactured, offer for sale and sell Licensed Products.

2.2 Restrictions. The grant in Paragraph 2.1 shall be further subject to, restricted by and non-exclusive with respect to;

(i) the making or use of the Subject Technology and Patent Rights by BAYLOR for non-commercial research, patient care, teaching and other educationally related purposes;

(ii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR grants to other academic or research institutions for non-commercial research purposes; and

(iii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR is required by law or regulation to grant to the United States of America or to a foreign state pursuant to an existing or future treaty with the United States of America; and

(iv) the non-exclusive, worldwide, paid-up license granted to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...].

2.3 Government Reservation. Rights under this Agreement are subject to rights required to be granted to the Government of the United States of America pursuant to 35 USC Section 200-212, including a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world.

3. DILIGENCE

BELLICUM shall:

(i) Supply to BAYLOR an Annual Report within [...***...] of January 1st of each year during the Term of the Agreement documenting Bellicum's progress and activities related to research and development, securing regulatory approvals, manufacturing, sublicensing, marketing and sales of Licensed Product;

(ii) File an investigational new drug (IND) application on a Licensed Product within [...***...] of the Agreement Date;

(iii) Initiate a Phase III Clinical Trial on a Licensed Product within [...***...] of the Agreement Date;

BAYLOR may [...***...] if BELLICUM does not perform (i), (ii) or (iii) in this section, subject to the Term and Termination section (Section 10) herein.

4. PAYMENTS

4.1 License Execution Fee. As partial consideration for the rights conveyed by BAYLOR under this Agreement, BELLICUM shall pay BAYLOR a license fee of thirty thousand dollars ($30,000). Such payment shall be delivered to BAYLOR in installments according to the following schedule:

(i) [...***...] dollars ($[...***...]) upon execution of this Agreement;

(ii) [...***...] dollars ($[...***...]) due [...***...] from the Agreement Date; and

(iii) [...***...] dollars ($[...***...]) due on [...***...].

4.2 Annual Maintenance Fee. BELLICUM shall pay to BAYLOR an annual maintenance fee of [...***...] dollars ($[...***...]) due upon each anniversary of the Agreement Date, beginning on the second anniversary of the Agreement Date and continuing until introduction of a Licensed Product.

4.3 Royalty on Net Sales. BELLICUM will pay to BAYLOR a royalty of [...***...] percent ([...***...]%) of Net Sales of Licensed Product. Collectively the royalty payments that are the subject of this Paragraph 4.3 are termed “Royalties” for purposes of this Agreement and shall be payable as provided in Section 5.

4.4 Minimum Royalties. Beginning with the calendar year following the first commercial sale of a Licensed Product, BELLICUM shall pay to BAYLOR an amount such that the amount payable shall be the greater of: (i) the actual royalties on Net Sales of Licensed Products during the calendar year, or (ii) the following minimum royalties:

(a) [...***...] dollars the first calendar year following the first commercial sale of a Licensed Product;

(b) [...***...] dollars the second calendar year following the first commercial sale of a Licensed Product;

(c) [...***...] dollars the third calendar year following the first commercial sale of a Licensed Product and thereafter.

4.5 Milestones. BELLICUM shall also pay BAYLOR the following milestone payments set forth below:

For the first (1st) clinical indication:	
Phase I Clinical Trial Initiation	[...***...] ($[...***...])
Phase II Clinical Trial Initiation	[...***...] dollars ($[...***...])
For the first two (2) clinical indications:	
Phase III Clinical Trial Initiation	[...***...] dollars ($[...***...])
First Regulatory Agency-Approved Commercial Sale	[...***...] dollars ($[...***...]).

BELLICUM shall notify BAYLOR in writing within [...***...] days upon the achievement of each milestone, such notice to be accompanied by payment of the appropriate milestone payment. Milestones are to be paid regardless of whether BELLICUM or BELLICUM's sublicensee attains such milestone.

4.6 Sublicense Revenue Sharing. In the event BELLICUM sublicenses the Subject Technology and Patent Rights under this Agreement, BELLICUM agrees to pay to BAYLOR:

(i) [...***...] percent ([...***...]%) of Sublicense Revenue if the sublicense agreement is executed on or before the [...***...].

(ii) [...***...] percent ([...***...]%) of Sublicense Revenue shall be payable to Baylor if the sublicense agreement is executed after the [...***...].

4.7 Legal Costs. BELLICUM will be responsible for payment of all Legal Costs, which BELLICUM will pay directly to each legal service provider on invoices for such legal costs received by BELLICUM.

4.8 Failure to Make Payment. Should BELLICUM fail to make any payment whatsoever due and payable to BAYLOR hereunder, BAYLOR may, at its sole option, terminate this Agreement as provided in Section 10.

5. REPORTING

5.1 Notification of Sale of Licensed Products. BELLICUM shall notify BAYLOR the date on which BELLICUM and/or its sublicensee(s) make a first sale of Licensed Products in each country in which it occurs within [...***...] days of occurrence.

5.2 Royalty Reports. BELLICUM shall submit to BAYLOR within [...***...] after March 31, June 30, September 30 and December 31, a written report on a form provided by BAYLOR (a current version of which is attached as Appendix A) setting forth for such calendar quarter at least the following information:

(i) the number of Licensed Products sold by BELLICUM and sublicensees in each country;

(ii) total billings for such Licensed Products;

(iii) the gross amount of monies or cash equivalent or other consideration which is received for sales, leases, licenses or other modes of transfer of Licensed Products by BELLICUM;

(iv) the identity of that consideration which is received instead of money for sales, leases, licenses or other modes of transfer of Licensed Products by BELLICUM;

(v) allowed deductions from the gross amount as per Definition 1.7, under which BELLICUM shall determine the amount of Net Sales thereof;

(vi) the amount of Royalties due thereon, or, if no Royalties are due to BAYLOR for any reporting period, the statement that no Royalties are due;

(vii) the amount of Sublicensing Revenue received by BELLICUM; and

(viii) the amount of other payments due BAYLOR, including but not limited to, milestone payments, minimum royalty payments and maintenance fee payments.

The royalty report shall be certified as correct by an officer of BELLICUM. After termination or expiration of this Agreement, BELLICUM will continue to submit royalty reports and payments to BAYLOR until all Licensed Products made, used, marketed, leased or imported under the Agreement have been sold.

5.3 Payment to Accompany Royalty Report. BELLICUM shall pay to BAYLOR with each such royalty report the amount of Royalties and other payments due with respect to such calendar quarter. If multiple technologies are covered by the license granted hereunder, BELLICUM shall specify which Subject Technology and Patent Rights are utilized for each Licensed Product included in the royalty report by citing the applicable **BLG number** listed on the front page of the Agreement.

5.4 Payment Terms. All payments due hereunder are payable by check or wire transfer in United States dollars and shall be deemed received when the complete payment is credited to BAYLOR's bank account. Until all funds are received by BAYLOR, the payment by BELLICUM is not considered to be complete. For sales of Licensed Products in currencies other than the United States, BELLICUM shall use exchange rates published in [...***...] on the last business day of the calendar quarter that such payment is due. No transfer, exchange, collection or other charges, **including any wire transfer fees**, shall be deducted from such payments.

5.5 Late Payments. Late payments shall be subject to a charge of [...***...] percent ([...***...]%) per [...***...], the interest being compounded annually, or [...***...]

dollars ($[...***...]), whichever is greater. BELLICUM shall calculate the correct late payment charge, and shall add it to each such late payment. Said late payment charge and the payment and acceptance thereof shall not negate or waive the right of BAYLOR to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment. [...***...].

5.6 Payment Address: If payments are sent by check, they shall be sent to the address listed in Paragraph 14.1. If payments are sent by wire transfer, they shall be sent using the wiring instructions sent by BAYLOR.

5.7 Notification of Merger or Acquisition. In the event of acquisition, merger, change of corporate name, or change of make-up, organization, or identity, BELLICUM shall notify BAYLOR in writing within [...***...] days of such event.

5.8 Small Entity Status Notification. If BELLICUM or sublicensee does not qualify as a "small entity" as provided by the United States Patent and Trademark Office, BELLICUM will notify BAYLOR within [...***...] days of BELLICUM becoming aware of such entity status change.

6. RECORDS AND INSPECTION

6.1 Obligation to Maintain Accounting Records. BELLICUM shall maintain, and shall cause its sublicensees to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to BAYLOR in relation to this Agreement, which records shall contain sufficient information to permit BAYLOR to confirm the accuracy of any reports delivered to BAYLOR and compliance in other respects with this Agreement. The relevant party shall retain such records for at least five (5) years following the end of the calendar year to which they pertain.

6.2 BAYLOR Right to Conduct Audit. During the Term of this Agreement as defined below and for a period of [...***...] thereafter, an independent certified public accountant, selected by BAYLOR and reasonably acceptable to BELLICUM (said acceptance shall not be unreasonably withheld, delayed, or denied), shall have the right to inspect the books and records of BELLICUM in conjunction with the performance of BELLICUM's obligations under the terms and conditions of this Agreement. BAYLOR will ensure that the accountant will conduct the inspection in accordance with duties or confidentiality and non-use no less stringent than such provisions of this Agreement. Such inspection will pertain only to BELLICUM's Sublicensing Revenue, Net Sales and calculation of Royalties within the [...***...] period immediately preceding the start of the inspection, and BAYLOR's accountant shall be granted access to records or documents required to determine the accuracy of any Sublicensing Revenue payment, Net Sales calculation or Royalty payment. BELLICUM agrees to provide the accountant reasonable access to the records and documents, and shall cooperate reasonably with the accountant in support of its inspection and audit activities during BELLICUM's

normal business hours. The accountant will issue a report specifying the findings of its inspection and audit, and BAYLOR will immediately issue a copy of the report to BELLICUM. If either Party disagrees with results of such report, BELLICUM and BAYLOR will use their good faith best efforts to resolve the disagreement.

6.3 Resolution of a Payment Deficiency. If a payment deficiency is determined, BELLICUM and its sublicensee(s), as applicable, shall pay the outstanding amounts within [...***...] days of receiving written notice thereof, plus interest on such outstanding amounts as described in Section 5.

6.4 Responsibility for Audit Expenses. BAYLOR will pay for any audit done under Paragraph 6.2. However, in the event that the audit reveals an underpayment of Royalties or fees by more than [...***...] percent ([...***...]%) for the period being audited, the cost of the audit shall be paid by BELLICUM. If the underpayment is less than [...***...] percent ([...***...]%) but more than [...***...] percent ([...***...]%) for the period being audited, BELLICUM and BAYLOR shall [...***...]

7. SUBLICENSES

All sublicenses granted by BELLICUM of its rights hereunder shall have terms and conditions no less restrictive than those in this Agreement. BELLICUM shall be responsible for its sublicensees and shall not grant any rights which are inconsistent with the rights granted to and obligations of BELLICUM hereunder. Should BELLICUM become aware of an act or omission of a sublicensee that would be a material breach of this Agreement, BELLICUM shall use reasonable business efforts to cause the sublicensee to cure the breach. No such sublicense agreement shall contain a provision that illegally extends the term of Patent Rights under this Agreement. BELLICUM shall give BAYLOR prompt notification of the identity and address of each sublicensee with whom it concludes a sublicense agreement and shall supply BAYLOR with a copy of each such sublicense agreement.

8. PATENTS AND INFRINGEMENT

8.1 Patent Prosecution Responsibility. From the Agreement Date and for the term of this Agreement, BELLICUM shall have primary responsibility, at its sole cost, to use patent counsel of its choice that is reasonably acceptable to BAYLOR for filing, prosecuting and maintaining all patent applications and patents included in the Patent Rights and Subject Technology licensed hereunder, except that BAYLOR may assume responsibility at its sole expense for pursuing any protection which BELLICUM declines to prosecute pursuant to Paragraph 8.2 of this Agreement.

8.2 Notification of Intent Not to Pursue. In the event that BELLICUM decides not to pay for the costs associated with either: (i) the prosecution of patent applications in the Patent Rights or (ii) maintenance of any United States or foreign issued patent in the Patent Rights, BELLICUM shall provide BAYLOR [...***...] days written notice thereof. BELLICUM's right under this Agreement to practice an invention

validly claimed in an issued patent not pursued under this Section 8.2 shall terminate [...***...] days after such notice in the jurisdiction of the patent not pursued.

8.3 Obligation to Inform. BELLICUM agrees to keep BAYLOR reasonably informed, at [...***...]'s expense, of prosecution and other actions pursuant to this Section 8, including submitting to BAYLOR copies of all official actions and responses thereto.

8.4 Obligation to Cooperate. BAYLOR agrees to reasonably cooperate with BELLICUM to whatever extent is reasonably necessary to provide BELLICUM the full benefit of the license granted herein.

8.5 Infringement Procedures. During the term of this Agreement, each Party shall promptly inform the other of any suspected infringement of any claims in the Patent Rights or the misuse, misappropriation, theft or breach of confidence of other proprietary rights in the Subject Technology and/or Patent Rights by a third party, and with respect to such activities as are suspected. Any action or proceeding against such third party shall be instituted as follows:

(i) BAYLOR and BELLICUM may agree to jointly institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. Such joint action shall be brought in the names of both BAYLOR and BELLICUM. If BAYLOR or BELLICUM decide to jointly prosecute an action or proceeding after it has been instituted by one Party, the action shall be continued in the name or names they both agree is expedient for efficient prosecution of such action. BELLICUM and BAYLOR shall agree to the manner in which they shall exercise control over any joint action or proceeding, providing however that if they cannot agree BAYLOR shall have the right to unilaterally decide on control. In such joint action or proceeding, the out-of-pocket costs shall be borne equally, and any recovery or settlement shall be shared equally.

(ii) If BELLICUM does not agree to participate in a joint action or proceeding then BAYLOR shall have the right, but not the obligation, to institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. If BAYLOR elects to institute action, it does so at its own cost. If BAYLOR fails to bring such an action or proceeding within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then BELLICUM shall have the right, but not the obligation, to prosecute the same at its own expense. If BELLICUM elects to institute action and action is not jointly instituted as described in Section 8.5(i), BELLICUM does so at its own cost and BAYLOR agrees to be named in the action and reasonably cooperate with costs of such actions by BAYLOR being paid by BELLICUM. Should either BAYLOR or BELLICUM commence action under the provisions of this Paragraph 8.5 and thereafter elect to abandon the same, it shall give timely notice to the other Party who may, if it so desires, continue prosecution of such action or proceeding. All recoveries, whether by

judgment, award, decree or settlement, from infringement or misuse of Subject Technology and/or Patent Rights shall be apportioned as follows: (a) the Party bringing the action or proceeding shall first recover an amount equal the costs and expenses incurred by such Party directly related to the prosecution of such action or proceeding, (b) the Party cooperating in such action or proceeding shall then recover costs and expenses incurred by such Party directly related to its cooperation in the prosecution of such action or proceeding and (c) the remainder will be divided proportionately between BAYLOR and BELLICUM according to the fraction of the costs and expenses incurred by each Party.

8.6 Consent to Settle. Neither BAYLOR nor BELLICUM shall settle any action covered by Paragraph 8.5 without first obtaining the consent of the other Party, which consent will not be unreasonably withheld.

8.7 Liability for Losses. BAYLOR shall not be liable for any losses incurred as the result of an action for infringement brought against BELLICUM as the result of BELLICUM's exercise of any right granted under this Agreement. The decision to defend or not defend shall be in BELLICUM's sole discretion.

9. TERM AND EXPIRATION

Unless sooner terminated as otherwise provided in Section 10, the license to employ Patent Rights and Subject Technology granted herein as part of Section 2 shall expire on a country-by-country basis, on the date of expiration of the last of the Patent Rights to expire. After such expiration, BELLICUM shall have a perpetual, paid-in-full (i.e., royalty free) license in such country,

10. TERMINATION

10.1 Termination by Baylor: Breach. In the event of default or failure by BELLICUM to perform any of the terms, covenants or provisions of this Agreement, BELLICUM shall have ninety (90) days after the receipt by BELLICUM of written notice of such default by BAYLOR to correct such default. If such default is not corrected within the said ninety (90) day period, BAYLOR shall have the right, at its option, to cancel and terminate this Agreement. The Parties may mutually agree, in writing, to extend the cure period for a default if BELLICUM has demonstrated good faith efforts to cure said default. However, BAYLOR is not obligated to grant such an extension. The failure of BAYLOR to exercise such right of termination shall not be deemed to be a waiver of any right BAYLOR might have, nor shall such failure preclude BAYLOR from exercising or enforcing said right upon any subsequent failure by BELLICUM.

10.2 Termination by Baylor: Insolvency. BAYLOR shall have the right, at its option, to cancel and terminate this Agreement in the event that BELLICUM shall (i) become involved in insolvency, dissolution, bankruptcy or receivership proceedings affecting the operation of its business or (ii) make an assignment of all or substantially all of its assets for the benefit of creditors, or in the event that (iii) a receiver or trustee is appointed for BELLICUM and BELLICUM shall, after the expiration of thirty (30) days following any of the events enumerated above, have been unable to secure a dismissal, stay or other suspension of such proceedings.

10.3 Termination by Bellicum. BELLICUM, upon sixty (60) days prior written notice to BAYLOR, may terminate this Agreement with or without cause.

10.4 Effects of Termination. In the event of termination of this Agreement, all rights to the Subject Technology and Patent Rights shall revert to BAYLOR.

10.5 Termination: Sublicenses. Effective on the date of termination of this Agreement for any reason prior to expiration, BELLICUM hereby assigns to BAYLOR, and BAYLOR hereby accepts as a successor to BELLICUM, each authorized sublicense agreement that is in effect on the date of termination. BELLICUM will notify, in writing, each sublicensee of such assignment within ten (10) days after the date of termination of this Agreement. BAYLOR will accept the assignment of each sublicense agreement from BELLICUM when the sublicensee agrees in writing to be bound directly to BAYLOR by provisions of the sublicensing agreement. BELLICUM will include notification of this provision in this Section 10.5 in each sublicense it grants under this Agreement.

10.6 No Refund. In the event this Agreement is terminated pursuant to this Section 10, BAYLOR is under no obligation to refund any consideration made by BELLICUM to BAYLOR, as set forth in Section 4, prior to the effective date of such termination or expiration.

10.7 Survival of Termination. No termination of this Agreement shall constitute a termination or a waiver of any rights of either Party against the other Party accruing at or prior to the time of such termination. The obligations of Sections 4, 5, 6, 10, 12, 13, 14, 15, and 16 shall survive termination of this Agreement.

11. ASSIGNMENT

BELLICUM may assign this Agreement to a third party without BAYLOR's approval or consent as part of:

(i) A sale or other transfer of BELLICUM's entire business; or

(ii) A sale or other transfer of that part of BELLICUM's business to which the license granted hereby relates;

BELLICUM shall give BAYLOR [...***...] days prior written notice of such assignment, including the new contact information of assignee. In circumstances other than (i) and (ii) of this Article 11, BELLICUM may assign this Agreement to a third party with the prior written consent of BAYLOR, which consent will not be unreasonably withheld, and BAYLOR will accept such assignment when the assignee has agreed in writing to be

bound by terms of this Agreement. Upon such assignment of this Agreement by such assignee, the term "BELLICUM" as used herein (i) will include the name of the assignee should BELLICUM assign a partial right and/or interest hereunder to the assignee, or (ii) will be replaced by the name of the assignee should BELLICUM assign its full right and interest hereunder to the assignee.

12. GOVERNMENTAL COMPLIANCE

12.1 Compliance with Laws. BELLICUM shall, during the term of this Agreement and for so long as it shall use the Subject Technology or Patent Rights or sell Licensed Products, comply with and cause its sublicensees to comply with all laws that may control the import, export, manufacture, use, sale, marketing, distribution and other commercial exploitation of the Subject Technology, Patent Rights, Licensed Products or any other activity undertaken pursuant to this Agreement.

12.2 Export Control Regulations. The Subject Technology is subject to, and BELLICUM agrees to use commercially reasonable efforts to comply with, U.S. law including but not limited to U.S. export controls under the Export Administration Regulations (15 C.F.R. Part 734 et seq.) and U.S. economic sanctions and embargoes codified in 31 C.F.R. Chapter V. BELLICUM agrees that BELLICUM bears sole responsibility for understanding and complying with current U.S. trade controls laws and regulations as applicable to its activities subject to this Agreement. Without limitation on the general agreement to comply set forth in the first sentence of this Paragraph 12.2, BELLICUM agrees not to sell any goods, services, or technologies subject to this Agreement, or to re-export the same: (1) to any destination prohibited by U.S. law, including any destination subject to U.S. economic embargo; (2) to any end-user prohibited by U.S. law, including any person or entity listed on the U.S. government's Specially Designated Nationals list, Denied Parties List, Debarred Persons List, Unverified List, or Entities List. Furthermore, any transfer of Patent Rights from BAYLOR to BELLICUM under this Agreement may be subject to U.S. export license authorization under U.S. law, and BAYLOR agrees to comply with applicable laws for such transfer.

12.3 Requirement for U.S. Manufacture. BAYLOR represents and certifies that research giving rise to the Patent Rights was partially funded by Federal funds, and that such Federal funds were solely from the National Institutes of Health (NIH). BELLICUM agrees that Licensed Products developed as a result of such Federal funds and are leased or sold in the United States shall be manufactured substantially in the United States, unless a written waiver is obtained from the NIH. At the request of BELLICUM, BAYLOR agrees to the best of its abilities to assist BELLICUM should BELLICUM seek such a waiver.

13. DISPUTE RESOLUTION

13.1 Amicable Resolution. The parties shall attempt to settle any controversy between them amicably. To this end, a senior executive from each Party shall consult and negotiate to reach a solution. The Parties agree that the period of amicable resolution shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing mediation if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that these amicable resolution negotiations have commenced.

13.2 Mediation. If a controversy arises out of or relates to this agreement, or the breach thereof, and if the controversy cannot be settled through amicable resolution, the Parties agree to try in good faith to settle the controversy by mediation before resorting to final and binding arbitration. The Party seeking mediation shall propose five mediators, each of whom shall be a lawyer licensed to practice by the state of Texas, having practiced actively in the field of commercial law for at least 15 years, to the other Party who shall select the mediator from the list. The Parties shall split the cost of the mediator equally. The Parties agree that the period of mediation shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing arbitration if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that amicable resolution negotiations have commenced.

13.3 Arbitration. Any dispute, controversy, or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, including claims for tortious interference or other tortious or statutory claims arising before, during or after termination, providing only that such claim touches upon matters covered by this Agreement shall be finally settled by arbitration administered by the American Arbitration Association pursuant to the Commercial Arbitration Rules in force at the time of the commencement of the arbitration, except as modified by the specific provisions of this Agreement. It is the specific intent of the Parties that this arbitration provision is intended to be the broadest form allowed by law.

13.4 Parties to Arbitration. This agreement to arbitrate is intended to be binding upon the signatories hereto, their principals, successors, assigns, subsidiaries and affiliates. This agreement to arbitrate is also intended to include any disputes, controversy or claims against any Party's employees, agents, representatives, or outside legal counsel arising out of or relating to matters covered by this Agreement or any agreement in which this Agreement is incorporated.

13.5 Consolidation Permitted. The Parties expressly agree that any court with jurisdiction may order the consolidation of any arbitrable controversy under this Agreement with any related arbitrable controversy not arising under this Agreement, as the court may deem necessary in the interests of justice or efficiency or on such other grounds as the court may deem appropriate.

13.6 Entry of Judgment. The Parties agree that a final judgment on the arbitration award may be entered by any court having jurisdiction thereof.

*****Confidential Treatment Requested**

13.7 Appointing Arbitrators. The American Arbitration Association shall appoint the arbitrator(s) from its Large, Complex Claims Panel. If such appointment cannot be made from the Large, Complex Claims Panel, then from its Commercial Panel. The Parties hereby agree to and acquiesce in any appointment of an arbitrator or arbitrators that may be made by such appointing authority.

13.8 Qualifications of the Arbitrator(s). The arbitrator(s) must be a lawyer, having practiced actively in the field of commercial law for at least 15 years.

13.9 Governing Substantive Law. The arbitrator(s) shall determine the rights and obligations of the Parties according to the substantive laws of the State of Texas (excluding conflicts of law principles) as though acting as a court of the State of Texas.

13.10 Governing Arbitration Law. The law applicable to the validity of the arbitration clause, the conduct of the arbitration, including any resort to a court for provisional remedies, the enforcement of any award and any other question of arbitration law or procedure shall be the Federal Arbitration Act.

13.11 Governing Convention. The Parties elect to have the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958 (instead of the Inter-American New York Convention on International Commercial Arbitration of August 15, 1990) govern any and all disputes that may be the subject of arbitration pursuant to this Agreement.

13.12 Preliminary Issues of Law. The arbitrator(s) shall hear and determine any preliminary issue of law asserted by a Party to be dispositive of any claim, in whole or part, in the manner of a court hearing a motion to dismiss for failure to state a claim or for summary judgment, pursuant to such terms and procedures as the arbitrator(s) deems appropriate.

13.13 Confidentiality. The Parties and the arbitrator(s) shall treat all aspects of the arbitration proceedings, including without limitation discovery, testimony and other evidence, briefs and the award, as strictly confidential. Further, except as may be required by law, neither Party nor the arbitrator(s) may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both Parties.

13.14 Place of Arbitration. The seat of arbitration shall be Houston, Texas, USA.

13.15 Language. The arbitration shall be conducted in the English language. All submissions shall be made in English or with an English translation. Witnesses may provide testimony in a language other than English, provided that a simultaneous English translation is provided. Each Party shall bear its own translation costs.

13.16 Punitive Damages Prohibited. The Parties hereby waive any claim to any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages, and the arbitrator(s) is/are specially divested of any power to award any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages.

13.17 Costs. The Party prevailing on substantially all of its claims shall be entitled to recover its costs, including attorneys' fees, for the arbitration proceedings, as well as for any ancillary proceeding, including a proceeding to compel or enjoin arbitration, to request interim measures or to confirm or set aside an award.

13.18 Survival. The provisions of this Section 13 shall survive expiration or termination of this Agreement.

14. ADDRESSES

14.1 Baylor Payment Address. All certificates of common stock shall be sent to the address below, and shall reference the applicable **OTA numbers** listed on the front page of the Agreement.

BAYLOR Tax ID #: 74-1613878
Baylor College of Medicine
Licensing Group
P.O. Box 203710
Houston, TX 77216-3710

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm.tmc.edu

14.2 Bellicum Payment Address. For questions about payments, BAYLOR can contact BELLICUM at the address below:

Tom Farrell CEO
Bellicum Pharmaceuticals, Inc.
6400 Fannin Street, Suite 2300
Houston, TX 77030

(713) 341-6472 direct
(713) 335-1446 fax
(512) 507-0003 mobile
tfarrell@bellicum.com

14.3 Address for Notices. All notices, reports or other communication pursuant to this Agreement shall be sent to such Party via (i) United States Postal Service postage prepaid, (ii) overnight courier, or (iii) facsimile transmission, addressed

to it at its address set forth below or as it shall designate by written notice given to the other Party. Notice shall be sufficiently made, or given and received (a) on the date of mailing or (b) when a facsimile printer reflects transmission.

In the case of BAYLOR:
Patrick Turley
Associate General Counsel
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg©bcm.tmc.edu

In the case of BELLICUM:
Tom Farrell CEO
Bellicum Pharmaceuticals, Inc.
6400 Fannin Street, Suite 2300
Houston, TX 77030

(713) 341-6472 direct
(713) 335-1446 fax
(512) 507-0003 mobile
tfarrell©bellicum.com

14.4 Baylor Reference Number. Each such report, notice or other communication shall include the applicable Baylor reference numbers listed on the front page of the Agreement.

15. REPRESENTATIONS, INDEMNITY & INSURANCE

15.1 BELLICUM Representations. BELLICUM hereby represents and certifies that:

(i) it is a corporation duly organized and in good standing under the laws of the State of Delaware;

(ii) it is qualified to do business and in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(iii) the execution, delivery and performance of this Agreement by BELLICUM and the consideration provided for herein has been duly authorized by corporate action; and

(iv) it has the full power and authority to enter into and carry out its obligations under this Agreement.

BELLICUM agrees to indemnify and hold BAYLOR and its officers, trustees, faculty, employees, agents and representatives, harmless from any liabilities, costs and expenses (including attorneys' fees and expenses), obligations or causes of action arising out of or related to any breach of the representations and certifications made by BELLICUM in this Section 15.1.

15.2 BAYLOR Representations. BAYLOR represents and certifies that:

(i) it is qualified to do business and is in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(ii) the execution, delivery and performance of this Agreement by BAYLOR and the consideration provided for herein has been duly authorized;

(iii) it has the full power and authority to enter into and carry out its obligations under this Agreement; and

(iv) it controls the entire right, title and interest in the Patent Rights and the Subject Technology BAYLOR owns and is fully authorized to make the grant in Section 2.1 of the Agreement.

15.3 GENERAL INDEMNITY.

(I) EACH PARTY SHALL NOTIFY THE OTHER OF ANY CLAIM, LAWSUIT OR OTHER PROCEEDING RELATED TO THE SUBJECT TECHNOLOGY AND PATENT RIGHTS. BELLICUM AGREES THAT IT WILL DEFEND, INDEMNIFY AND HOLD HARMLESS BAYLOR, ITS FACULTY MEMBERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, OFFICERS, TRUSTEES AND AGENTS AND EACH OF THEM (THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ANY AND ALL CLAIMS, CAUSES OF ACTION, LAWSUITS OR OTHER PROCEEDINGS (THE "BAYLOR CLAIMS") FILED OR OTHERWISE INSTITUTED AGAINST ANY OF THE INDEMNIFIED PARTIES ARISING OUT OF THE DESIGN, PROCESS, MANUFACTURE OR USE BY BELLICUM OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS, OR LICENSED PRODUCTS; PROVIDED, HOWEVER, THAT SUCH INDEMNITY SHALL NOT APPLY TO ANY CLAIMS ARISING FROM THE NEGLIGENCE OR INTENTIONAL MISCONDUCT OF ANY INDEMNIFIED PARTY. BELLICUM WILL ALSO ASSUME RESPONSIBILITY FOR ALL COSTS AND EXPENSES RELATED TO SUCH CLAIMS FOR WHICH IT IS OBLIGATED TO INDEMNIFY THE INDEMNIFIED PARTIES PURSUANT TO THIS PARAGRAPH 15.3, INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE.

(II) BELLICUM FURTHER AGREES NOT TO SETTLE ANY CLAIM AGAINST A BAYLOR INDEMNITEE WITHOUT THE INDEMNITEE'S WRITTEN CONSENT WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD. BELLICUM FURTHER AGREES TO KEEP BAYLOR INDEMNITEES FULLY APPRISED OF THE BAYLOR CLAIMS.

15.4 Insurance.

(i) BELLICUM shall, for so long as BELLICUM manufactures, uses or sells any Licensed Product(s) for research applications, maintain in full force and effect policies of (a) general liability insurance with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]) and (b) products liability insurance, with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]).

(ii) BELLICUM shall provide to BAYLOR copies of certificates of insurance or copies of the policies of insurance within [...***...] days after BELLICUM receives a request from BAYLOR for such copies. It is the intention of the Parties hereto that BELLICUM shall, throughout the term of this Agreement, continuously and without interruption, maintain in force the required insurance coverages set forth in this Paragraph 15.4.

(iii) BAYLOR reserves the right to request additional policies of insurance where appropriate and reasonable in light of BELLICUM's business operations and availability of coverage.

15.5 DISCLAIMER OF WARRANTY. BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS OTHER THAN THOSE MADE ABOVE, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS OR MERCHANTABILITY, REGARDING OR WITH RESPECT TO THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS AND BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, OF THE PATENTABILITY OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS OR OF THE ENFORCEABILITY OF ANY PATENTS ISSUING THEREUPON, IF ANY, OR THAT THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS ARE OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT OR OTHER RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS CONFERRING BY IMPLICATION, ESTOPPEL OR OTHERWISE ANY LICENSE OR RIGHTS UNDER ANY PATENTS OF BAYLOR OTHER THAN THE PATENT RIGHTS, REGARDLESS OF WHETHER SUCH PATENTS ARE DOMINANT OR SUBORDINATE TO THE PATENT RIGHTS.

16. ADDITIONAL PROVISIONS

16.1 Use of BAYLOR Name. BAYLOR agrees that BELLICUM may publicly disclose the existence of this Agreement, the name "Baylor College of Medicine" and the names of scientists and researchers at BAYLOR associated with the Patent Rights and Technology Rights. BELLICUM will not disclose it has an affiliation with BAYLOR that does not exist at the time the name "Baylor College of Medicine" is publicly disclosed.

16.2 Confidentiality.

(i) Confidential Information will be marked "CONFIDENTIAL." The recipient of Confidential Information ("Recipient") agrees to retain in confidence and to prevent the disclosure of the Confidential Information from the discloser ("Discloser") to any third party without the prior written consent of the Discloser; provided, however, the Recipient may disclose Confidential Information to its officers, directors, employees, partners, investors, shareholders, lawyers, accountants, and consultants (collectively, the "Representatives") on a need-to-know basis only for the purpose of assisting the Recipient in evaluating the Confidential Information or in the discharge of its obligations under this Agreement. The Recipient will use the same degree of care with respect to the Confidential Information as it would with its own proprietary and confidential information, and in no event use less than a reasonable degree of care. The Recipient will use reasonable efforts to notify its Representatives about the Recipient's duties under this Agreement and to promote Representatives' maintenance of the confidentiality of the Confidential Information as if the Representatives were themselves parties to this Agreement. BELLICUM may disclose Confidential Information to potential licensees, purchasers, investors, joint venturers and the like so long as BELLICUM uses commercially reasonable efforts to make such disclosures subject to a confidentiality agreement. The Recipient agrees to retain in confidence and to prevent the disclosure of any document prepared by or for the Recipient that includes Discloser's Confidential Information, including without limitation any document that analyzes or summarizes Discloser's Confidential Information, to any third party without the prior written consent of the Discloser.

(ii) This Agreement imposes no obligations upon the Recipient with respect to any Confidential Information which (a) was in the Recipient's possession before receipt of such information from the Discloser, as evidenced by competent written proof; (b) is or becomes a matter of public knowledge through no fault or violation of this Agreement by the Recipient or its Representatives; (c) is rightfully received by the Recipient from a third party who, to the Recipient's knowledge, is not under a duty of confidentiality; (d) is approved in writing for release by the Discloser prior to such release; (e) is independently developed by the Recipient as evidenced by Recipient's written records without any use of or reference to Confidential Information of the Discloser; or (f) is disclosed in an intangible medium (e.g., visual, oral) and not confirmed in a writing to the Recipient within thirty (30) days after its initial disclosure by the Discloser. Notwithstanding any other provision of this Agreement, the Recipient may disclose Confidential Information which is required to be disclosed by law, rule, regulation, administrative, or legal process ("Compelled Request"); provided, however, the Recipient will give prompt written notice of any Compelled Request for such information to the Discloser and agrees to cooperate with the Discloser, at the Discloser's expense, to challenge the request or limit the scope of disclosure of such information, as the Discloser may request and deem appropriate.

(iii) Each Party agrees to notify the other Party in writing of any misuse or misappropriation of the other Party's Confidential Information that may come to its attention. The Parties hereby acknowledge and agree that in the event of any breach of this Section 16.2, including, without limitation, the actual or threatened disclosure or unauthorized use of Confidential Information without the prior express written consent of the Discloser, the Discloser would suffer an irreparable injury such that no remedy at law would adequately protect or appropriately compensate the disclosing party for such injury. Accordingly, the Parties agree that the Discloser will have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond or further showing and without prejudice to any other rights and remedies that the Discloser may have for a breach of this Section 16.2.

16.3 No Additional Rights. BELLICUM acknowledges that, other than the specific rights granted hereunder, it is not entitled to any rights to any current or future technology, research or developments made at or owned by BAYLOR.

16.4 BAYLOR's Disclaimers. Neither BAYLOR, nor any of its faculty members, scientists, researchers, employees, officers, trustees or agents assume any responsibility for the manufacture, product specifications, sale or use of the Subject Technology or the Licensed Products which are manufactured by or sold by BELLICUM.

16.5 Independent Contractors. The Parties hereby acknowledge and agree that each is an independent contractor and that neither Party shall be considered to be the agent, representative, master or servant of the other Party for any purpose whatsoever, and that neither Party has any authority to enter into a contract, to assume any obligation or to give warranties or representations on behalf of the other Party. Nothing in this relationship shall be construed to create a relationship of joint venture, partnership, fiduciary or other similar relationship between the Parties.

16.6 Non-Waiver. The Parties covenant and agree that if a Party fails or neglects for any reason to take advantage of any of the terms provided for the termination of this Agreement or if a Party, having the right to declare this Agreement terminated, shall fail to do so, any such failure or neglect by such Party shall not be a waiver or be deemed or be construed to be a waiver of any cause for the termination of this Agreement subsequently arising, or as a waiver of any of the terms, covenants or conditions of this Agreement or of the performance thereof. None of the terms, covenants and conditions of this Agreement may be waived by a Party except by its written consent.

16.7 Reformation. The Parties hereby agree that neither Party intends to violate any public policy, statutory or common law, rule, regulation, treaty or decision of any government agency or executive body thereof of any country or community or association of countries, and that if any word, sentence, paragraph or clause or combination thereof of this Agreement is found, by a court or executive body with judicial powers having jurisdiction over this Agreement or any of the Parties hereto, in a final, unappealable order to be in violation of any such provision in any country or

community or association of countries, such words, sentences, paragraphs or clauses or combination shall be inoperative in such country or community or association of countries, and the remainder of this Agreement shall remain binding upon the Parties hereto.

16.8 Force Majeure. No liability hereunder shall result to a Party by reason of delay in performance caused by force majeure, that is circumstances beyond the reasonable control of the Party, including, without limitation, acts of God, fire, flood, war, terrorism, civil unrest, labor unrest, or shortage of or inability to obtain material or equipment.

16.9 Informed Review. Each Party acknowledges that it and its counsel have received and reviewed this Agreement and that normal rules of construction, to the effect that ambiguities are to be resolved against the drafting Party, shall not apply to this Agreement or to any amendments, modifications, exhibits or attachments to this Agreement.

16.10 Section Headings. The section headings used in this Agreement are intended for purposes of reference and convenience only, and shall not enter into any interpretation of this Agreement.

16.11 Entire Agreement. The terms and conditions herein constitute the entire agreement between the Parties and shall supersede all previous agreements, either oral or written, between the Parties hereto with respect to the subject matter hereof. No agreement of understanding bearing on this Agreement shall be binding upon either Party hereto unless it shall be in writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement in multiple originals by their duly authorized officers and representatives on the respective dates shown below, but effective as of the Agreement Date.

BELLICUM PHARMACEUTICALS, INC.

Name: /s/ Thomas J. Farrell
Thomas J. Farrell

Title: Chief Executive Officer

Date: June 27, 2010

BAYLOR COLLEGE OF MEDICINE

Name: /s/ Illegible

Title: Sr. VP and Dean of Research

Date: June 22, 2010

APPROVED AS TO FORM
Office of the General Counsel
Baylor College of Medicine
By: /s/ 6/17/10

Appendix A
Royalty Report

BLG #: _____
Licensee: _____
Reporting Period: _____
Prepared By _____ Date: _____
Approved By _____ Date: _____

Please prepare a separate report for each product line. Then combine all product lines into a summary report.

Product Line Code (SKU): _____

Country	Units Sold	Exchange Rate	Total Billings (USD)	Gross Sales (USD)	Less Deductions* (USD)	Net Sales (USD)	Royalty Rate	Royalty Amount
USA								
Canada								
Europe:								
Japan								
Other:								
Total								**$**
Third Party Royalty Payments (USD)								**$**
Net Royalty Payable (USD)								**$**
Sublicensing Revenue (USD)								**$**
Other Payments- Milestones, Minimum Royalties, Maintenance Fees (USD)								**$**
Total Payment Due (USD)								**$**

* Deduction Description:

Exhibit 10.19

*****Text Omitted and Filed Separately**
with the Securities and Exchange Commission
Confidential Treatment Requested
Under 17 C.F.R. Sections 200.80(b)(4)
and 230.406

CANCER PREVENTION &
RESEARCH INSTITUTE OF TEXAS

STATE OF TEXAS
COUNTY OF TRAVIS

This **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") is by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**"), hereinafter referred to as the "**INSTITUTE**", acting through its Executive Director, and **Bellicum Pharmaceuticals, Inc.**, hereinafter referred to as the "**RECIPIENT**", acting through its authorized signing official.

RECITALS

WHEREAS, pursuant to TEX. HEALTH & SAFETY CODE, Ch. 102, the INSTITUTE may make grants to public and private persons in this state for research into the causes and cures for all types of cancer in humans; facilities for use in research into the causes and cures for cancer; research to develop therapies, protocols, medical pharmaceuticals, or procedures for the cure or substantial mitigation of all types of cancer; and cancer prevention and control programs.

WHEREAS, Article III, Section 67 of the Texas Constitution expressly authorizes the State of Texas to sell general obligation bonds on behalf of the INSTITUTE and for the INSTITUTE to use the proceeds from the sale of the bonds for the purposes of cancer research and prevention programs in this state.

WHEREAS, the INSTITUTE issued a request for applications for RFA R-11-COMP-1: Company Commercialization Awards on or about July 2010.

WHEREAS, pursuant to TEX. HEALTH & SAFETY CODE § 102.251, and after a review by the INSTITUTE's scientific research and prevention program committees, the INSTITUTE's Executive Director has approved a Grant (defined below) to be awarded to the RECIPIENT.

WHEREAS, to ensure that the Grant provided to the RECIPIENT pursuant to this Contract is utilized in a manner consistent with Tex. Const. Article III, Section 67 and other laws, and in exchange for receiving such Grant, the RECIPIENT agrees to comply with certain conditions and deliver certain performance.

WHEREAS, the RECIPIENT and the INSTITUTE desire to set forth herein the provisions relating to the awarding of such monies and the disbursement thereof to the RECIPIENT.

IN CONSIDERATION of the Grant and the premises, covenants, agreements, and provisions contained in this Contract, the parties agree to the following terms and conditions:

Article I
DEFINITIONS

The following terms shall have the following meaning throughout this Contract and any Attachments and amendments. Other terms may be defined elsewhere in this Contract.

(1) **Collaborator** – any entity other than the RECIPIENT having one or more personnel participating in the Project and (a) designated as a collaborator in the application submitted by the RECIPIENT requesting the Grant funds awarded by the INSTITUTE, or (b) otherwise approved in writing as a collaborator by the INSTITUTE.

(2) **Contractor** – any person or entity, other than a Collaborator or the RECIPIENT (or their respective personnel), who is contracted by the RECIPIENT to perform activities for the Project.

(3) **Equipment** – an article of tangible, nonexpendable personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.

(4) **Grant** – the funding assistance authorized by TEX. HEALTH & SAFETY CODE, Ch. 102 in the amount specified in Section 2.01 and awarded by the INSTITUTE to the RECIPIENT to carry out the Project pursuant to the terms and conditions of this Contract.

(5) **Indirect Costs** – the expenses of doing business that are not readily identified with a particular grant, contract, project, function or activity, but are necessary for the general operation of the organization or the performance of the organization's activities.

(6) **Institute-Funded Activity** – all aspects of work conducted on or as part of the Project.

(7) **Non-Profit Organization** – a university or other institution of higher education or an organization of the type described in 501(c)(3) of the Internal Revenue Code of 1986, as amended (26 U.S.C. 501 (c)(3)) and exempt from taxation under 501 (a) of the Internal Revenue Code (26 U.S.C. 501 (a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(8) **Principal Investigator/Program Director** – the individual designated by the RECIPIENT to direct the Project who is principally responsible and accountable to the RECIPIENT and the INSTITUTE for the proper conduct of the Project. References herein to "Principal Investigator/Program Director" include Co-Principal Investigators or Co-Program Directors as well. The Principal Investigator/Program Director and Co-Principal Investigators or Co-Program Directors are set forth on Attachment A.

(9) **Project** – the activities specified or generally described in the Scope of Work or otherwise in this Contract (including without limitation any of the Attachments to the Contract) that are approved by the INSTITUTE for funding, regardless of whether the INSTITUTE funding constitutes all or only a portion of the financial support necessary to carry them out.

(10) **Recipient Personnel** – The RECIPIENT's Principal Investigator/Program Director and RECIPIENT's employees and consultants working on the Project.

Article II
GRANT AWARD

Section 2.01 Award of Monies. In accordance with the provisions of this Contract, the INSTITUTE shall disburse the proceeds of the Grant to the RECIPIENT in an amount not to exceed **$5,680,310** to be used solely for the Project. This award is subject to compliance with the Scope of Work and demonstration of progress towards achievement of the milestones set forth in Section 2.02. The INSTITUTE, in its sole discretion, may award supplemental funding not to exceed ten percent (10%) of the total Grant amount based upon progress made by the RECIPIENT pursuant to the Scope of Work. This Grant is not intended to be a loan of money.

Section 2.02 Scope of Work and Milestones. The RECIPIENT shall perform the Project in accordance with this Agreement and as outlined in Application **RP110508** submitted by the RECIPIENT and approved by the INSTITUTE. The RECIPIENT shall conduct the Project within the State of Texas with Texas-based employees, Contractors and/or Collaborators unless otherwise specified in the Scope of Work or the Approved Budget. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment A in their entirety, incorporate them as if fully set forth herein, and agree that the Project description, goals, timeline and milestones included as Attachment A accurately reflect the Scope of Work of the Project to be undertaken by the RECIPIENT (the "**Scope of Work**") and the milestones expected to be achieved. RECIPENT and the INSTITUTE mutually agree that the outcome of scientific research is unpredictable and cannot be guaranteed. The RECIPIENT shall use commercially reasonable efforts to complete the goals of the Project pursuant to the timeline reflected in Attachment A and shall timely notify the INSTITUTE if circumstances occur that materially and adversely affect completion thereof. Modifications, if any, to the Scope of Work must be agreed to in writing by both parties as set forth in Section 2.06 "Amendments and Modifications" herein. Material changes to the Scope of Work include, but are not limited to, changes in key personnel involved with the Project, the site of the Project, and the milestones expected to be achieved.

Section 2.03 Contract Term. The Contract shall be effective as of **June 1, 2011** (the "**Effective Date**") and terminate on **May 31, 2013** or in accordance with the Contract termination provisions set forth in Article VIII herein, whichever shall occur first (the "**Termination Date**"). Unless otherwise approved by the INSTITUTE as evidenced by written communication from the INSTITUTE to the RECIPIENT and appended to the Contract, Grant funds distributed pursuant to the Contract shall be expended no earlier than the Effective Date or subsequent to the Termination Date. If, as of the Termination Date, the RECIPIENT has not used Grant money awarded by the INSTITUTE for permissible services, expenses, or costs related to the Project and has not received approval from the INSTITUTE for a no cost extension to the contract term pursuant to Section 3.11 "Carry Forward of Unspent Funds and No Cost Extension" herein, then the RECIPIENT shall not be entitled to retain such unused Grant funds from the INSTITUTE. Certain obligations as set forth in Section 9.09 of this Contract shall extend beyond the Termination Date.

Section 2.04 Contract Documentation. The Contract between the INSTITUTE and the RECIPIENT shall consist of this final, executed Contract, including the following Attachments to the Contract, all of which are hereby incorporated by reference:

(a) Attachment A – Project Description, Goals and Timeline

(b) Attachment B – Approved Budget, including changes approved by the INSTITUTE subsequent to execution of the Contract.

(c) Attachment C – Assurances and Certifications

(d) Attachment D – Intellectual Property and Revenue Sharing

(e) Attachment E – Reporting Requirements

(f) Attachment F – Approved Amendments to Contract, excluding budget amendments reflected in Attachment B.

Section 2.05 Entire Agreement. All agreements, covenants, representations, certifications and understandings between the parties hereto concerning this Contract have been merged into this written Contract. No prior or contemporaneous representation, agreement or understanding, express or implied, oral or otherwise, of the parties or their agents that may have related to the subject matter hereof in any way shall be valid or enforceable unless embodied in this Contract.

Section 2.06 Amendments and Modifications. Requested amendments and modifications to the Contract must be submitted in writing to the INSTITUTE for review and approval (such approval shall not be unreasonably withheld.) Amendments and modifications (including alterations, additions, deletions, assignments and extensions) to the terms of this Contract shall be made solely in writing and shall be executed by both parties. The approved amendment shall be reflected in Attachment A if it is change to the Scope of Work, or as part of Attachment B if it is a budget amendment, or as part of Attachment F for all other changes. No handwritten changes to this Contract shall be effective unless initialed and dated by authorized signatories of both parties.

Section 2.07 Relationship of the Parties. The RECIPIENT shall be responsible for the conduct of the Project that is the subject of this Contract and shall direct the activities and at all times be responsible for the performance of Recipient Personnel, Collaborators, Contractors and other agents. The INSTITUTE does not assume responsibility for the conduct of the Project or any Institute-Funded Activity that is the subject of this Contract. The INSTITUTE and the RECIPIENT shall perform their respective obligations under this Contract as independent contractors and not as agents, employees, partners, joint venturers, or representatives of the other party. Neither party is permitted to make representations or commitments that bind the other party.

Section 2.08 Subcontracting. Any and all subcontracts entered into by the RECIPIENT in relation to the performance of activities under the Project shall be in writing and shall be subject to the requirements of this Contract. Without in any way limiting the foregoing, the RECIPIENT shall enter into and maintain a written agreement with each such permitted Contractor with terms and conditions sufficient to ensure the RECIPIENT fully complies with the terms of this Contract, including without limitation the terms set forth in Attachments C, D, and E. The RECIPIENT agrees that it shall be responsible to the INSTITUTE for the performance of and payment to any Contractor. Any reimbursements made by the RECIPIENT to a Contractor shall be made in accordance with the applicable provisions of TEX. GOV'T. CODE, Ch. 2251.

Section 2.09 Transfer or Assignment by the Recipient. This Contract is not transferable or otherwise assignable by the RECIPIENT, whether by operation of law or otherwise, without the prior written consent of the INSTITUTE, except as provided in this Section 2.09. Any such attempted transfer or assignment without the prior written consent of the INSTITUTE (except as provided in this Section 2.09) shall be null, void and of no effect. For purposes of this section, an assignment or transfer of this Contract by the RECIPIENT in connection with a merger, transfer or sale of all or substantially all of the RECIPIENT's assets or business related to this Contract or a consolidation, change of control or similar transaction involving the RECIPIENT shall not be deemed to constitute a transfer or assignment, so long as such action does not impair or otherwise negatively impact the revenue sharing terms in Attachment D. Nothing herein shall be interpreted as superseding the requirement that the Project be undertaken in Texas with Texas-based employees.

If the Principal Investigator leaves the employment of the RECIPIENT or is replaced by the RECIPIENT for any reason during the course of the Grant with someone who is not already designated a co-Principal Investigator in Attachment A, the RECIPIENT shall notify the INSTITUTE prior to replacing the Principal Investigator. Written approval by the INSTITUTE is required for the replacement of the Principal Investigator with someone who is not already a co-Principal Investigator in Attachment A, which approval shall not be unreasonably withheld, conditioned or delayed.

Section 2.10 Representations and Certifications. The RECIPIENT represents and certifies to the best of its knowledge and belief to the INSTITUTE as follows:

(a) It has legal authority to enter into, execute, and deliver this Contract, and all documents referred to herein, and it has taken all corporate actions necessary to its execution and delivery of such documents;

(b) It will comply with all of the terms, conditions, provisions, covenants, requirements, and certifications in this Contract, and all other documents incorporated herein by reference;

(c) It has made no material false statement or misstatement of fact in connection with this Contract and its receipt of the Grant, and all of the information it previously submitted to the INSTITUTE or that it is required under this Contract to submit to the INSTITUTE relating to the Grant or the disbursement of any of the Grant is and will be true and correct at the time such statement is made;

(d) It is in compliance in all material respects with provisions of its charter and of the laws of the State of Texas, and of the laws of the jurisdiction in which it was formed, and (i) there are no actions, suits, or proceedings pending, or threatened, before any judicial body or governmental authority against or affecting its ability to enter into this Contract, or any document referred to herein, or to perform any of the material acts required of it in such documents and (ii) it is not in default with respect to any order, writ, injunction, decree, or demand of any court or any governmental authority which would impair its ability to enter into this Contract, or any document referred to herein, or to perform any of the material acts required of it in such documents;

(e) Neither the execution and delivery of this Contract or any document referred to herein, nor compliance with any of the terms, conditions, requirements, or provisions contained in this Contract or any documents referred to herein, is prevented by, is a breach of, or will result in a breach of, any term, condition, or provision of any agreement or document to which it is now a party or by which it is bound; and

(f) It shall furnish such satisfactory evidence regarding the representations and certifications described herein as may be required and requested by the INSTITUTE from time to time.

Section 2.11 Reliance upon Representations. By awarding the Grant and executing this Contract, the INSTITUTE is relying, and will continue to rely throughout the term of this Contract, upon the truthfulness, accuracy, and completeness of the RECIPIENT's written assurances, certifications and representations. Moreover, the INSTITUTE would not have entered into this Contract with the RECIPIENT but for such written assurances, certifications and representations. The RECIPIENT acknowledges that the INSTITUTE is relying upon such assurances, certifications and representations and acknowledges their materiality and significance.

Section 2.12 Contingent upon Availability of Grant Funds. This Contract is contingent upon funding being available for the term of the Contract and the RECIPIENT shall have no right of action against the INSTITUTE in the event that the INSTITUTE is unable to perform its obligations under this Contract as a result of the suspension, termination, withdrawal, or failure of funding to the INSTITUTE or lack of sufficient funding of the INSTITUTE for this Contract. If funds become unavailable to the INSTITUTE during the term of the Contract, Section 8.01(c) shall apply. For the sake of clarity, and except as otherwise provided by this Contract, if this Contract is not funded, then both parties are relieved of all of their obligations under this Contract. The INSTITUTE acknowledges and agrees that the Project is a multiyear project subject to Tex. Health & Safety Code, Chr. 102, Section 102.257.

Section 2.13 Confidentiality of Documents and Information. In connection with work contemplated for the Project or pursuant to complying with various provisions of this Contract, the RECIPIENT may disclose its confidential business, financial, technical, scientific information and other information to the INSTITUTE ("Confidential Information"). To assist the INSTITUTE in identifying such information, the RECIPIENT shall mark or designate the information as "confidential," provided however that the failure to so designate does not operate as a waiver to protections provided by applicable law or this Contract. The INSTITUTE shall use no less than reasonable care to protect the confidentiality of the Confidential Information to the fullest extent permissible under the Texas Public Information Act, Texas Government Code, Chapter 552 (the "**TPIA**"), and, except as otherwise provided in the TPIA to prevent the disclosure of the Confidential Information to third parties for a period of time equal to three (3) years from the termination of the contract, unless the INSTITUTE and the RECIPIENT agree in writing to extend such time period, provided that this obligation shall not apply to information that:

(a) was in the public domain at the time of disclosure or later became part of the public domain through no act or omission of the INSTITUTE in breach of this Contract;

(b) was lawfully disclosed to the INSTITUTE by a third party having the right to disclose it without an obligation of confidentiality;

(c) was already lawfully known to the INSTITUTE without an obligation of confidentiality at the time of disclosure;

(d) was independently developed by the INSTITUTE without using or referring to the RECIPIENT's Confidential Information; or

(e) is required by law or regulation to be disclosed.

The INSTITUTE shall hold the Confidential Information in confidence, shall not use such Confidential Information except as provided by the terms of this Contract, and shall not disclose such Confidential Information to third parties without the prior written approval of the RECIPIENT or as otherwise allowed by the terms of the Contract. Subject in all respects to the terms of this Contract and the TPIA, the INSTITUTE has the right to use and disclose the Confidential Information reasonably in connection with the exercise of its rights under the Contract.

In the event that the INSTITUTE is requested or required (by oral questions, interrogatories, requests for information or documents in legal proceedings, subpoena, civil investigative demand or other similar process by a court of competent jurisdiction or by any administrative, legislative, regulatory or self-regulatory authority or entity) to disclose any Confidential Information, the INSTITUTE shall provide the RECIPIENT with prompt written notice of any such request or requirement so that the RECIPIENT may seek a protective order or other appropriate remedy. If, in the absence of a protective order or other remedy, the INSTITUTE is nonetheless legally compelled to make any such disclosure of Confidential Information to any person, the INSTITUTE may, without liability hereunder, disclose only that portion of the Confidential Information that is legally required to be disclosed, provided that the INSTITUTE will use reasonable efforts to assist the RECIPIENT, at the RECIPIENT's expense, in obtaining an appropriate protective order or other reliable assurance that confidential treatment will be accorded the Confidential Information. To the extent that such Confidential Information does not become part of the public domain by virtue of such disclosure, it shall remain Confidential Information hereunder.

Article III
DISBURSEMENT OF GRANT AWARD PROCEEDS

Section 3.01 Payment of Grant Award Proceeds. The INSTITUTE will advance Grant award proceeds upon request by the RECIPIENT, consistent with the amounts and schedule as provided in Attachment B. If the RECIPIENT does not request advancement of funds for some or all of the Grant award proceeds, disbursement of Grant award proceeds for services performed and allowable expenses and costs incurred pursuant to the Scope of Work will be on a reimbursement basis.

Section 3.02 Requests for Reimbursement and Quarterly Financial Status Reports. If the RECIPIENT does not elect to receive an advance disbursement of Grant proceeds, the RECIPIENT's requests for reimbursement shall be made on INSTITUTE Form 269a (Financial Status Report). If the RECIPIENT has elected to receive an advance disbursement of Grant proceeds, RECIPIENT shall submit INSTITUTE Form 269a (Financial Status Report) to document all costs and allowable expenses paid with Grant proceeds. The RECIPIENT shall submit the INSTITUTE Form 269a quarterly to the INSTITUTE within 90 days following the end of the quarter covered by the bill. A final INSTITUTE Form 269a shall be submitted by RECIPIENT not later than 90 days after the Termination Date. An extension of time for submission deadlines specified herein must be expressly authorized in writing by the INSTITUTE.

Section 3.03 Actual Costs and Allowable Expenses. Because the Approved budget for the Project(s) as set forth in Attachment B is only an estimate, the parties agree that the RECIPIENT's billings under this Contract will reflect the actual costs and expenses incurred in performing the Project(s), regardless of the Approved Budget, up to the total contracted amount specified in Section 2.01 "Award of Monies." The RECIPIENT shall use Grant proceeds only for allowable expenses consistent with state law and agency administrative rules. Allowable expenses for the Project(s) shall be only as outlined in the Approved Budget and any modifications to same.

Section 3.04 Travel Expenses. Reimbursement for travel expenditures shall be in accordance with the Approved Budget. Prior written approval from the INSTITUTE must be obtained before travel that exceeds the amount included in the Approved Budget commences. Failure to obtain such prior written approval shall result in such excess travel costs constituting expenses that may not be taken into account for the purposes of calculating expenditure of Grant funds under this Contract.

Section 3.05 Budget Modifications. The total Approved Budget and the assignment of costs may be adjusted based on implementation of the Scope of Work, spending patterns, and unexpended funds, but only by an amendment to the Approved Budget. In no event shall an amendment to the Approved Budget result in payments in excess of the aggregate amount specified in Section 2.01 "Award of Monies" or in approved supplemental funding for the Project, if any. The RECIPIENT may make transfers between or among lines within budget categories without prior written approval provided that:

(a) The total dollar amount of all changes of any single line item within budget categories (individually and in the aggregate) is less than [...***...]% of the total Approved Budget;

(b) The transfer will not increase or decrease the total Approved Budget;

(c) The transfer will not materially change the nature, performance level, or Scope of Work of the Project; and

(d) The RECIPIENT submits a revised copy of the Approved Budget including a narrative justification of the changes prior to incurring costs in the new category.

All other budget changes or transfers require the INSTITUTE's express prior written approval. Transfer of funds between categories in the Project's Approved Budget may be allowed if requests are in writing, fit within the Scope of Work and the total Approved Budget, are beneficial to the achievement of the objectives of the Project, and appear to be an efficient, effective use of the INSTITUTE's funds.

Section 3.06 Withholding Payment. The INSTITUTE may withhold Grant award proceeds from the RECIPIENT if required Financial Status Reports (Form 269a) are not on file for previous quarters or for the final period, if material program requirements are not met and remain uncured after a reasonable time period to cure, if the RECIPIENT is in breach of any material term of this Contract, or in accordance with provisions of this Contract as well as applicable state or federal laws, regulations or administrative rules, and the breach remains uncured after a reasonable time period to cure. The INSTITUTE shall have the right to withhold all or part of any future payments to the RECIPIENT to offset any prior advance payments made to the RECIPIENT for ineligible expenditures that have not been refunded to the INSTITUTE by the RECIPIENT

Section 3.07 Grant Funds as Supplement to Budget. The RECIPIENT shall use the Grant proceeds awarded pursuant to this Contract to supplement its overall budget. These funds will in no event supplant existing funds currently available to the RECIPIENT that have been previously budgeted and set aside for the Project. The RECIPIENT will not bill the INSTITUTE for any costs under this Contract that also have been billed or should have been billed to any other funding source.

*****Confidential Treatment Requested**

Section 3.08 Buy Texas. The RECIPIENT shall apply good faith efforts to purchase goods and services from suppliers in Texas to the extent reasonably possible, to achieve a goal of more than 50 percent of such purchases from suppliers in Texas.

Section 3.09 Historically Underutilized Businesses. The RECIPIENT shall use reasonable efforts to purchase materials, supplies or services from a Historically Underutilized Business (HUB). The Texas Procurement and Support Services website will assist in finding HUB vendors (http://www.window.state.tx.us/procurement.) The RECIPIENT shall complete a HUB report with each annual report submitted to the INSTITUTE in accordance with Attachment E.

Section 3.10 Limitation on Use of Grant Award Proceeds to Pay Indirect Costs. The RECIPIENT shall not spend more than five percent of the Grant award proceeds for Indirect Costs.

Section 3.11 Carry Forward of Unspent Funds and No Cost Extension. RECIPIENT may request to carry forward unspent funds into the budget for the next year. Carryover of unspent funds must be specifically approved by the INSTITUTE. The INSTITUTE may approve a no cost extension for the Contract for a period not to exceed six (6) months after the Termination Date if additional time beyond the Termination date is required to ensure adequate completion of the approved project. The Contract must be in good fiscal and programmatic standing. All terms and conditions of the Contract shall continue during any extension period and if such extension is approved, notwithstanding Section 2.03, all references to the "Termination Date" shall be deemed to mean the date of expiration of such extension period.

Article IV
AUDITS AND INSPECTIONS

Section 4.01 Record Keeping. The RECIPIENT, each Collaborator and each Contractor whose costs are funded in all or in part by the Grant shall maintain or cause to be maintained books, records, documents and other evidence (electronic or otherwise) pertaining in any way to its performance under and compliance with the terms and conditions of this Contract ("**Records**"). The RECIPIENT, each Collaborator and each Contractor shall use, or shall cause the entity which is maintaining such Records to use generally accepted accounting principles in the maintenance of such Records, and shall retain or require to be retained all of such Records for a period of four (4) years from the Termination Date of the Contract.

Section 4.02 Audits. Upon request and with reasonable notice, the RECIPIENT, each Collaborator and each Contractor whose costs are charged to the Project shall allow, or shall cause the entity which is maintaining such items to allow, the INSTITUTE, or auditors working on behalf of the INSTITUTE, including the State Auditor and/or the Comptroller of Public Accounts for the State of Texas, to review, inspect, audit, copy or abstract all of its Records during regular working hours. Acceptance of funds directly under the Contract or indirectly through a subcontract under the Contract constitutes acceptance of the authority of the INSTITUTE, or auditors working on behalf of the INSTITUTE, including the State Auditor and/or the Comptroller of Public Accounts, to conduct an audit or investigation in connection with those funds for a period of four (4) years from the Termination Date of the Contract.

Notwithstanding the foregoing, any RECIPIENT expending $[...***...] or more in federal or state awards during its fiscal year shall obtain either an annual single audit or a program specific audit. A RECIPIENT expending funds from only one federal program (as listed in the Catalog of Federal Domestic Assistance (CFDA) or one state program may elect to obtain a program specific audit in accordance with Office of Management and Budget (OMB) Circular A-133 or with the State of Texas Uniform Grant Management Standards (UGMS). A single audit is required if funds from more than one federal or state program are spent by the RECIPIENT. The audited time period is the RECIPIENT's fiscal year, not the INSTITUTE funding period.

Section 4.03 Inspections. In addition to the audit rights specified in Section 4.02 "Audits", the INSTITUTE shall have the right to conduct periodic onsite inspections within normal working hours and on a day and a time mutually agreed to by the parties, to evaluate the Institute-Funded Activity. The RECIPIENT shall fully participate and cooperate in any such evaluation efforts.

Section 4.04 On-going Obligation to Submit Requested Information. The RECIPIENT shall, submit other information related to the Grant to the INSTITUTE as may be reasonably requested from time-to-time by the INSTITUTE, by the Legislature or by any other funding or regulatory bodies covering the RECIPIENT's activities under this Contract.

Section 4.05 Duty to Resolve Deficiencies. If an audit and/or inspection under this Article IV finds there are deficiencies that should be remedied, then the RECIPIENT shall resolve and/or cure such deficiencies within a reasonable time frame specified by the INSTITUTE. Failure to do so shall constitute an Event of Default pursuant to Section 8.03 "Event of Default." Upon the RECIPIENT'S request, the parties agree to negotiate in good faith, specific extensions so that the RECIPIENT can cure such deficiencies.

Section 4.06 Repayment of Grant Proceeds for Improper Use. In no event shall RECIPIENT retain Grant funds that have not been used by the RECIPIENT for purposes for which the Grant was intended or in violation of the terms of this Contract. The RECIPIENT shall repay any portion of Grant proceeds used by the RECIPIENT for purposes for which the Grant was not intended, as determined by the final results of an audit conducted pursuant to the provisions of this Contract. Unless otherwise expressly provided for in writing and appended to this Contract, the repayment shall be made to the INSTITUTE no later than [...***...] upon a written request by the INSTITUTE specifying the amount to be repaid and detailing the basis upon which such request is being made and the amount shall include interest calculated at an amount not to exceed five percent (5%) annually. The RECIPIENT may request that the INSTITUTE waive the interest, subject in all cases to the INSTITUTE'S sole discretion.

Section 4.07 Repayment of Grant Proceeds for Relocation Outside of Texas. The RECIPIENT shall repay the INSTITUTE all Grant proceeds disbursed to RECIPIENT in the event that RECIPIENT relocates its principal place of business outside of the State during the Contract term or within 3 years after the final payment of the Grant funds is made by the INSTITUTE.

Article V
ASSURANCES AND CERTIFICATIONS

Adoption of Attachment C. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment C in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VI
INTELLECTUAL PROPERTY AND REVENUE SHARING

Adoption of Attachment D. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment D in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VII
REPORTING

Adoption of Attachment E. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment E in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VIII
EARLY TERMINATION AND EVENT OF DEFAULT

Section 8.01 Early Termination of Contract. This Contract may be terminated prior to the Termination Date specified in Section 2.03 “Contract Term” by:

(a) Mutual written consent of all parties to this Contract; or

(b) The INSTITUTE for an Event of Default (defined in Section 8.03) by the RECIPIENT; or

(c) The INSTITUTE if allocated funds should become legally unavailable during the Contract period and the INSTITUTE is unable to obtain additional funds for such purposes; or

(d) The RECIPIENT for convenience.

Section 8.02 Repayment of Grant Proceeds upon Early Termination. The INSTITUTE may require the RECIPIENT to repay any unused portion of the disbursed Grant proceeds in the event of early termination under 8.01 (d) above or under Section 8.01(b) above, to the extent such Event of Default resulted from Grant funds being expended in violation of this Contract. To the extent that the INSTITUTE exercises this option, the INSTITUTE shall provide written notice to the RECIPIENT stating the amount to be repaid, applicable interest calculated not to exceed five percent (5%) annually, and the schedule for such repayment. The RECIPIENT may request that the INSTITUTE waive the interest, subject in all cases to the INSTITUTE’S sole discretion. In no event shall the RECIPIENT retain Grant funds that have not been used by the RECIPIENT for purposes for which the Grant was intended.

Section 8.03 Event of Default. The following events shall, unless expressly waived in writing by the INSTITUTE or fully cured by the RECIPIENT pursuant to the provisions herein, constitute an event of default (each, an "**Event of Default**"):

(a) The RECIPIENT's failure, in any material respect, to conduct the Project in accordance with the approved Scope of Work and to demonstrate progress towards achieving the milestones set forth in Section 2.02;

(b) The RECIPIENT's failure to conduct the Project within the State of Texas to the extent required under this Contract unless as otherwise specified in the application, Scope of Work or Approved Budget;

(c) The RECIPIENT's failure to fully comply, in any material respect, with any provision, term, condition, covenant, representation, certification, or warranty contained in this Contract or any other document incorporated herein by reference;

(d) The RECIPIENT's failure to comply with any applicable federal or state law, administrative rule, regulation or policy with regard to the conduct of the Project;

(e) The RECIPIENT's material misrepresentation or false covenant, representation, certification, or warranty made by the RECIPIENT herein, in the Grant application, or in any other document furnished by the RECIPIENT pursuant to this Contract that was false or misleading at the time that it was made; or

(f) The RECIPIENT ceases its business operations, has a receiver appointed for all or substantially all of its assets, makes a general assignment for the benefit of creditors, is declared insolvent by a court of competent jurisdiction or becomes the subject, as a debtor, of a proceeding under the federal bankruptcy code, which such proceedings are not dismissed within ninety (90) days after filing.

Section 8.04 Notice Required. If the RECIPIENT intends to terminate pursuant to Section 8.01(d) "Early Termination of Contract", it shall provide written notice to the INSTITUTE pursuant to the notice provisions of Section 9.21 "Notices" no later than thirty (30) days prior to the intended date of termination.

If the INSTITUTE intends to terminate for an Event of Default under Section 8.01(b) by the RECIPIENT, as described in Section 8.03 "Event of Default", the INSTITUTE shall provide written notice to the RECIPIENT pursuant to Section 9.21 "Notices" and shall include a reasonable description of the Event of Default and, if applicable, the steps necessary to cure such Event of Default. Upon receiving notice from the INSTITUTE, the RECIPIENT shall have thirty (30) days beginning on the day following the receipt of notice to cure the Event of Default. Upon request, the INSTITUTE may provide an extension of time to cure the Event of Default(s) beyond the thirty (30) day period specified herein so long as the RECIPIENT is using reasonable efforts to cure and is making reasonable progress in curing such Event(s) of Default. The extension shall be in writing and appended to the Contract. If the RECIPIENT is unable or fails to timely cure an Event of Default, unless expressly waived in writing by the INSTITUTE, this Contract shall immediately terminate as of the close of business on the final day of the allotted cure period without any further notice or action by the INSTITUTE required. **In addition, and notwithstanding the foregoing, the INSTITUTE and the RECIPIENT agree that certain events that cannot be cured shall, unless expressly waived in writing by the INSTITUTE, constitute a final Event of Default under this Contract and this Contract shall terminate immediately upon the INSTITUTE giving the RECIPIENT written "Notice of Event of Default and FINAL TERMINATION."**

In the event that the INSTITUTE terminates the Contract under Section 8.01(c) above because allocated funds become legally unavailable during the Contract period, the INSTITUTE shall immediately provide written notification to the RECIPIENT of such fact pursuant to Section 9.21 “Notices.” The Contract is terminated upon the RECIPIENT’s receipt of that notification, subject to Section 9.09 “Survival of Terms.”

Section 8.05 Duty to Report Event of Default. The RECIPIENT shall notify the INSTITUTE in writing pursuant to Section 9.21 “Notices”, promptly and in no event more than (30) days after it obtains knowledge of the occurrence of any Event of Default. The RECIPIENT shall include a statement setting forth reasonable details of each Event of Default and the action which the RECIPIENT proposes to take with respect thereto.

Section 8.06 Obligations/Liabilities Affected by Early Termination. The RECIPIENT shall not incur new obligations that otherwise would have been paid for using Grant funds after the receipt of notice as provided by Section 8.04 “Notice Required”, unless expressly permitted by the INSTITUTE in writing, and shall cancel as many outstanding obligations as possible. The INSTITUTE shall not owe any fee, penalty or other amount for exercising its right to terminate the Contract in accordance with Section 8.01. In no event shall the INSTITUTE be liable for any services performed, or costs or expenses incurred, after the Termination Date of the Contract. Early termination by either party shall not nullify obligations already incurred, including the RECIPIENT’s revenue sharing obligations as set forth in Attachment D, or the performance or failure to perform obligations prior to the Termination Date.

Section 8.07 Interim Remedies. Upon receipt by the RECIPIENT of a notice of Event of Default, and at any time thereafter until such Event of Default is cured to the satisfaction of the INSTITUTE or this Contract is terminated, the INSTITUTE may enforce any or all of the following remedies (such rights and remedies being in addition to and not in lieu of any rights or remedies set forth herein):

(a) The INSTITUTE may refrain from disbursing any amount of the Grant funds not previously disbursed; provided, however, the INSTITUTE may make such a disbursement after the occurrence of an Event of Default without thereby waiving its rights and remedies hereunder;

(b) The INSTITUTE may enforce any additional remedies it has in law or equity.

The rights and remedies herein specified are cumulative and not exclusive of any rights or remedies that the INSTITUTE would otherwise possess.

Article IX
MISCELLANEOUS

Section 9.01 Uniform Grant Management Standards. Unless otherwise provided herein, the RECIPIENT agrees that the Uniform Grant Management Standards (UGMS), developed by the Governor’s Budget and Planning Office as directed under the Uniform Grant Management Act of 1981, TEX. GOVT. CODE, Ch. 783, apply as additional terms and conditions of this Contract and that the standards are adopted by reference in their entirety. If there is a conflict between the provisions of this Contract and UGMS, the provisions of this Contract will prevail unless expressly stated otherwise.

Section 9.02 Management and Disposition of Equipment. During the term of this Contract, the RECIPIENT may use Grant funds to purchase Equipment to be used for the authorized purpose of the Project, subject to the conditions set forth below. Unless otherwise provided herein, title to Equipment shall vest in the RECIPIENT upon termination of the Contract.

(a) The INSTITUTE must authorize the acquisition in advance and in writing but an acquisition is deemed authorized if included in the Approved Budget for the Project;

(b) Equipment purchased with Grant funds must stay within the State of Texas;

(c) Equipment purchased with Grant funds must be materially deployed to the uses and purposes related to the Project;

(d) In the event the RECIPIENT is indemnified, reimbursed or otherwise compensated for any loss of, destruction of, or damage to the Equipment purchased using Grant funds, it shall use the proceeds to repair or replace said Equipment;

(e) Equipment may be exchanged (trade-in) or sold without the prior written approval of the INSTITUTE if the proceeds thereof shall be applied to the acquisition cost of replacement Equipment;

(f) The RECIPIENT may use its own property management standards and procedures provided that it observes the terms of UGMS, A-102, in all material respects;

(g) The title or ownership of the Equipment shall not be encumbered for purposes other than the Project nor or transferred other than to a permitted assignee of this Contract without the prior written approval of the INSTITUTE;

(h) If the original or replacement Equipment is no longer needed for the originally authorized purpose or for other activities supported by the INSTITUTE, the RECIPIENT shall request disposition instructions from the INSTITUTE and, upon receipt, shall fully comply therewith; and

(i) If this Contract is terminated early pursuant to Section 8.01(b),(d), (e) or (f) above, the INSTITUTE shall determine the final disposition of Equipment purchased with Grant award money.

Section 9.03 Supplies and Other Expendable Property. The RECIPIENT shall classify as materials, supplies and other expendable property the allowable unit acquisition cost of such property under $5,000 necessary to carry out the Project. Title to supplies and other expendable property shall vest in the RECIPIENT upon acquisition.

Section 9.04 Acknowledgement of Grant Funding and Publicity. The parties agree to the following terms and conditions regarding acknowledging Grant funding and publicity:

(a) The parties agree to fully cooperate and coordinate with each other in connection with all press releases and publications regarding the award of the Grant, the execution of the Contract and the Institute-Funded Activities.

(b) The RECIPIENT shall notify the INSTITUTE's Information Specialist or similar personnel at least three business days prior to any press releases, advertising, publicity, use of CPRIT logo, or other promotional activities that pertain to the Project or any Institute-Funded Activity. In the event that the INSTITUTE wishes to participate in a joint press release, the RECIPIENT shall coordinate and cooperate with the INSTITUTE's Information Specialist or similar personnel to develop a mutually agreeable joint press release.

(c) Consistent with the goal of encouraging development of scientific breakthroughs and dissemination of knowledge, publication or presentation of scholarly materials is expected and encouraged. The RECIPIENT may publish in scholarly journals or other peer-reviewed journals (including graduate theses and dissertations) and may make presentations at scientific meetings without prior notice to or consent of the INSTITUTE, except as may otherwise be set forth in this Contract. The RECIPIENT shall promptly notify the INSTITUTE when any scholarly presentations or publications have been accepted for public disclosure and shall provide the INSTITUTE with final copies of all such accepted presentations and publications. The RECIPIENT shall acknowledge receipt of the INSTITUTE funding in all publications, presentations, press releases and other materials regarding the work associated with the Institute-Funded Activities. The RECIPIENT shall promptly submit an electronic version of all published manuscripts to PubMed Central in accordance with Section 9.05 "Public Access to Research Results."

(d) When grant funds are used to prepare print or visual materials for educational or promotional purposes for the general public (e.g., patients), and excluding presentations and publications discussed above in subsection (c), the RECIPIENT shall provide a copy of such materials to the INSTITUTE at least ten (10) days prior to printing. The RECIPIENT shall also acknowledge receipt of the INSTITUTE funding on all such materials including, but not limited to, brochures, pamphlets, booklets, training fliers, project websites, videos and DVDs, manuals and reports, as well as on the labels and cases for audiovisual or videotape/DVD presentations.

Section 9.05 Public Access to Results of Institute-Funded Activities. The RECIPIENT shall submit an electronic version of its final peer-reviewed journal manuscripts that arise from Grant funds to the digital archive National Library of Medicine's PubMed Central upon acceptance for publication. These papers must be accessible to the public on PubMed no later than 12 months after publication. This policy is subject to the terms of Attachment D and does not supplant applicable copyright law. For clarity, this policy is not intended to require the RECIPIENT to make a disclosure at a time or in any manner that would cause the RECIPIENT to abandon, waive or disclaim any intellectual property rights that it is obligated to protect pursuant to the terms of Attachment D.

Section 9.06 Work to be Conducted in State. The RECIPIENT agrees that it will use reasonable efforts to direct that any new or expanded preclinical testing, clinical trials, commercialization or manufacturing that is part of or relating to any Institute-Funded Activities take place in the State of Texas, including the establishment of facilities to meet this purpose. If the RECIPIENT decides not to conduct such work in the State of Texas, the RECIPIENT shall provide a prior written explanation to the INSTITUTE detailing the RECIPIENT's reasons for conducting the work outside of the State of Texas and the RECIPIENT's efforts made to conduct the work in the State of Texas

Section 9.07 Duty to Notify. During the term of this Contract and for a period of [...***...] thereafter, the RECIPIENT is under a continuing obligation to notify the INSTITUTE's executive director at the same time it is required to notify any Federal or State entity of any unexpected adverse event

or condition that materially impacts the performance or general public perception of the conduct or results of the Project and the Institute-Funded Activities, including any impact to the Scope of Work included in the Contract and events or results that have a serious adverse impact on human health, safety or welfare. By way of example only, if clinical testing of the results of the Institute-Funded Activities reveal an unexpected risk of developing serious health conditions or death, then the RECIPIENT shall, at the same time it notifies any Federal or State entity, promptly so notify the INSTITUTE's executive director even if such results are not available until after the term of this Contract. Notice required under this section shall be made as promptly as reasonably possible and shall follow the procedures set forth in Section 9.21 "Notices."

Section 9.08 Severability. If any provision of this Contract is construed to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or enforceability shall not affect any other provisions hereof. The invalid, illegal or unenforceable provision shall be deemed stricken and deleted to the same extent and effect as if never incorporated herein. All other provisions shall continue as provided in this Contract.

Section 9.09 Survival of Terms. Termination or expiration of this Contract for any reason will not release either party from any liabilities or obligations set forth in this Contract that: (1) the Parties have expressly agreed shall survive any such termination or expiration; or (2) remain to be performed or by their nature would be intended to be applicable following any such termination or expiration. Such surviving terms include, but are not limited to, Sections 2.13, 4.01, 4.02, 4.05, 4.06, 8.02, 8.06, 9.04, 9.05, 9.06, 9.07, 9.09, 9.14, 9.15, 9.16, 9.17, 9.18, and Attachment D.

Section 9.10 Binding Effect and Assignment or Modification. This Contract and all terms, provisions and obligations set forth herein shall be binding upon and shall inure to the benefit of the parties and their successors and permitted assigns, including all other state agencies and any other agencies, departments, divisions, governmental entities, public corporations or other entities which shall be successors to either of the parties or which shall succeed to or become obligated to perform or become bound by any of the covenants, agreements or obligations hereunder of either of the parties hereto. Upon a permitted assignment of this Contract by RECIPIENT, all references to "the RECIPIENT" herein shall be deemed to refer to such permitted assignee.

Section 9.11 No Waiver of Contract Terms. Neither the failure by the RECIPIENT or the INSTITUTE, in any one or more instances, to insist upon the complete and total observance or performance of any term or provision hereof, nor the failure of the RECIPIENT or the INSTITUTE to exercise any right, privilege or remedy conferred hereunder or afforded by law, shall be construed as waiving any breach of such term or provision or the right to exercise such right, privilege or remedy thereafter. In addition, no delay on the part of either the RECIPIENT or the INSTITUTE, in exercising any right or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or the exercise of any other right or remedy.

Section 9.12 No Waiver of Sovereign Immunity. No provision of this Contract is in any way intended to constitute a waiver by the INSTITUTE, the RECIPIENT (if applicable), or the State of Texas of any immunities from suit or from liability that the INSTITUTE, the RECIPIENT, or the State of Texas may have by operation of law.

Section 9.13 Force Majeure. Neither the INSTITUTE nor the RECIPIENT will be liable for any failure or delay in performing its obligations under the Contract if such failure or delay is due to any cause beyond the reasonable control of such party, including, but not limited to, unusually severe weather, strikes, natural disasters, fire, civil disturbance, epidemic, war, court order or acts of God. The existence of such causes of delay or failure will extend the period of performance in the exercise of reasonable diligence until after the causes of delay or failure have been removed. Each party must inform the other in accordance with Section 9.21 "Notices" within five (5) business days, or as soon as it is practical, of the existence of a force majeure event or otherwise waive this right as a defense.

Section 9.14 Disclaimer of Damages. IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS LIMITATION WILL APPLY REGARDLESS OF WHETHER OR NOT THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Section 9.15 Indemnification and Hold Harmless. Except as provided herein, the RECIPIENT agrees to fully indemnify and hold the INSTITUTE and the State of Texas harmless from and against any and all claims, demands, costs, expenses, liabilities, causes of action and damages of every kind and character (including reasonable attorneys fees) which may be asserted by any third party in any way related or incident to, arising out of, or in connection with (1) the RECIPIENT's negligent, intentional or wrongful performance or failure to perform under this Contract, (2) the RECIPIENT's receipt or use of Grant funds, or (3) any negligent, intentional or wrongful act or omission committed by the RECIPIENT as part of an Institute-Funded Activity or during the Project. In addition, the RECIPIENT agrees to fully indemnify and hold the INSTITUTE and the State of Texas harmless from and against any and all costs and expenses of every kind and character (including reasonable attorneys fees, costs of court and expert fees) that are incurred by the INSTITUTE or the State of Texas arising out of or related to a third party claim of the type specified in the preceding sentence. Notwithstanding the preceding, such indemnification shall not apply in the event of the sole or gross negligence of the INSTITUTE. If the RECIPIENT is a State of Texas agency or institution of higher education, then this Section 9.15 is subject to the extent authorized by the Texas Constitution and the laws of the State of Texas.

The RECIPIENT acknowledges and agrees that this indemnification shall apply to, but is not limited to, employment matters, taxes, personal injury, and negligence.

It is understood and agreed that it is not the intent of the parties to expand or increase the liability of the State of Texas under this Article. This provision is intended to prevent the RECIPIENT, the INSTITUTE and the State of Texas from attempting or appearing to assume liability it does not have the statutory or legal power to assume.

Section 9.16 Alternative Dispute Resolution. If applicable, the dispute resolution process provided for in TEX. GOVT. CODE, Ch. 2260 shall be used, as further described herein, to resolve any claim for breach of contract made against the INSTITUTE (excluding any uncured Event of Default). The submission, processing and resolution of a party's claim are governed by the published rules adopted by the Attorney General pursuant to TEX. GOVT. CODE, Ch. 2260, as currently effective, hereafter enacted or subsequently amended.

Section 9.17 Applicable Law and Venue. This Contract shall be construed and all disputes shall be considered in accordance with the laws of the State of Texas, without regard to its principles governing the conflict of laws. Provided that the RECIPIENT first complies with procedures set forth in Section 9.16 "Alternative Dispute Resolution," exclusive venue and jurisdiction for the resolution of claims arising from or related to this Contract shall be in the federal and state courts in Travis County, Texas.

Section 9.18 Attorneys' Fees. In the event of any litigation, appeal or other legal action to enforce any provision of the Contract, the RECIPIENT shall pay all expenses of such action, including attorneys' fees and costs, if the INSTITUTE is the prevailing party. If the RECIPIENT is a State of Texas agency or institution of higher education, then this Section 9.18 is subject to the extent authorized by the Texas Constitution and the laws of the State of Texas.

Section 9.19 Counterparts. This Contract may be executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall together constitute one and the same instrument.

Section 9.20 Construction of Terms. The headings used in this Contract are inserted only as a matter of convenience and for reference and shall not affect the construction or interpretation of this Contract. Where context so indicates, a word in the singular form shall include the plural, a word in the masculine form the feminine, and vice-versa. The word "including" and similar constructions (such as "includes", "included", "for example", "such as", and "e.g.") shall mean "including, without limitation" throughout this Contract. The words "and" and "or" are not intended to convey exclusivity or nonexclusivity except where expressly indicated or where the context so indicates in order to give effect to the intent of the parties.

Section 9.21 Notices. All notices, requests, demands and other communications will be in writing and will be deemed given on the date received as demonstrated by (i) a courier's receipt or registered or certified mail return receipt signed by the party to whom such notice was sent, provided that such notice was sent to the address provided in the signature block of this Contract, or (ii) a fax confirmation page showing that such fax was successfully transmitted to the fax number provided in the signature block of this Contract. Notices shall be sent to the parties at the addresses or fax numbers specified herein or as may be updated from time to time by the applicable party in a writing delivered to the other party pursuant to the terms of this Section.

IN WITNESS THEREOF, THE PARTIES HAVE SIGNED AND EXECUTED IN DUPLICATE COUNTERPARTS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell, CEO
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO
Date: 7/27/11

RECIPIENT Mailing Address:
BELLICUM PHARMACEUTICALS, INC.

6400 Fannin St., Suite 2300, Houston, TX 77030

Physical Address: (If different from above)

Phone: (713) 341-6472
Fax: (713) 335-1446

INSTITUTE

By /s/ William Gimson

Name: William "Bill" Gimson, Executive Director
Date: July 27, 2011

INSTITUTE Mailing Address:
Cancer Prevention and Research Institute of TX
Grant Compliance
P.O. Box 12097
Austin, TX 78711

INSTITUTE Physical Address:
211 E. 7th Street, Suite 300
Austin, TX 78701

Phone: (512) 463-3190

Fax: (512) 475-2563

ATTACHMENT A

Project Description Summary

The project encompasses preparation for and execution of a Phase 2 clinical trial, protocol number BP- HM-001, currently entitled "[...***...]". The Principal Investigator will be Dr. Richard Champlin, Chairman, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas M.D. Anderson Cancer Center, which will also be the primary clinical trial site. Up to [...***...] additional sites will be recruited to participate in the trial, including other sites in Texas.

Preparation activities include the following:

- [...***...]

Activities during the clinical trial include the following:

- [...***...]

Project Goals and Timelines

*****Confidential Treatment Requested**

The primary project goals are to [...***...]. The timeline is summarized by quarter as follows:

[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	
	[...***...] [...***...] [...***...]	[...***...]	[...***...]	
	[...***...] [...***...] [...***...] [...***...]	[...***...] [...***...] [...***...] [...***...]	[...***...] [...***...] [...***...] [...***...]	

The primary milestone to be achieved in Year 1, which will be the milestone for Year 2 funding, is [...***...] in the clinical trial. This milestone depends on the achievement of earlier milestones, including [...***...]. This primary milestone is expected to occur approximately [...***...].

The primary milestone to be achieved in Year 2, which will be the milestone for Year 3 funding, is [...***...]. Because [...***...].

The primary milestone to be achieved in Year 3, and for the project as a whole, is [...***...]

ATTACHMENT B

DETAILED BUDGET FORM

BUDGET CATEGORY	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
a. PERSONNEL	[...***...]	[...***...]	[...***...]			[...***...]
b. FRINGE BENEFITS	[...***...]	[...***...]	[...***...]			[...***...]
c. TRAVEL	[...***...]	[...***...]	[...***...]			[...***...]
d. EQUIPMENT	[...***...]	[...***...]	[...***...]			[...***...]
e. SUPPLIES	[...***...]	[...***...]	[...***...]			[...***...]
f. CONTRACTUAL						
Process Development	[...***...]	[...***...]	[...***...]			[...***...]
Clinical Lot Manufacturing	[...***...]	[...***...]	[...***...]			[...***...]
Data Management	[...***...]	[...***...]	[...***...]			[...***...]
Research-Related Subject C	[...***...]	[...***...]	[...***...]			[...***...]
g. OTHER	[...***...]	[...***...]	[...***...]			[...***...]
h. Total Direct Charges	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
i. Indirect Charges	[...***...]	[...***...]	[...***...]			[...***...]
Grand TOTAL	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]

Texas/Federal Vendor ID#:	12014502004000
Fiscal contact:	Thomas Farrell
Address:	6400 Fannin St., Suite 2300
Address 2:	Houston, TX 77030
Phone:	(713) 341-6472
Fax:	(713) 335-1446
Email:	tfarrell@bellicum.com

For questions regarding this form, please contact Alfonso Royal at (512) 305-8488 or oroyal@cprit.state.tx.us.

*****Confidential Treatment Requested**

ATTACHMENT C

ASSURANCES AND CERTIFICATIONS

This Attachment C is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "INSTITUTE") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given to term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control. Notwithstanding any other provision of this Attachment C, each reference to "compliance" in the foregoing certifications and assurances shall mean "compliance in all material respects" and the RECIPENT shall be deemed to be in compliance with a law, regulation or policy identified in a particular certification or assurance specified in this Attachment C if the RECIPIENT is in compliance in all materials respects with such law, regulation or policy, as applicable.

By signing this Contract, RECIPIENT certifies compliance with the following assurances and certifications required by the INSTITUTE (listed below). RECIPIENT further acknowledges that its obligations pursuant to the following assurances and certifications are ongoing.

Section C1.01 Demonstration of Matching Funds. Pursuant to TEX. HEALTH & SAFETY CODE § 102.255(d) and T.A.C. § 703.11, RECIPIENT has an amount of funds equal to one-half of the amount of the Grant to be disbursed each fiscal year of the Contract term dedicated to the same area of cancer research that is the subject of the Grant as demonstrated by the form incorporated herein to Attachment C. The RECIPIENT shall update the matching funds certification annually for each fiscal year that Grant funds are disbursed. The update must be on or before the anniversary of the Effective Date.

Section C1.02 Payment of Taxes. RECIPIENT's payment of franchise taxes is current or, if the RECIPIENT is exempt from payment of franchise taxes, that it is not subject to the State of Texas franchise tax. If franchise tax payments become delinquent during the Contract term, payments under this Contract may, upon delivery of written notice by the INSTITUTE to the RECIPIENT be withheld until the RECIPIENT's delinquent franchise tax is paid in full. The RECIPIENT also acknowledges that it is not otherwise exempt from state sales or occupancy tax as a result of this Contract.

Section C1.03 Compliance with Confidentiality Guidelines Relating to Personal and Medical Information. RECIPIENT complies with all applicable laws, rules and regulations relating to personal and medical information. Without in any way limiting the foregoing, RECIPIENT maintains and enforces, to the extent applicable to RECIPIENT, appropriate facility and information technology access rules and procedures to protect against inappropriate disclosure of patient records and all other documents containing patient personal and medical information deemed confidential by law, which are maintained in connection with the Project and Institute-Funded Activities, including provisions that comply with the requirements of the INSTITUTE's rules, 25 T.A.C. Section 703.14. Upon request from the INSTITUTE, RECIPIENT will timely furnish a copy of the RECIPIENT's facility and information technology access rules and procedures, as well as any other applicable confidentiality guidelines.

If RECIPIENT, including any Collaborators or Contractors, works directly with patients or otherwise has access to or maintains patient personal and medical information, RECIPIENT specifically addresses Health Insurance Portability and Accountability Act of 1996 regulations concerning confidentiality of personal and medical information. Any disclosure of patient confidential information in any way related to the Project (including information that may be required by reports and inspections) must be in accordance with all applicable laws.

Section C1.04 Conduct of Research or Service Provided. RECIPIENT understands that the Project must be conducted with full consideration for the ethical and medical implications of the research performed or services delivered and comply with all applicable federal and state laws regarding the conduct of the research or service.

Section C1.05 Regulatory Certificates, Licenses and Permits. All of the RECIPIENT's personnel, facilities and equipment involved or to be involved in the Project are certified, licensed, permitted, registered or approved by the appropriate regulating agency, where applicable. Any revocation, surrender, expiration, non-renewal, inactivation or suspension of any such certification, license, permit, registration or approval shall constitute grounds for Contract termination if the same is not remedied (or alternative personnel, facilities and/or equipment identified, as applicable, for use in the Project) within the applicable cure period specified in Section 8.04.

Section C1.06 Assurances and Certifications in Accordance with the NIH *Grants Policy Statement*:

(a) Civil Rights. Compliance with Title VI of the Civil Rights Act of 1964.

(b) Handicapped Individuals. Compliance with Section 504 of the Rehabilitation Act of 1973 as amended.

(c) Sex Discrimination. Compliance with Section 901 of Title IX of the Education Amendments of 1972 as amended.

(d) Age Discrimination. Compliance with the Age Discrimination Act of 1975, as amended.

(e) Patents, Licenses and Inventions. Compliance with the Standard Patent Rights clauses as specified in 37 CFR, Part 401 or 35 U.S.C. 203, if appropriate and applicable, in a manner that adequately protects the INSTITUTE'S rights in the Project Results.

(f) Human Subjects. Compliance with the requirements of federal policy concerning the safeguarding of the rights and welfare of human subjects who are involved in activities supported by federal funds. Before any funding may be utilized for any portion of the Project involving human subjects, RECIPIENT must receive approval from RECIPIENT's Institutional Review Board (IRB). Upon request, a copy of RECIPIENT's IRB approval must be provided to the INSTITUTE.

(g) Human Biological/Anatomical Material. Compliance with the recommendations of the NIH Office of Human Subject Research Medical Administrative Series (MAS) #MO1-2 entitled "Procurement and Use of Human Biological Materials for Research," and any other applicable federal or state requirements pertaining to the procurement and use of human biological material for research.

(h) Use of Animals. Compliance with applicable portions of the Animal Welfare Act (PL 89-544 as amended) and appropriate Public Health Service Policy on Humane Care and Use of Laboratory Animals regulations. Before any funding may be utilized for any portion of the Project involving animal subjects, RECIPIENT must receive approval from RECIPIENT's Institutional Animal Care and Use Committee (IACUC). Upon request, a copy of RECIPIENT's IACUC approval must be provided to the INSTITUTE.

(i) Debarment and Suspension. RECIPIENT certifies that neither it nor the Principal Investigator/Project Director or any other Recipient Personnel or personnel of any Collaborator or Contractor assigned to work on the Project are debarred, suspended, proposed for debarment, declared ineligible or otherwise excluded from participation in the Project by any federal or state department or agency.

(j) Non-Delinquency on Federal or State Debt. RECIPIENT certifies that neither it, nor, to its knowledge, any person to be paid from funds under this Contract, is delinquent in repaying any Federal debt as defined by OMB Circular A-129 or any debt to the State of Texas.

(k) Eligibility to Receive Payments on State Contracts. RECIPIENT certifies that it and, to its knowledge, the Principal Investigator/Project Director are not ineligible to receive the Grant award under this Contract pursuant to Tex. Fam. Code Ann. Section 231.006 and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate.

(l) Drug-Free Workplace. Compliance with the Drug-Free Workplace Act of 1988 (45 CFR 82).

(m) Misconduct in Science. Compliance with 42 CFR Part 50, Subpart A, and Final Rule as published at 54 CFR 32446, August 8, 1989.

(n) Objectivity of Research/Conflict of Interest. Compliance with the NIH requirement to maintain a written standard of conduct and comply with 42 CFR Part 50, Subpart F, Responsibility of Applicants for Promoting Objectivity in Research. RECIPIENT must notify the INSTITUTE of any conflicting financial interests pertaining to the performance of the Project and assure that such conflict of interest has been appropriately managed, reduced or eliminated.

(o) Trafficking in Persons. Compliance with the NIH regulations on trafficking in persons as published at http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-055.html.

(p) Criminal Misconduct. RECIPIENT shall promptly report to the INSTITUTE issues involving potential civil or criminal fraud related in any way to the Project, the Institute-Funded Activity or this Contract, such as false claims or misappropriation of federal or state funds.

ATTACHMENT C

CPRIT Matching Requirement Certification Form

FOR: Entity/Institution Name: Bellicum Pharmaceuticals, Inc.

Project Number(s): RP110508

	Award Year #1			Award Year #2			Award Year #3			Award Year #4			Award Year #5		
For purposes of the certification use the following research categories to classify encumbered funds that are dedicated to cancer research:	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended
(1) Cancer biology and genetics, including oncogenesis and collection and characterization of tumors (genomics, proteomics, other "omics");															
(2) Cancer immunology, including vaccines;															
(3) Cancer imaging and diagnostics;															
(4) Cancer epidemiology and outcomes research; and															
(5) Cancer treatment, including drug discovery and development and clinical trials.	$2,779,167.00	$1,400,000.00													
Total	$2,779,167.00	$1,400,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total non-state funds leveraged as a match for award.		$1,400,000.00						$			$			$	

The information above is the entity/institution's demonstration of encumbered available funds pursuant to its certification in Attachment C

This certification is on an annual basis and can be made on an entity/institutional level or project by project. The entity/institutional level requires the match to reflect all research grant awards received by the entity/institution, including any FY2010 CPRIT research awards.

To clarify, encumbered funds may include but are not necessarily limited to: (1) Federal funds (including American Recovery and Reinvestment Act of 2009 funds, and the fair market value of drug development support provided to the recipient by the National Cancer Institute (NCI) or other similar programs); (2) State of Texas funds (Non-CPRIT); (3) Other States' funds; (4) Non-governmental funds (including private funds, foundation grants, gifts and donations); and (5) Unrecovered indirect costs not to exceed 10 percent of the grant award amount, subject to the following conditions: (A) These costs are not otherwise charged against the grant as the five percent indirect funds (B) The Institution or recipient must have a documented federal indirect cost rate or an indirect cost rate certified by an independent accounting firm; and (C) The allowance for unrecovered indirect costs must be specifically approved by the Executive Director.

The following items do not qualify as encumbered funds:

(1) In-kind costs; (2) Volunteer services furnished to the grant recipient; (3) Noncash contributions; (4) Income earned not available at the time of award; (5) Pre-existing real estate including building, facilities and land; (6) Deferred giving such as a charitable remainder annuity trust, a charitable remainder unitrust, or a pooled income fund; or (7) Other items as may be determined by the Oversight Committee.

For questions regarding this form, please contact Alfonso Royal at (512) 305-8488 or by email at aroyal@cprit.state.tx.us

ATTACHMENT D

INTELLECTUAL PROPERTY AND REVENUE SHARING

This Attachment D is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "**INSTITUTE**") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given the term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control.

PART 1
OWNERSHIP AND INTELLECTUAL PROPERTY PROTECTION

Section D1.01 Ownership of Project Results. RECIPIENT and its Collaborators shall retain ownership of the Institute-Funded Technology and the Institute-Funded IPR, subject to the terms of the Contract.

Section D1.02 Transfer or Assignment of Rights to a Third Party. RECIPIENT shall notify the INSTITUTE of any proposed transfer or assignment of rights in any Institute-Funded IPR to a third party. RECIPIENT shall ensure that, in any assignment or transfer of Institute-Funded IPR, the transferee or assignee agrees in writing to (i) recognize that the Institute-Funded IPR is transferred or assigned subject to the licenses, interests and other rights in such Institute-Funded IPR provided to the INSTITUTE in the Contract and any applicable law or regulation, and (ii) take all actions necessary to protect all such licenses, interests and other rights.

Section D1.03 Protection of Institute-Funded IPR. Subject to Section D5.01RECIPIENT shall use commercially reasonable efforts to appropriately protect the Institute-Funded IPR, including without limitation, diligently seeking registration of patents and copyrights covering the Institute-Funded Technology, as appropriate. If RECIPIENT elects to abandon Institute-Funded IPR (including any partial abandonment of Institute-Funded IPR in specific territories), RECIPIENT shall provide the INSTITUTE with prior written notice of such election, with sufficient time (but no less than 30 days) for the INSTITUTE to exercise its rights in Section D5.01 in relation to the subject Institute-Funded IPR.

Section D1.04 Cost of Protection. The INSTITUTE shall not be responsible for, and no Grant funds may be used to pay for, any costs or expenses associated with RECIPIENT's efforts to protect the Institute-Funded IPR.

Section D1.05 Inventions.

(a) **Disclosures.** RECIPIENT shall notify INSTITUTE of each Institute-Funded Invention by delivering a copy of the invention disclosure form (or similar document) within [...***...] after RECIPIENT receives the form from its Inventor. In the event that the invention disclosure form is revised or updated, RECIPIENT shall provide the INSTITUTE with the revised/updated invention disclosure form as part of the RECIPIENT's annual written report.

(b) **Patent Prosecution and Maintenance**. For all Institute-Funded Inventions for which patent protection is pursued, RECIPIENT shall provide an annual written report to the INSTITUTE regarding the status of pending applications and issued patents .

Section D1.06 Required Agreements with Recipient Personnel and Contractors. The RECIPIENT shall have, maintain and enforce written policies or agreements applicable to Recipient Personnel and

Contractors with terms sufficient to enable RECIPIENT to fully comply with all terms and conditions of this Contract. RECIPIENT shall promptly report to INSTITUTE any material breach of such policies or agreements relating to or affecting any of the material provisions of this Contract.

Section D1.07 Agreements with Collaborators. All agreements between RECIPIENT and a Collaborator relating to or affecting joint ownership of any Project Result shall recognize the licenses, interests and other rights provided to the INSTITUTE in the Contract. RECIPIENT shall provide to the INSTITUTE a copy of each such agreement affecting joint ownership of any Project Result.

PART 2
NON-COMMERCIAL LICENSES

Section D2.01 RECIPIENT License. In granting an Exclusive License to any Project Result, RECIPIENT shall retain the right to Exploit all Project Results (including material embodiments thereof) for education, research and other non-commercial purposes, and the right to grant the licenses pursuant to Section D2.02 below.

Section D2.02 INSTITUTE License. RECIPIENT agrees to grant, and does hereby grant, to the INSTITUTE a non-exclusive, irrevocable, royalty-free, perpetual, worldwide license under the Institute-Funded IPR to Exploit all Project Results (including material embodiments thereof) for or on behalf of the INSTITUTE and other governmental entities and agencies of the State of Texas for education, research and other non-commercial purposes only. RECIPIENT shall make the Institute-Funded Technology available by reasonable means to the INSTITUTE in order for the INSTITUTE to exercise its rights under this Section. The INSTITUTE may not transfer or sublicense the licenses granted under this Section, except to the State of Texas or other Texas agency.

Section D2.03 No Implied Licenses. No implied licenses are granted under this Agreement including any license to any Intellectual Property Rights owned or controlled by RECIPIENT outside of the Institute-Funded IPR. Nothing in this Agreement shall be construed to impose an obligation on RECIPIENT to license or otherwise make available any of its Intellectual Property Rights or other resources owned or controlled by it except as expressly provided in this Agreement with respect any Institute Funded IPR.

PART 3
COMMERCIALIZATION OF PROJECT RESULTS

Section D3.01 Commercialization Strategy. RECIPIENT shall be under a continuing obligation throughout the term of this Contract to enhance and improve the commercial development plan submitted with the Application and to provide an annual written report to the INSTITUTE regarding the RECIPIENT's efforts to commercialize or otherwise bring to practical application Project Results. The INSTITUTE may, at its option and at any time, provide RECIPIENT with comments regarding the RECIPIENT's commercial development plan and strategy, in which case RECIPIENT shall consider in good faith and use reasonable efforts to account for and incorporate the INSTITUTE's input into such commercial development plan and strategy.

Section D3.02 Commercialization Efforts. The RECIPIENT shall, whether through its own efforts or the efforts of a licensee under a License Agreement allowed by the terms of this Attachment, use diligent and commercially reasonable efforts to commercialize or otherwise bring to practical application the Project Results in accordance with the commercial development plan described in Section D3.01.

Section D3.03 Licensing of Project Results. Each License Agreement entered into by the RECIPIENT shall include an acknowledgement by the licensee that (i) such License Agreement is subject to the INSTITUTE's licenses, interests and other rights under this Contract, and (ii) to the extent that there is a conflict between the terms of the License Agreement and the terms of this Contract, the terms of this

Contract shall prevail. In addition, all License Agreements shall include terms obligating the licensee to report to the RECIPIENT such information as is required for the RECIPIENT to fully comply with the terms of the Contract, including without limitation the reporting obligations set forth in Attachment E, and to allow RECIPIENT to make the grants specified in Sections D2.02. The RECIPIENT shall monitor the performance of its licensees and such licensees' compliance with the terms of the License Agreements and shall take commercially reasonable actions to enforce the terms of all License Agreements. The RECIPIENT shall promptly report to the INSTITUTE any material breach of a License Agreement relating to or affecting any of the material provisions of this Contract.

Section D3.04 Cost of Licensing Activities. The INSTITUTE shall not be responsible for, and no Grant funds may be used to pay for, any costs or expenses associated with the RECIPIENT's Licensing Activities.

Section D3.05 Survival. The licenses, rights and obligations set forth in this Attachment D shall survive any termination of this Contract, including any termination for convenience by RECIPIENT, except in the event that RECIPIENT pays the Buyout Amount as set forth in Part 4, in which case the licenses, rights and obligations set forth in this Attachment D shall automatically terminate.

Section D3.06 Recipient Opt-Out. RECIPIENT may, after diligently attempting to comply with the terms of Section D3.02, notify the INSTITUTE in writing that it is electing to cease its efforts, either directly or through a licensee, to commercialize or otherwise bring to practical application any particular Project Results. Such written notice must identify the applicable Project Results, provide a reasonable explanation of the reasons for RECIPIENT's election, including any feasibility studies, trial results, regulatory impediments, financial analyses or similar assessments, and must identify any deadlines in relation to the applicable Project Results that then exist. Upon receipt of such notice, the INSTITUTE shall have the option, but not the obligation, to exercise its rights in Section 5.01 in relation to the subject Project Results at the INSTITUTE's expense. The INSTITUTE shall notify the RECIPIENT in writing within thirty (30) days of its receipt of the RECIPIENT's notice if the INSTITUTE elects to exercise its rights in relation to the subject Project Results. In the event that the INSTITUTE exercises its option under this section, the RECIPIENT shall fully cooperate with the INSTITUTE's efforts, in commercializing or otherwise bringing to practical application the applicable Project Results.

PART 4
REVENUE SHARING

Section D4.01 Revenue Sharing; Buyout.

(a) RECIPIENT shall pay to INSTITUTE royalties as follows:

(i) [...***...]% of all Revenues until the aggregate amount of royalties paid to INSTITUTE pursuant to this Section D4.01(a)(i) equals [...***...]% of Net Grant Award Proceeds; and

(ii) [...***...] % of all Revenues thereafter.

(b) Notwithstanding anything to the contrary in this Section D4.01, upon RECIPIENT's written notice of the Buyout Notice Trigger Event to INSTITUTE at any time after the Termination Date (the "**Buyout Notice**"), RECIPIENT may, in lieu of paying any additional royalties to INSTITUTE pursuant to Section D4.01(a), pay to INSTITUTE the dollar amount set forth in the following table opposite the applicable period in which such Buyout Notice is delivered (the applicable dollar amount being referred to as the "**Buyout Amount**"):

Period in Which Buyout Notice is Delivered	Buyout Amount
On or prior to the fifth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.
After the fifth anniversary of the Termination Date but on or prior to the tenth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.
After the tenth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.

After satisfaction of its obligations under this Section D4.01(b), RECIPIENT shall have no further obligation under this Section D4.01.

(d) "**Net Grant Award Proceeds**" means the aggregate amount of Grant award proceeds advanced to RECIPIENT, net of any Grant award proceeds repaid by RECIPIENT to INSTITUTE, including, without limitation, pursuant to Section 4.07 of the Contract.

Section D4.02 Adjustments. If any funding sources other than the INSTITUTE (but excluding RECIPIENT) contribute funds, directly or indirectly, to the research yielding any particular Project Result(s) and such funding sources are legally or contractually entitled to receive royalty based compensation with respect to such Project Result(s) (hereinafter a "**Participating Funding Source**"), then the royalty percentages in Section D4.01(a) in effect at any time shall be reduced in proportion to the aggregate amount of funds provided by the INSTITUTE under this Contract in comparison to the aggregate amount of funds provided by all Participating Funding Sources that contributed to the Project Result and by the INSTITUTE. For the sake of clarity, Participating Funding Sources do not include equity or quasi-equity financing funding sources or debt arrangements. In calculating such reduced rate, funds from Participating Funding Sources used for Indirect Costs or for any costs of product development, manufacturing, marketing, sales, regulatory approval or similar commercialization activities shall not be included. In addition, for clarity, the rate shall not be reduced as a result of any funds received from funding sources where such funding sources are not legally or contractually entitled to receive a share of the Revenue with respect to such Project Result(s).

Section D4.03 Statements and Timing of Payments. All payments owed pursuant to this Part 4 shall be made to the Cancer Prevention and Research Institute of Texas, and are payable on or before the thirtieth day following the end of the calendar quarter in which RECIPIENT receives the Revenue or, in the case of Section D4.04, receives the monetary recovery. For each payment specified in Section D4.01, the payment shall be accompanied by a statement specifying: (i) the Grant to which the payment relates, (ii) the identities of and amounts funded by all Participating Funding Sources, (iii) the License

Agreements to which the payment relates, (iv) the quantity of all Sales of each Commercial Product and Commercial Service since the last payment, if Sales are applicable to the current payment, (v) the gross consideration from all such License Agreements and Sales, if Sales are applicable to the current payment, and (vi) the amount of the payment to the Cancer Prevention and Research Institute of Texas.

Section D4.04 Recoveries in Enforcement Actions. In the event that RECIPIENT receives any monetary recovery from its enforcement of Institute-Funded IPR against infringement by a third party, then it shall pay to the State of Texas a share of such monetary recovery, including any punitive damages, less the documented fees and expenses that are directly associated with such enforcement and are paid by RECIPIENT to third parties, at the same rate and in the same manner as it shares Revenue pursuant to Section D4.01 (including any adjustments allowed by Section D4.02). For clarity, if the enforcement action is resolved by way of the execution of a License Agreement with the infringing third party, such License Agreement is consistent with the Section D4.01, then this Section D4.04 is not intended to apply to such License Agreement or the consideration specified therein.

Section D4.05 Revenue-Related Records. In addition to satisfying the requirements of Article IV of the Contract and Section E1.03 of Attachment E, the RECIPIENT shall keep complete and accurate Revenue-related Records until the fourth anniversary of the date of the payment of the last royalty payment owed hereunder, in sufficient detail to permit the INSTITUTE to confirm the accuracy of the statements delivered to the INSTITUTE under Section D4.03 and the calculation of the royalties owed hereunder.

Section D4.06 Audit of Revenue-Related Records. Upon at least [...***...] advance written notice, the RECIPIENT shall permit the INSTITUTE or its representatives or agents, at the INSTITUTE's expense, to examine the Revenue-related Records of the RECIPIENT pursuant to Section D4.05 at least once per calendar year during regular business hours for the purpose of and to the extent necessary to verify the RECIPIENT's compliance with this Part 4. The rights of the INSTITUTE under this Section D4.06 shall terminate on the fourth anniversary of the date of the payment of the last royalty payment owed hereunder. In the event that any such examination reveals an underpayment to the INSTITUTE of greater than [...***...] percent ([...***...]%) of the amounts previously paid by the RECIPIENT to the INSTITUTE, then the RECIPIENT shall reimburse the INSTITUTE for the cost of such examination.

PART 5
OPT-OUT AND DEFAULT

Section D5.01 RECIPIENT Opt-Out. Upon receipt of RECIPIENT's notice of its election (i) under Section D1.03 to abandon any Institute-Funded IPR or (ii) under Section 3.06 to cease its efforts to commercialize or otherwise bring to practical application any particular Project Results, the INSTITUTE shall have the option, but not the obligation, to pursue protection of the applicable Institute-Funded IPR, including directing the filing, prosecution and maintenance of patents covering the applicable Institute-Funded Inventions and/or to commercialize or otherwise bring to practical application the applicable Project Results, at its own cost, either directly or through one or more licensees. If the INSTITUTE elects to exercise such option, it shall notify RECIPIENT in writing within thirty (30) days of its receipt of RECIPIENT's notice and RECIPIENT shall thereafter comply with the terms of Section D5.03.

Section D5.02 RECIPIENT Default. In the event that the INSTITUTE notifies RECIPIENT in writing of RECIPIENT's failure to materially comply with its obligations under Sections D1.03 or D3.02 with respect to any particular Project Results, and RECIPIENT fails to cure such failure within thirty (30) days of such notice, then the INSTITUTE shall have the option, but not the obligation, to direct the filing, prosecution and maintenance of patents covering the applicable Institute-Funded Inventions and/or to commercialize or otherwise bring to practical application the applicable Project Results, at its own cost, either directly or through one or more licensees. If the INSTITUTE elects to exercise such option, it shall notify the RECIPIENT in writing of such election and RECIPIENT shall thereafter comply with the terms of Section D5.03.

Section D5.03 RECIPIENT Cooperation upon Opt-Out or Default. In the event that the INSTITUTE exercises its option under Section D5.01 or D5.02, the RECIPIENT shall:

(1) transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE or the INSTITUTE's designee, to the maximum extent allowed by law, including where relevant and necessary to facilitate the foregoing transfer, requesting and diligently attempting to obtain any approvals required by law or otherwise in relation to such transfer;

(2) to the extent that RECIPIENT is unable to transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE as specified in item (1), and subject to any existing third party rights, RECIPIENT hereby grants to the INSTITUTE an exclusive, royalty-free, perpetual, fully transferable license under the applicable Institute-Funded IPR to Exploit the Project Results for the development, manufacture and sale of Commercial Products and Commercial Services and for all other purposes reasonably related thereto, provided that the INSTITUTE may exercise the foregoing license rights only after exercising its option under Section D5.01 or D5.02;

(3) fully cooperate with the INSTITUTE's efforts, and at the INSTITUTE's cost, in protecting applicable Institute-Funded Inventions and in commercializing or otherwise bringing to practical application the applicable Project Results, including making relevant Recipient Personnel (to the extent still then-employed by RECIPIENT), Contractors, Collaborators, records, papers, information, samples, specimens and other materials related to the applicable Institute-Funded Technology reasonably available for such purposes and executing any documents and taking any further action necessary to fully effectuate the intent of this Section; and

(4) not take any action that would materially impede the INSTITUTE's ability to protect the applicable Institute-Funded Inventions.

If the INSTITUTE exercises its option under Sections D5.01 or D5.02, RECIPIENT shall have no further claim or interest in or to the applicable Project Results (except as set forth in Part 2 of this Attachment, if applicable) and shall not be entitled to any share of Revenue or any other compensation with respect to such Project Results, except to the minimum extent required by law, if any. To the extent that the INSTITUTE has exercised its option under Section D5.01 or D5.02 and RECIPIENT is unable to transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE as specified in item (1), then the INSTITUTE's license set forth in item (2) includes the right, but not the obligation, for the INSTITUTE at its cost to: (i) direct the filing, prosecution and maintenance of patents covering the applicable Project Results, and (ii) enforce all applicable Institute-Funded IPR relevant to the Project Results against any infringement by a third party. Subject to the statutory duties of the Texas Attorney General, if any, RECIPIENT shall cooperate fully with the INSTITUTE in any action brought by the INSTITUTE to enforce the Intellectual Property Rights in the applicable Project Results, at the INSTITUTE's cost, including without limitation, joining the enforcement action in name as a party plaintiff after all required approvals are obtained; provided that the INSTITUTE or its designee shall have full control over such enforcement action and shall receive and retain all monetary recoveries resulting from such enforcement actions, including any punitive damages.

PART 6
DEFINITIONS

The following terms shall have the following meaning throughout this Attachment. Other terms may be defined elsewhere in this Attachment.

(1) **Authorized Seller –** RECIPIENT, its Collaborators, or their licensees or any other party authorized by RECIPIENT, its Collaborators or their licensees to make a Sale on their behalf.

(2) **Buyout Trigger Event** – the acquisition, by an independent third party ("the Party"), of substantially all of the assets of RECIPIENT and the Party notifies the RECIPIENT it desires to buy out the Royalty defined by this Contract.

(3) **Commercial Product** – anything that incorporates, is based on, utilizes or is developed from Project Results and is created by human or mechanical effort or by a natural process and that is capable of being sold, licensed, transferred or conveyed to another party or is capable of otherwise being Exploited or disposed of, whether in exchange for consideration or not, including without limitation any drug, chemical or biological compound, gene, nucleic acid or nucleic acid sequence, gene therapy, plant, machine, mechanical device, hardware, tool or computer program.

(4) **Commercial Service** – any service performed that incorporates, is based on, utilizes or is developed from Project Results. For clarity, Commercial Service does not include research and development performed by RECIPIENT or its Collaborators.

(5) **Exclusive License** – a License Agreement under which the specific rights granted to the licensee with respect to the Project Results, including without limitation scope of use and territorial rights, are granted on an exclusive basis.

(6) **Exploit** – make, have made, use, sell, offer to sell, import, export or otherwise dispose of, practice, copy, distribute, create derivative works of, publicly perform or publicly display.

(7) **Institute-Funded IPR** – any and all Intellectual Property Rights in and to Institute-Funded Technology. In no event shall Institute-Funded IPR include any intellectual property rights and/or technology in existence and owned/controlled by the RECIPIENT prior to the receipt of funds from the INSTITUTE, the listing of such IPR and/or technology in existence and owned/controlled by the RECIPIENT prior to the receipt of funds from the INSTITUTE is attached herein.

(8) **Institute-Funded Invention** – an Invention conceived or first reduced to practice by RECIPIENT, Recipient Personnel and/or Collaborator(s) in the performance of Institute-Funded Activity.

(9) **Institute-Funded Technology** – any and all of the following resulting or arising from Institute-Funded Activity during the Contract term: (a) proprietary and confidential information, including but not limited to data, trade secrets and know-how; (b) databases, compilations and collections of data; (c) tools, methods and processes; and (d) works of authorship, excluding all scholarly works, but including, without limitation, computer programs, source code and executable code, whether embodied in software, firmware or otherwise, documentation, files, records, data and mask works; and all instantiations of the foregoing in any form and embodied in any form, including but not limited to therapeutics, drugs, drug delivery systems, drug formulations, devices, diagnostics, biomarkers, reagents and research tools. Institute-Funded Technology includes Institute-Funded Inventions. In no event shall Institute-Funded Technology include items that were conceived of, in existence, or owned/controlled by RECIPIENT prior to receipt of funds from the INSTITUTE (a) proprietary and confidential information, including but not limited to data, trade secrets and know-how; (b) databases, compilations and collections of data; (c) tools, methods and processes; and (d) works of authorship, excluding all scholarly works, but including, without limitation, computer programs, source code and executable code, whether embodied in software, firmware or otherwise, documentation, files, records, data and mask works; and all instantiations of the foregoing in any form and embodied in any form, including but not limited to therapeutics, drugs, drug delivery systems, drug formulations, devices, diagnostics, biomarkers, reagents and research tools,.

(10) **Intellectual Property Rights** – any and all of the following and all rights in, arising out of, or associated therewith: (a) all United States and foreign patents and utility models and applications therefor, and all reissues, divisions, renewals, extensions, provisionals, and continuations and continuations-in part thereof, and equivalent or similar rights anywhere in the world in inventions and discoveries; (b) all trade secrets and rights in know-how and proprietary information; (c) all copyrights, copyright registrations and applications therefor, and all other rights corresponding thereto throughout the world; (d) all mask works, mask work registrations and applications therefor, and any equivalent or similar rights in semiconductor masks, layouts, architectures or topology; and (e) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world.

(11) **Invention** – a method, device, process or discovery that is conceived and/or reduced to practice, whether patentable or not.

(12) **License Agreement** – an agreement by which an owner of a Project Result grants any right to Exploit such Project Result to another party in exchange for consideration.

(13) **Licensing Activities** – the efforts of RECIPIENT or its Collaborator to negotiate, execute or enforce a License Agreement.

(14) **Necessary Additional IPR** – any unencumbered Intellectual Property Rights (a) owned by RECIPIENT, and (b) identified by the Institute and agreed to in writing by Recipient, that are not Project Results but are necessary to Exploit the Project Results for the specific purposes set forth in the applicable Section of this Attachment D.

(15) **Non-Exclusive License** – a License Agreement under which the rights granted to the licensee with respect to the Project Results are granted on a non-exclusive basis.

(16) **Project Results** – any and all Institute-Funded Technology and Institute-Funded IPR.

(17) **Revenue** – the gross consideration, whether cash or non-cash (e.g., securities, direct equity interest, indirect equity interest, etc.), received from Sales and License Agreements related to Project Results (including without limitation, any milestone fees, license fees, sublicense fees, assignment fees, product royalties and similar fees and royalties), net of (a) trade or quantity discounts or rebates, credits, allowances or refunds given for rejected or returned Commercial Products or Commercial Services, (b) any sales, value-added or other tax or governmental charge levied on the sale, transportation or delivery of a Commercial Product or Commercial Service (but excluding any income tax owed by the RECIPIENT), and (c) any separately stated charges for freight, postage, shipping and insurance.

(18) **Sale** – means any sale, lease, transfer, conveyance or other exploitation or disposition of a Commercial Product or Commercial Service for which consideration is received by an Authorized Seller.

ATTACHMENT E

REPORTING REQUIREMENTS

This Attachment E is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "**INSTITUTE**") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given to term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control.

INSTITUTE and RECIPIENT agree as follows:

ANNUAL REPORTING

Section E1.01 Annual Reports. The RECIPIENT shall submit reports annually to the INSTITUTE within 60 days of the anniversary of the Effective Date of this Contract or at such other time as may be specified herein. The reports shall be submitted by the means and in the form(s) required by the INSTITUTE and shall be signed by the Principal Investigator/Program Director and the RECIPIENT's Authorized Signing Official. To the extent possible, the reports shall only include information that may be shared publicly. However, if it is necessary to submit information in the reports that the RECIPIENT considers confidential in order to fully comply with the terms of this Contract, then the RECIPIENT shall use reasonable efforts to mark such information as "confidential" and shall, to the extent practicable, to segregate such information within the reports to facilitate its redaction should redaction ever be necessary or appropriate.

Section E1.02 Contents of Reports. Each report shall contain a signed verification (electronic signature is acceptable) of RECIPIENT's compliance with each of its obligations as set forth in the Contract and shall include the following for the period covered by such report, as may then be applicable:

(a) Project Data. During the term of the Contract, RECIPIENT shall include in its annual report each of the following (except that the final annual report due under this part (a) shall be due within ninety (90) days after the end of the term of the Contract):

(1) A brief statement of the progress made to under the Scope of Work, including the progress to achieve the Project Goals and Timelines set forth in Attachment A.

(2) A brief statement of the Project Goals for the twelve months following submission of the report.

(3) New jobs created in the preceding twelve month period as a result of the Grant funds awarded to RECIPIENT.

(4) An inventory of the Equipment purchased for the Project using Grant funds.

(5) A HUB report in accordance with Section 3.08 "Historically Underutilized Businesses" of the Contract.

(b) Commercialization Data. During the term of the Contract and continuing thereafter for so long as RECIPIENT has ongoing obligations to the INSTITUTE with respect to protection, development, commercialization and licensing of Project Results pursuant to Attachment D, RECIPIENT shall provide information about commercialization activities in a format specified by the INSTITUTE.

c) Revenue Sharing Data. During the term of the Contract and continuing thereafter for so long as RECIPIENT has ongoing obligations to the INSTITUTE with respect to revenue sharing pursuant to Attachment D:

(1) A statement of the identities of the funding sources, amounts and dates of funding for all funding sources for the Project.

(3) A brief statement of the RECIPIENT's efforts to secure additional funds to support the Project.

(4) All financial information necessary to verify the calculation of the revenue sharing amounts specified in Attachment D.

(d) Additional Data. In addition to the foregoing, RECIPIENT shall use commercially reasonable efforts to also promptly report any other information required by this Contract or otherwise reasonably requested by the INSTITUTE, the Legislature, or any other funding or regulatory bodies covering the RECIPIENT's activities under this Contract.

Section E1.03 Record Keeping and Audits. The provisions of Article IV of the Contract shall apply fully to all information reported to the INSTITUTE pursuant to this Attachment, except that the right of the State of Texas to audit and the RECIPIENT's obligation to maintain Records shall continue until four years after the date of each such report made by RECIPIENT hereunder.

Section E1.04 Confidentiality of Documents and Information. The provisions of Section 2.13 "Confidentiality of Documents and Information" of the Contract shall apply fully to all Confidential Information reported, delivered or submitted to the INSTITUTE pursuant to this Attachment E.

By their signatures below, parties hereby agree that the effective date of this contract as reflected in Section 2.03 is changed to July 1, 2011and the end date is June 30, 2013.

Further, in accordance with Section 2.03, this amendment serves as specific authorization for RECIPIENT to expend grant funds prior to the effective date of the contract, so long as the expenses are not incurred prior to June 1, 2011.

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO
Date: August 25, 2011

INSTITUTE

/s/ William Gimson
(Signature of Person Authorized to Sign Contracts)
Name: William “Bill” Gimson, Executive Director
Date: June 22, 2011

ATTACHMENT F-2

As indicated by the signatures below, the INSTITUTE and the RECIPIENT agree to the following amendments to the CPRIT Contract:

Section 4.03 Inspections.

The first sentence of Section 4.03 is hereby amended to read in its entirety as follows:

"In addition to the audit rights specified in Section 4.02 'Audits', during the term of this Contract, the INSTITUTE shall have the right to conduct periodic onsite inspections within normal working hours and on a day and a time mutually agreed to by the parties, to evaluate the Institute-Funded Activity."

Section 4.07 Repayment of Grant Proceeds for Relocation Outside of Texas.

Section 4.07 is amended by adding the following sentence to the end of the Section:

"The RECIPIENT shall repay the INSTITUTE all Grant proceeds disbursed to RECIPIENT and a preferred return of [...***...]% of the amount disbursed in the event that RECIPIENT relocates its principal place of business outside of the State during the Contract term or within 3 years after the final payment of the Grant funds is made by the INSTITUTE. Upon repayment to the INSTITUTE of all Grant funds disbursed to RECIPIENT and the preferred return of [...***...]% of the amount disbursed, the Contract shall terminate and RECIPIENT shall have no further obligations to the INSTITUTE hereunder."

AMENDMENTS TO ATTACHMENT D

Section D2.02 INSTITUTE License.

Section D2.02 of Attachment D is here by amended by adding the following sentence to the end of the section:

"All other rights are reserved by RECIPIENT."

Section D3.01 Commercialization Strategy.

Section D3.01 of Attachment D is hereby amended by deleting the period in the last sentence and inserting the following language after the word "strategy":

", that RECIPIENT, in its sole business judgment, decides to incorporate."

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT	**INSTITUTE**
By /s/ Thomas J. Farrell	/s/ William Gimson
(Signature of Person Authorized to Sign Contracts)	(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO	Name: William "Bill" Gimson, Executive Director
Date: August 31, 2011	Date: August 31, 2011

*****Confidential Treatment Requested**

As indicated by the signatures below, the INSTITUTE and the RECIPIENT agree to the following amendments to the CPRIT Contract:

AMENDMENT TO SECTION 2.03

The end date indicated in Section 2.03 of the CPRIT Contract is hereby changed to June 30, 2014.

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT	**INSTITUTE**
By /s/ Thomas J. Farrell	/s/ William Gimson
(Signature of Person Authorized to Sign Contracts)	(Signature of Person Authorized to Sign Contracts)
Name: /s/ Thomas J. Farrell	Name: William “Bill” Gimson, Executive Director
Date: October 28, 2011	Date: October 24, 2011

CANCER PREVENTION AND RESEARCH INSTITUTE OF TEXAS
REQUEST FOR ADVANCEMENT OF GRANT AWARD

ENTITY:	Bellicum Pharmaceuticals, Inc.
ADDRESS:	6400 Fannin St, Suite 2300, Houston, TX 77030
PI:	Kevin M. Slawin, M.D.
CPRIT GRANT NUMBER:	RP110508

BUDGET CATEGORIES	CURRENT YEAR APPROVED BUDGET	ADVANCE AMOUNT REQUESTED	Percentage of Funds Advanced
PERSONNEL	[...***...]	[...***...]	
FRINGE BENEFITS	[...***...]	[...***...]	
TRAVEL	[...***...]	[...***...]	
EQUIPMENT	[...***...]	[...***...]	
SUPPLIES	[...***...]	[...***...]	
CONTRACTUAL	[...***...]	[...***...]	
OTHER	[...***...]	[...***...]	
TOTAL	[...***...]	[...***...]	100.00%

Justification for Advancement of Grant Award Funds

funds required to achieve first major project milestone

Acknowledgement, I understand that the advancement of grant funds does not preclude the fiscal requirements (timely submission of financial reports, allowable expenditures, indirect cost less then five percent, etc.) of the grant award.

Signature of Authorized Certifying Official:	Telephone Number	Date
/s/ Thomas J. Farrell	713-341-6472	8/29/2011

Typed or Printed Name and Title of Certifying Official:

Thomas J. Farrell, CEO

*****Confidential Treatment Requested**

Exhibit 10.20

NOTICE OF EXPANSION OF LICENSED FIELD TO OBTAIN ADDITIONAL EXCLUSIVE RIGHTS

This Notice of Expansion of Licensed Field to Obtain Additional Exclusive Rights ("Notice") is delivered pursuant to Section 2.1.2(a) of the Amended and Restated License Agreement, dated March 7, 2011 ("Agreement") by and between Bellicum Pharmaceuticals, Inc. (the "Company") and ARIAD Pharmaceuticals, Inc. All capitalized terms not otherwise defined herein shall have the meanings as set forth in the Agreement.

The closing date of the Qualified Financing was March 7th, 2012.

All cancer indications (other than prostate cancer) are to be included in the Additional Indications to the Licensed Field.

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President & Chief Executive Officer

Address: 6400 Fannin Street, Suite 2300
Houston, TX 77030

Exhibit 10.21

THIS NOTE IS SUBJECT TO THE TERMS OF THE SUBORDINATION AGREEMENT DATED OCTOBER 3, 2014 BETWEEN COMERICA BANK AND HOLDER.

$35,000,000.00 October 3, 2014

PROMISSORY NOTE

FOR VALUE RECEIVED, and subject to the terms and conditions set forth herein, Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "**Borrower**"), hereby unconditionally promises to pay to the order of ARIAD Pharmaceuticals, Inc. or its assigns (the "**Noteholder**", and together with the Borrower, the "**Parties**"), the principal amount of $35,000,000.00 (the "**Loan**"), together with all accrued interest thereon, if any, as provided in this Promissory Note (this "**Note**").

1. Definitions. Capitalized terms used herein shall have the meanings set forth in this **Section 1**.

"**Borrower**" has the meaning set forth in the introductory paragraph.

"**Business Day**" means a day other than a Saturday, Sunday or other day on which commercial banks in Boston, Massachusetts are authorized or required by law to close.

"**Current Agreements**" means, collectively, the License Agreement, that certain Investor Rights Agreement between the Parties, dated July 25, 2006, as amended on March 25, 2009, and the Stock Purchase Agreement.

"**Default**" means any of the events specified in **Section 7** which constitutes an Event of Default or which, upon the giving of notice, the lapse of time, or both pursuant to **Section 7** would, unless cured or waived, become an Event of Default.

"**Default Rate**" means the rate equal to ten percent (10%) per annum or the maximum rate allowed by applicable Law, if lower.

"**Definitive Agreement**" means that certain Omnibus Amendment Agreement between the Parties, dated as of the date of this Note, pursuant to which the Current Agreements have been restructured.

"**Event of Default**" has the meaning set forth in **Section 7**.

"**Governmental Authority**" means the government of any nation or any political subdivision thereof, whether at the national, state, territorial, provincial, municipal or any other level, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of, or pertaining to, government.

"**Law**" as to any Person, means any law (including common law), statute, ordinance, treaty, rule, regulation, policy or requirement of any Governmental Authority and authoritative interpretations thereon, whether now or hereafter in effect, in each case, applicable to or binding on such Person or any of its properties or to which such Person or any of its properties is subject.

"**License Agreement**" means that certain Amended and Restated License Agreement between the Parties, dated March 7, 2011.

"**Loan**" has the meaning set forth in the introductory paragraph.

"**Material Adverse Effect**" means a material adverse effect on (a) the business, assets, properties, liabilities (actual or contingent), operations, condition (financial or otherwise) of the Borrower; (b) the validity or enforceability of this Note; (c) the rights or remedies of the Noteholder hereunder; or (e) the Borrower's ability to perform any of its material obligations hereunder.

"**Note**" has the meaning set forth in the introductory paragraph.

"**Noteholder**" has the meaning set forth in the introductory paragraph.

"**Order**" as to any Person, means any order, decree, judgment, writ, injunction, settlement agreement, requirement or determination of an arbitrator or a court or other Governmental Authority, in each case, applicable to or binding on such Person or any of its properties or to which such Person or any of its properties is subject.

"**Parties**" has the meaning set forth in the introductory paragraph.

"**Person**" means any individual, corporation, limited liability company, trust, joint venture, association, company, limited or general partnership, unincorporated organization, Governmental Authority or other entity.

"**Stock Purchase Agreement**" means that certain that certain Stock Purchase Agreement between the Parties, dated July 25, 2006.

2. Payment Dates; Optional Prepayments.

2.1 Principal Payment Dates. The principal amount of the Loan shall be payable as follows:

(a) Pursuant to the Definitive Agreement, a payment of fifteen million dollars ($15,000,000) has been made to the Noteholder on the date hereof.

(b) A payment of twenty million dollars ($20,000,000) of principal ("Second Payment") shall be due and payable on June 30, 2015.

(c) A payment of fifteen million dollars ($15,000,000) of principal ("Third Payment") shall be due and payable on June 30, 2016.

2.2 Optional Prepayment; Repaid Amounts. The Borrower may prepay the amounts due under Section **2.1(b)** or **2.1(c)** at any time without penalty or premium by paying the principal amount to be paid thereunder.

3. Interest.

3.1 Default Interest. If any amount payable hereunder is not paid when due, such overdue amount shall bear interest at the Default Rate from the date of such non-payment until such amount is paid in full.

3.2 Computation of Interest. All computations of interest shall be made on the basis of a year of 360 days and the actual number of days elapsed.

4. Payment Mechanics.

4.1 Manner of Payments. All payments of interest and principal shall be made in lawful money of the United States of America no later than 5:00 PM ET on the date on which such payment is due by wire transfer of immediately available funds to the Noteholder's account at a bank specified by the Noteholder in writing to the Borrower from time to time.

4.2 Application of Payments. All payments made hereunder shall be applied first to accrued interest, if any, and second to the payment of the principal amount outstanding under this Note.

4.3 Business Day Convention. Whenever any payment to be made hereunder shall be due on a day that is not a Business Day, such payment shall be made on the last preceding Business Day and adjustment will be taken into account in calculating the amount of interest, if any, payable under this Note.

4.4 Rescission of Payments. If at any time any payment made by the Borrower under this Note is rescinded or must otherwise be restored or returned upon the insolvency, bankruptcy or reorganization of the Borrower or otherwise, the Borrower's obligation to make such payment shall be reinstated as though such payment had not been made.

5. Representations and Warranties. The Borrower hereby represents and warrants to the Noteholder on the date hereof as follows:

5.1 Existence; Compliance With Laws. The Borrower is a corporation duly incorporated, validly existing and in good standing under the laws of the state of its jurisdiction of organization and has the requisite power and authority, and the legal right, to own, lease and operate its properties and assets and to conduct its business as it is now being conducted.

5.2 Power and Authority. The Borrower has the power and authority, and the legal right, to execute and deliver this Note and to perform its obligations hereunder.

5.3 Authorization; Execution and Delivery. The execution and delivery of this Note by the Borrower and the performance of its obligations hereunder have been duly authorized by all necessary corporate action in accordance with all applicable Laws. The Borrower has duly executed and delivered this Note.

5.4 No Approvals. No consent or authorization of, filing with, notice to or other act by, or in respect of, any Governmental Authority or any other Person is required in order for the Borrower to execute, deliver, or perform any of its obligations under this Note, except for consents previously obtained and any filings with Governmental Authorities which may be made after the date of this Note.

5.5 No Violations. The execution and delivery of this Note and the consummation by the Borrower of the transactions contemplated hereby do not and will not (a) violate any provision of the Borrower's organizational documents; (b) violate any Law or Order applicable to the Borrower or by which any of its properties or assets may be bound; or (c) constitute a default under any material agreement or contract by which the Borrower may be bound.

5.6 Enforceability. This Note is a valid, legal and binding obligation of the Borrower, enforceable against the Borrower in accordance with its terms, except as the enforceability hereof may be limited by bankruptcy, insolvency or other similar laws of general application relating to or affecting the enforcement of creditors' rights or by general principles of equity.

6. Affirmative Covenants. Until all amounts outstanding in this Note have been paid in full, the Borrower shall:

6.1 Maintenance of Existence. (a) Preserve, renew and maintain in full force and effect its corporate existence and (b) take all reasonable action to maintain all rights, privileges and franchises necessary or desirable in the normal conduct of its business; except in each case where the failure to do so could not reasonably be expected to have a Material Adverse Effect.

6.2 Compliance. Comply with (a) all of the terms and provisions of its organizational documents; (b) its obligations under the Current Agreements as modified by the Definitive Agreement; and (c) all Laws and Orders applicable to it and its business; except in each case where the failure to do so could not reasonably be expected to have a Material Adverse Effect.

6.3 Notice of Defaults and Events of Default. As soon as possible and in any event within five (5) Business Days after it becomes aware that a Default or an Event of Default has occurred, notify the Noteholder in writing of the nature and extent of such Default or Event of Default and the action, if any, it has taken or proposes to take with respect to such Default or Event of Default.

6.4 Further Assurances. Promptly execute and deliver such further instruments and do or cause to be done such further acts as may be reasonably necessary or advisable, upon advice of counsel to the Borrower, to carry out the intent and purpose of this Note.

7. Events of Default. The occurrence and continuance of any of the following shall constitute an Event of Default hereunder:

7.1 Failure to Pay. The Borrower fails to pay (a) the Second Payment of the Loan plus interest at the Default Rate on or before June 30, 2016, or (b) the Third Payment of the Loan plus interest at the Default Rate on or before June 30, 2017.

7.2 Breach of Representations and Warranties. Any representation or warranty made by the Borrower to the Noteholder herein is incorrect in any material respect on the date as of which such representation or warranty was made, except where the breach could not reasonably be expected to have a Material Adverse Effect.

7.3 Breach of Covenants. The Borrower fails to observe or perform any covenant, obligation, condition or agreement contained in this Note and such failure continues for 30 days.

7.4 Bankruptcy.

(a) the Borrower commences any case, proceeding or other action (i) under any existing or future Law relating to bankruptcy, insolvency, reorganization, or other relief of debtors, seeking to have an order for relief entered with respect to it, or seeking to adjudicate Borrower as bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, winding-up, liquidation, dissolution, composition or other relief with respect to it or its debts or (ii) seeking appointment of a receiver, trustee, custodian, conservator or other similar official for it or for all or any substantial part of its assets, or the Borrower makes a general assignment for the benefit of its creditors;

(b) there is commenced against the Borrower any case, proceeding or other action of a nature referred to in **Section 7.4(a)** above which (i) results in the entry of an order for relief or any such adjudication or appointment or (ii) remains undismissed, undischarged or unbonded for a period of 30 days;

(c) there is commenced against the Borrower any case, proceeding or other action seeking issuance of a warrant of attachment, execution or similar process against all or any substantial part of its assets which results in the entry of an order for any such relief which has not been vacated, discharged, or stayed or bonded pending appeal within 30 days from the entry thereof;

(d) the Borrower takes any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any of the acts set forth in **Section 7.4(a)**, **Section 7.4(b)** or **Section 7.4(c)** above.

8. Remedies. Upon the occurrence of any Event of Default and at any time thereafter during the continuance of such Event of Default, the Noteholder may at its option, by written notice to the Borrower (a) declare the entire principal amount of this Note, together with all accrued interest, if any, thereon and all other amounts payable hereunder, immediately due and payable; and/or (b) exercise any or all of its rights, powers or remedies under applicable Law; *provided, however* that, if an Event of Default described in **Section 7.4** shall occur, the principal of and accrued interest on the Loan shall become immediately due and payable without any notice, declaration or other act on the part of the Noteholder.

9. Continuing Obligation; Discharge. The Borrower's obligations under this Note are absolute and unconditional, and will not be affected by the expiration or termination of the Current Agreements, the Definitive Agreement, or any of them, for any reason other than the valid termination of both the License Agreement and the Definitive Agreement by the Borrower in compliance with Section 2.2 of the Definitive Agreement; in which case this Note shall terminate and all amounts due hereunder by the Borrower shall be extinguished and all obligations of the Borrower hereunder shall cease and be of no further force or effect.

10. Miscellaneous.

10.1 Notices.

(a) All notices, requests or other communications required or permitted to be delivered hereunder shall be delivered in writing, in each case to the address specified below or to such other address as such Party may from time to time specify in writing in compliance with this provision:

(i) If to the Borrower:

2130 Holcombe Boulevard
Suite 850
Houston, TX 77030
Attn: Chief Executive Officer
Telephone: 1-281-768-7691, Facsimile: 1-832-384-1111
E-mail: tfarrell@bellicum.com

(ii) If to the Noteholder:

26 Landsdowne Street
Cambridge, MA 02139-4234
Attn: Chief Executive Officer
Telephone: (617) 494-0400,
Facsimile: (617) 494-1828
E-mail: Harvey.berger@ariad.com

(b) Notices if (i) mailed by certified or registered mail or sent by hand or overnight courier service shall be deemed to have been given when received; (ii) sent by facsimile during the recipient's normal business hours shall be deemed to have been given upon confirmation of sending (and if sent after normal business hours shall be deemed to have been given at the opening of the recipient's business on the next business day); and (iii) sent by e-mail shall be deemed received upon the sender's receipt of an acknowledgment from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgment).

10.2 Expenses. The Borrower shall reimburse the Noteholder on demand for all reasonable out-of-pocket costs, expenses and fees (including reasonable expenses and fees of its counsel) incurred by the Noteholder in connection with the enforcement of the Noteholder's rights hereunder.

10.3 Governing Law. This Note and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Note, and the transactions contemplated hereby shall be governed by the laws of the State of New York.

10.4 Waiver of Jury Trial. THE BORROWER HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY RELATING TO THIS NOTE OR THE TRANSACTIONS CONTEMPLATED HEREBY WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY.

10.5 Counterparts; Integration; Effectiveness. This Note and any amendments, waivers, consents or supplements hereto may be executed in counterparts, each of which shall constitute an original, but both taken together shall constitute a single contract. This Note, the Definitive Agreement and Current Agreements constitute the entire contract between the

Parties with respect to the subject matter hereof and supersede all previous agreements and understandings, oral or written, with respect thereto. Delivery of an executed counterpart of a signature page to this Note by facsimile or in electronic (i.e., "pdf" or "tif") format shall be effective as delivery of a manually executed counterpart of this Note.

10.6 Successors and Assigns. This Note may be assigned or transferred by the Noteholder to any Person. The Borrower may not assign or transfer this Note or any of its rights hereunder without the prior written consent of the Noteholder; provided, however, that the Borrower may, without the written consent of the Noteholder, assign this Note in connection with the transfer or sale of all or substantially all of the Borrower's assets or, in the event of its merger, consolidation, change in control or similar transaction. Any permitted assignee shall assume all obligations of the Borrower under this Note. This Note shall inure to the benefit of, and be binding upon, the Parties and their permitted assigns.

10.7 Waiver of Notice. The Borrower hereby waives demand for payment, presentment for payment, protest, notice of payment, notice of dishonor, notice of nonpayment, notice of acceleration of maturity and diligence in taking any action to collect sums owing hereunder.

10.8 Amendments and Waivers. No term of this Note may be waived, modified or amended except by an instrument in writing signed by both of the Parties hereto. Any waiver of the terms hereof shall be effective only in the specific instance and for the specific purpose given.

10.9 Headings. The headings of the various Sections and subsections herein are for reference only and shall not define, modify, expand or limit any of the terms or provisions hereof.

10.10 No Waiver; Cumulative Remedies. No failure to exercise and no delay in exercising on the part of the Noteholder, of any right, remedy, power or privilege hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege. The rights, remedies, powers and privileges herein provided are cumulative and not exclusive of any rights, remedies, powers and privileges provided by law.

10.11 Electronic Execution. The words "execution," "signed," "signature," and words of similar import in this Note shall be deemed to include electronic or digital signatures or the keeping of records in electronic form, each of which shall be of the same effect, validity and enforceability as manually executed signatures or a paper-based recordkeeping system, as the case may be, to the extent and as provided for under applicable law, including the Electronic Signatures in Global and National Commerce Act of 2000 (15 USC § 7001 et seq.), the Electronic Signatures and Records Act of 1999 (N.Y. State Tech. Law §§ 301-309), or any other similar state laws based on the Uniform Electronic Transactions Act.

10.12 Severability. If any term or provision of this Note is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Note or invalidate or render unenforceable such term or provision in any other jurisdiction.

IN WITNESS WHEREOF, the Borrower has executed this Note as of October 3, 2014.

BELLICUM PHARMACEUTICALS, INC.

By /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Title: President and Chief Executive Officer

BELLICUM PHARMACEUTICALS, INC.

LOAN AND SECURITY AGREEMENT

This LOAN AND SECURITY AGREEMENT (this "Agreement") is entered into as of December 13, 2012, by and between **COMERICA BANK** ("Bank") and **BELLICUM PHARMACEUTICALS, INC.**, a Delaware corporation ("Borrower").

RECITALS

Borrower wishes to obtain credit from time to time from Bank, and Bank desires to extend credit to Borrower. This Agreement sets forth the terms on which Bank will advance credit to Borrower, and Borrower will repay the amounts owing to Bank.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION.

1.1 Definitions. As used in this Agreement, all capitalized terms shall have the definitions set forth on Exhibit A. Any term used in the Code and not defined herein shall have the meaning given to the term in the Code.

1.2 Accounting Terms. Any accounting term not specifically defined on Exhibit A shall be construed in accordance with GAAP and all calculations shall be made in accordance with GAAP. The term "financial statements" shall include the accompanying notes and schedules.

2. LOAN AND TERMS OF PAYMENT.

2.1 Credit Extensions.

(a) Promise to Pay. Borrower promises to pay to Bank, in lawful money of the United States of America, the aggregate unpaid principal amount of all Credit Extensions made by Bank to Borrower, together with interest on the unpaid principal amount of such Credit Extensions at rates in accordance with the terms hereof.

(b) Equipment Advances.

(i) Subject to and upon the terms and conditions of this Agreement, Bank agrees to make Equipment Advances to Borrower. Borrower may request Equipment Advances at any time from the date hereof through the Equipment Advance Availability End Date. The aggregate outstanding amount of Equipment Advances shall not exceed the Equipment Line.

(ii) Interest shall accrue from the date of each Equipment Advance at the rate specified in Section 2.3(a), and shall be payable in accordance with Section 2.3(c). Any Equipment Advances that are outstanding on the Equipment Advance Availability End Date shall be payable in thirty (30) equal monthly installments of principal, plus all accrued interest, beginning on July 1, 2013, and continuing on the same day of each month thereafter through the Equipment Line Maturity Date, at which time all amounts due in connection with Equipment Advances made under this Section 2.1(b) shall be immediately due and payable. Borrower may prepay any Equipment Advances in whole or in part without penalty or premium. Partial prepayments hereunder shall be applied to the installments hereunder in the inverse order of their maturities without reamortization of the repayment schedule for the remaining principal balance.

(iii) When Borrower desires to obtain an Equipment Advance, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:00 p.m. Central time three Business Days before the day on which the Equipment Advance is to be made. Such notice shall be substantially in the form of Exhibit C. The notice shall be signed by a Responsible Officer or its designee and include a copy of the invoice for any Equipment to be financed. Each Equipment Advance shall not exceed one hundred percent (100)% of the invoice amount of equipment (which Borrower shall, in any case, have purchased

within ninety (90) days of the date of the corresponding Equipment Advance), excluding taxes, shipping, warranty charges, freight discounts and installation expense. Bank shall be entitled to rely on any facsimile notice given by a person who Bank reasonably believes to be a Responsible Officer or a designee thereof, and Borrower shall indemnify and hold Bank harmless for any damages or loss suffered by Bank as a result of such reliance.

2.2 [Reserved].

2.3 Interest Rates, Payments, and Calculations.

(a) Interest Rate. Except as set forth in Section 2.3(b), the Equipment Advances shall bear interest, on the outstanding daily balance thereof, as set forth in the Prime Referenced Rate Addendum to Loan and Security Agreement attached hereto as Exhibit D ("Interest Rate Addendum").

(b) Late Fee; Default Rate. If any payment is not made within 10 days after the date such payment is due, Borrower shall pay Bank a late fee equal to the lesser of (i) five percent (5%) of the amount of such unpaid amount or (ii) the maximum amount permitted to be charged under applicable law. All Obligations shall bear interest, from and after the occurrence and during the continuance of an Event of Default, at a rate equal to five (5) percentage points above the interest rate applicable immediately prior to the occurrence of the Event of Default.

(c) Payments. Except as set forth in the Interest Rate Addendum, interest hereunder shall be due and payable on the first (1st) Business Day of each month during the term hereof. Bank shall, at its option, charge such interest, all Bank Expenses, and all Periodic Payments against any of Borrower's deposit accounts or against the Equipment Line, in which ease those amounts shall thereafter accrue interest at the rate then applicable hereunder. Any interest not paid when due shall be compounded by becoming a part of the Obligations, and such interest shall thereafter accrue interest at the rate then applicable hereunder.

(d) Computation. In the event the Prime Rate is changed from time to time hereafter, the applicable rate of interest hereunder shall be increased or decreased, effective as of the day the Prime Rate is changed, by an amount equal to such change in the Prime Rate. All interest chargeable under the Loan Documents shall be computed on the basis of a three hundred sixty (360) day year for the actual number of days elapsed.

2.4 Crediting Payments. Prior to the occurrence of an Event of Default, Bank shall credit a wire transfer of funds, check or other item of payment to such deposit account or Obligation as Borrower specifies. After the occurrence of an Event of Default, Bank shall have the right, in its sole discretion, to immediately apply any wire transfer of funds, check, or other item of payment Bank may receive to conditionally reduce Obligations, but such applications of funds shall not be considered a payment on account unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Bank after 12:00 noon Central time shall be deemed to have been received by Bank as of the opening of business on the immediately following Business Day. Whenever any payment to Bank under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

2.5 Fees. Borrower shall pay to Bank the following:

(a) Facility Fee. On the Closing Date, a fee equal to $10,000, which shall be nonrefundable; and

(b) Bank Expenses. On the Closing Date, all Bank Expenses incurred through the Closing Date, and, after the Closing Date, all Bank Expenses, as and when they become due.

2.6 Term. This Agreement shall become effective on the Closing Date and, subject to Section 13.8, shall continue in full force and effect for so long as any Obligations remain outstanding or Bank has any obligation to make Credit Extensions under this Agreement. Notwithstanding the foregoing, Bank shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice upon the occurrence and during the continuance of an Event of Default.

3. CONDITIONS OF LOANS.

3.1 Conditions Precedent to Initial Credit Extension. The obligation of Bank to make the initial Credit Extension is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, the following:

(a) this Agreement;

(b) an officer's certificate of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Agreement;

(c) a financing statement (Form UCC-1) naming Borrower as debtor;

(d) an agreement to furnish insurance;

(e) for each collateral location or warehouse location of Borrower or any Collateral location not owned by Borrower, a landlord subordination agreement, collateral access agreement or bailment waiver, executed by the landlord, warehouseman or bailee of such location, as applicable, together with a copy of the lease, warehouse or bailment agreement for each such location, as applicable;

(f) payment of the fees and Bank Expenses then due specified in Section 2.5;

(g) current SOS Reports indicating that except for Permitted Liens, there are no other security interests or Liens of record in the Collateral;

(h) current financial statements, including CPA reviewed statements for Borrower's most recently ended fiscal year, company prepared consolidated and consolidating (as applicable) balance sheets and income statements for the most recently ended month in accordance with Section 6.2, and such other updated financial information as Bank may reasonably request;

(i) an Automatic Debit Authorization; and

(j) such other documents or certificates, and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

3.2 Conditions Precedent to all Credit Extensions. The obligation of Bank to make each Credit Extension, including the initial Credit Extension, is further subject to the following conditions:

(a) timely receipt by Bank of the Payment/Advance Form as provided in Section 2.1; and

(b) the representations and warranties contained in Article 5 shall be true and correct in all material respects on and as of the date of such Payment/Advance Form and on the effective date of each Credit Extension as though made at and as of each such date, and no Event of Default shall have occurred and be continuing, or would exist after giving effect to such Credit Extension (provided, however, that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such date). The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2.

4. CREATION OF SECURITY INTEREST.

4.1 Grant of Security Interest. Borrower grants and pledges to Bank a continuing security interest in the Collateral, now existing or hereafter acquired, to secure prompt repayment of any and all Obligations and to

secure prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except as set forth in the Schedule, such security interest constitutes a valid, first priority security interest in the presently existing Collateral, and will constitute a valid, first priority security interest in later-acquired Collateral Borrower also hereby agrees not to sell, transfer, assign, mortgage, pledge, lease, grant a security interest in, or encumber any of its Intellectual Property, except in connection with Permitted Liens and Permitted Transfers. Notwithstanding any termination of this Agreement, Bank's Lien on the Collateral shall remain in effect for so long as any Obligations are outstanding.

4.2 Perfection of Security Interest. Borrower authorizes Bank to file at any time financing statements, continuation statements, and amendments thereto that (i) either specifically describe the Collateral or describe the Collateral as all assets of Borrower of the kind pledged hereunder, and (ii) contain any other information required by the Code for the sufficiency of filing office acceptance of any financing statement, continuation statement, or amendment, including whether Borrower is an organization, the type of organization and any organizational identification number issued to Borrower, if applicable. Any such financing statements may be filed by Bank at any time in any jurisdiction whether or not Revised Article 9 of the Code is then in effect in that jurisdiction. Borrower shall from time to time endorse and deliver to Bank, at the request of Bank, all Negotiable Collateral and other documents that Bank may reasonably request, in form satisfactory to Bank, to perfect and continue perfection of Bank's security interests in the Collateral and in order to fully consummate all of the transactions contemplated under the Loan Documents. Borrower shall have possession of the Collateral, except where expressly otherwise provided in this Agreement or where Bank chooses to perfect its security interest by possession in addition to the filing of a financing statement. Where Collateral is in possession of a third party, Borrower shall take such steps as Bank reasonably requests for Bank (i) to obtain an acknowledgment, in form and substance satisfactory to Bank, that the bailee holds such Collateral for the benefit of Bank; and (ii) to obtain "control" of any Collateral consisting of investment property, deposit accounts, letter-of-credit rights or electronic chattel paper (as such items and the term "control" are defined in Revised Article 9 of the Code) by causing the securities intermediary or depositary institution or issuing bank to execute a control agreement in form and substance satisfactory to Bank. Borrower will not create any chattel paper without placing a legend on the chattel paper acceptable to Bank indicating that Bank has a security interest in the chattel paper. Borrower from time to time may deposit with Bank specific cash collateral to secure specific Obligations; Borrower authorizes Bank to hold such specific balances in pledge and to decline to honor any drafts thereon or any request by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the specific Obligations are outstanding.

4.3 Right to Inspect. Bank (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours but no more than once a year (unless an Event of Default has occurred and is continuing), to inspect Borrower's Books and to make copies thereof and to check, test, and appraise the Collateral in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

5. REPRESENTATIONS AND WARRANTIES.

Borrower represents and warrants as follows:

5.1 Due Organization and Qualification. Borrower and each Subsidiary is an entity duly existing under the laws of the State of Delaware and qualified and licensed to do business in any state in which the conduct of its business or its ownership of property requires that it be so qualified, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.2 Due Authorization; No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's organizational documents, nor will they constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement by which it is bound, except to the extent such default would not reasonably be expected to cause a Material Adverse Effect.

5.3 Collateral. Borrower has rights in or the power to transfer the Collateral, and its title to the Collateral is free and clear of Liens, adverse claims, and restrictions on transfer or pledge except for Permitted

Liens. All Collateral is located solely in the Collateral States. All Inventory is in all material respects of good and merchantable quality, free from all material defects, except for Inventory for which adequate reserves have been made. Except as set forth in the Schedule, none of the Collateral is maintained or invested with a Person other than Bank or Bank's Affiliates.

5.4 Intellectual Property. Borrower is the sole owner of the Intellectual Property, except for licenses granted by Borrower to its customers in the ordinary course of business. To Borrower's knowledge, each of the Copyrights, Trademarks and Patents is valid and enforceable, and no part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and no claim has been made to Borrower that any part of the Intellectual Property violates the rights of any third party except to the extent such claim could not reasonably be expected to cause a Material Adverse Effect.

5.5 Name; Location of Chief Executive Office. Except as disclosed in the Schedule, Borrower has not done business under any name other than that specified on the signature page hereof, and its exact legal name is as set forth in the first paragraph of this Agreement. The chief executive office of Borrower is located in the Chief Executive Office State at the address indicated in Article 10 hereof.

5.6 Actions, Suits, Litigation, or Proceedings. Except as set forth in the Schedule, there are no actions, suits, litigation or proceedings, at law or in equity, pending by or against Borrower or any Subsidiary of Borrower before any court, administrative agency, or arbitrator in which a likely adverse decision could reasonably be expected to have a Material Adverse Effect.

5.7 No Material Adverse Change in Financial Statements. All consolidated and consolidating financial statements related to Borrower and any Subsidiary of Borrower that are delivered by Borrower to Bank fairly present in all material respects Borrower's consolidated and consolidating financial condition as of the date thereof and Borrower's consolidated and consolidating results of operations for the period then ended. There has not been a material adverse change in the consolidated or in the consolidating financial condition of Borrower since the date of the most recent of such financial statements submitted to Bank.

5.8 Solvency, Payment of Debts. Borrower is able to pay its debts (including trade debts) as they mature; the fair saleable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; and Borrower is not left with unreasonably small capital after the transactions contemplated by this Agreement.

5.9 Compliance with Laws and Regulations. Borrower and each Subsidiary have met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. No event has occurred resulting from Borrower's failure to comply with ERISA that is reasonably likely to result in Borrower's incurring any liability that could reasonably be expected to have a Material Adverse Effect. Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940. Borrower is not engaged principally, or as one of the important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T and U of the Board of Governors of the Federal Reserve System). Borrower has complied in all material respects with all the provisions of the Federal Fair Labor Standards Act. Borrower is in compliance with all environmental laws, regulations and ordinances except where the failure to comply is not reasonably likely to have a Material Adverse Effect. Borrower has not violated any statutes, laws, ordinances or rules applicable to it, the violation of which could reasonably be expected to have a Material Adverse Effect. Borrower and each Subsidiary of Borrower have filed or caused to be filed all tax returns required to be filed, and have paid, or have made adequate provision for the payment of, all taxes reflected therein except those being contested in good faith with adequate reserves under GAAP or where the failure to file such returns or pay such taxes could not reasonably be expected to have a Material Adverse Effect.

5.10 Subsidiaries. Borrower does not own any stock, partnership interest or other equity securities of any Person, except for Permitted Investments.

5.11 Government Consents. Borrower and each Subsidiary of Borrower have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.12 Inbound Licenses. Except as disclosed on the Schedule, Borrower is not a party to, nor is bound by, any inbound license agreement, the failure, breach, or termination of which could reasonably be expected to cause a Material Adverse Effect, or that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license agreement or related property.

5.13 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Bank taken together with all such certificates and written statements furnished to Bank contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading, it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not to be viewed as facts and that actual results during the period or periods covered by any such projections and forecasts may differ from the projected or forecasted results.

6. AFFIRMATIVE COVENANTS.

Borrower covenants that, until payment in full of all outstanding Obligations, and for so long as Bank may have any commitment to make a Credit Extension hereunder, Borrower shall do all of the following:

6.1 Good Standing and Government Compliance. Borrower shall maintain its, and each of its Subsidiaries' limited liability company or corporate, as applicable, existence and good standing in its respective state or jurisdiction of organization or incorporation, as applicable, shall maintain qualification and good standing in each other jurisdiction in which the failure to so qualify would reasonably be expected to have a Material Adverse Effect, and shall furnish to Bank the organizational identification number issued to Borrower by the authorities of the state in which Borrower is organized, if applicable. Borrower shall meet, and shall cause each of its Subsidiaries to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply in all material respects with all applicable Environmental Laws, and maintain all material permits, licenses and approvals required thereunder where the failure to do so would reasonably be expected to have a Material Adverse Effect. Borrower shall comply, and shall cause each of its Subsidiaries to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, and shall maintain, and shall cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which or failure to comply with which would reasonably be expected to have a Material Adverse Effect.

6.2 Financial Statements, Reports, Certificates. Borrower shall deliver to Bank: (i) as soon as available, but in any event within thirty (30) days after the end of each calendar month, a company-prepared balance sheet, income statement and statement of cash flows covering Borrower's and its Subsidiaries' operations during such period, prepared in accordance with GAAP, and in a form reasonably acceptable to Bank and certified by a Responsible Officer; (ii) as soon as available, but in any event within one hundred eighty (180) days after the end of Borrower's fiscal year, financial statements of Borrower prepared in accordance with GAAP, consistently applied, and reviewed by an independent certified public accounting firm reasonably acceptable to Bank; (iii) if applicable, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and all reports on Forms 10-K and 10-Q filed with the Securities and Exchange Commission; (iv) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened against Borrower or any Subsidiary that could result in damages or costs to Borrower or any Subsidiary of One Hundred Thousand Dollars ($100,000) or more; (v) promptly upon receipt, each management letter prepared by Borrower's independent certified public accounting firm regarding Borrower's management control systems; (vi) as soon as available, but in any event not later than January 31 of each calendar year, Borrower's financial and business projections and budget for the immediately following year, which projections shall include monthly balance sheets and income statements, with evidence of approval thereof by Borrower's board of directors; (vii) such budgets, sales projections, operating plans or other financial information generally prepared by Borrower in the ordinary course of business as Bank may reasonably request from time to time; and (viii) upon Bank's request, within thirty (30) days of the last day of each fiscal quarter, a report signed by Borrower, in form reasonably acceptable to Bank, listing any applications or registrations that Borrower has made or filed in respect of any Patents, Copyrights or Trademarks and the status of any outstanding applications or registrations, as well as any material change in Borrower's Intellectual Property Collateral.

(a) Within thirty (30) days after the last day of each month, Borrower shall deliver to Bank with the monthly financial statements a Compliance Certificate certified as of the last day of the applicable month and signed by a Responsible Officer in substantially the form of Exhibit E hereto.

(b) Immediately after the occurrence or existence of an Event of Default hereunder, a written statement of a Responsible Officer setting forth details of the Event of Default, and the action which Borrower has taken or proposes to take with respect thereto.

(c) Bank shall have a right from time to time hereafter to audit Borrower's Accounts and appraise Collateral at Borrower's expense, provided that such audits will be conducted no more often than every twelve (12) months unless an Event of Default has occurred and is continuing.

Borrower may deliver to Bank on an electronic basis any certificates, reports or information required pursuant to this Section 6.2, and Bank shall be entitled to rely on the information contained in the electronic files, provided that Bank in good faith believes that the files were delivered by a Responsible Officer. If Borrower delivers this information electronically, it shall also deliver to Bank by U.S. Mail, reputable overnight courier service, hand delivery, facsimile or .pdf file within five (5) Business Days of submission of the unsigned electronic copy the certification of monthly financial statements, the intellectual property report, the Borrowing Base Certificate and the Compliance Certificate, each bearing the physical signature of the Responsible Officer.

6.3 Inventory; Returns. Borrower shall keep all Inventory in good and merchantable condition, free from all material defects except for Inventory for which adequate reserves have been made. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist on the Closing Date. Borrower shall promptly notify Bank of all returns and recoveries and of all disputes and claims involving more than One Hundred Thousand Dollars ($100,000).

6.4 Taxes. Borrower shall make, and cause each of its Subsidiaries to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, including, but not limited to, those laws concerning income taxes, F.I.C.A., F.U.T.A. and state disability, and will execute and deliver to Bank, on demand, proof satisfactory to Bank indicating that Borrower or a Subsidiary of Borrower has made such payments or deposits and any appropriate certificates attesting to the payment or deposit thereof; provided that Borrower or a Subsidiary of Borrower need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is reserved against (to the extent required by GAAP) by Borrower or its Subsidiary, as applicable.

6.5 Insurance.

(a) Borrower, at its expense, shall keep the Collateral insured against loss or damage by fire, theft, explosion, sprinklers, and all other hazards and risks, and in such amounts, as ordinarily insured against by other owners in similar businesses conducted in the locations where Borrower's business is conducted on the date hereof. Borrower shall also maintain liability and other insurance in amounts and of a type that are customary to businesses similar to Borrower's.

(b) All such policies of insurance shall be in such form, with such companies, and in such amounts as reasonably satisfactory to Bank. All policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Bank, showing Bank as an additional loss payee, and all liability insurance policies shall show Bank as an additional insured and specify that the insurer must give at least twenty (20) days notice to Bank before canceling its policy for any reason. Upon Bank's request, Borrower shall deliver to Bank certified copies of the policies of insurance and evidence of all premium payments. If no Event of Default has occurred and is continuing, proceeds payable under any casualty policy will, at Borrower's option, be payable to Borrower to replace the property subject to the claim, provided that any such replacement property shall be deemed

Collateral in which Bank has been granted a first priority security interest. If an Event of Default has occurred and is continuing, all proceeds payable under any such policy shall, at Bank's option, be payable to Bank to be applied on account of the Obligations.

6.6 Accounts. Borrower shall maintain all its primary depository and operating accounts with Bank and its primary investment accounts with Bank or Bank's Affiliates (covered by satisfactory control agreements).

6.7 [Reserved].

6.8 Registration of Intellectual Property Rights.

(a) Borrower shall register or cause to be promptly registered (to the extent not already registered) with the United States Patent and Trademark Office or the United States Copyright Office, as the case may be, those registrable intellectual property rights now owned or hereafter developed or acquired by Borrower, but only to the extent that Borrower, in its sole reasonable business judgment, deems it appropriate to so protect such intellectual property rights.

(b) Borrower shall (i) protect, defend and maintain the validity and enforceability of its material Trademarks, Patents, Copyrights, and trade secrets, (ii) use commercially reasonable efforts to detect infringements of its material Trademarks, Patents and Copyrights and promptly advise Bank in writing of material infringements detected and (iii) not allow any material Trademarks, Patents or Copyrights to be abandoned, forfeited or dedicated to the public without the written consent of Bank, which shall not be unreasonably withheld.

6.9 Consent of Inbound Licensors. Within ten (10) days after entering into or becoming bound by any material license agreement, Borrower shall provide written notice to Bank of the material terms of such license agreement with a description of its likely impact on Borrower's business or financial condition.

6.10 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Bank to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS.

Borrower covenants and agrees that, so long as any credit hereunder shall be available and until the outstanding Obligations are paid in full or for so long as Bank may have any commitment to make any Credit Extensions, Borrower will not do any of the following without Bank's prior written consent:

7.1 Dispositions. Convey, sell, lease, license, transfer or otherwise dispose of (collectively, to "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, or subject to Section 6.6 of the Agreement, move cash balances on deposit with Bank to accounts opened at another financial institution, other than Permitted Transfers.

7.2 Change in Name, Location, Executive Office, or Executive Management Change in Business; Change in Fiscal Year; Change in Control. Change its name or the Borrower State or relocate its chief executive office without thirty (30) days prior written notification to Bank; replace its chief executive officer or chief financial officer without thirty (30) days prior written notification to Bank; engage in any business, or permit any of its Subsidiaries to engage in any business, other than or reasonably related or incidental to the businesses currently engaged in by Borrower; change its fiscal year end; or have a Change in Control.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of a Subsidiary into another Subsidiary or into Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person, or enter into any agreement to do any of the same.

7.4 Indebtedness. Create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any of its Subsidiaries to do so, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except Indebtedness to Bank.

7.5 Encumbrances. Create, incur, assume or allow any Lien with respect to any of its property, or assign or otherwise convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries so to do, except for Permitted Liens, or covenant to any other Person that Borrower in the future will refrain from creating, incurring, assuming or allowing any Lien with respect to any of Borrower's property.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock other than Permitted Stock Repurchases.

7.7 Investments. Directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments, or, except as provided in Section 6.6 of this Agreement, maintain or invest any of its property with a Person other than Bank or Bank's Affiliates or permit any of its Subsidiaries to do so unless such Person has entered into a control agreement with Bank, in form and substance satisfactory to Bank, or suffer or permit any of its Subsidiaries to be a party to, or be bound by, an agreement that restricts such Subsidiary of Borrower from paying dividends or otherwise distributing property to Borrower. Further, Borrower shall not enter into any license or agreement with any Prohibited Territory or with any Person organized under or doing business in a Prohibited Territory.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person.

7.9 Subordinated Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt and the terms of the subordination agreement relating to such Subordinated Debt, or amend any provision of any document evidencing such Subordinated Debt, except in compliance with the terms of the subordination agreement relating to such Subordinated Debt, or amend any provision affecting Bank's rights contained in any documentation relating to the Subordinated Debt without Bank's prior written consent.

7.10 Inventory and Equipment. Store the Inventory or the Equipment with a bailee, warehouseman, or similar third party unless the third party has been notified of Bank's security interest and Bank (a) has received an acknowledgment from the third party that it is holding or will hold the Inventory or Equipment for Bank's benefit or (b) is in possession of the warehouse receipt, where negotiable, covering such inventory or Equipment. Except for Inventory sold in the ordinary course of business and except for such other locations as Bank may approve in writing, Borrower shall keep the Inventory and Equipment only at the location set forth in Section 10 and such other locations of which Borrower gives Bank prior written notice and as to which Bank files a financing statement where needed to perfect its security interest.

7.11 No Investment Company; Margin Regulation. Become or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose.

8. EVENTS OF DEFAULT.

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay any of the Obligations when due;

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Article 6, or violates any of the covenants contained in Article 7 of this Agreement; or

(b) If Borrower fails or neglects to perform or observe any other material term, provision, condition, covenant contained in this Agreement, in any of the Loan Documents, or in any other present or future agreement between Borrower and Bank and as to any default under such other term, provision, condition or covenant that can be cured, has failed to cure such default within ten (10) days after Borrower receives notice thereof or any officer of Borrower becomes aware thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional reasonable period (which shall not without Bank's consent exceed thirty (30) days) to attempt to cure such default, so long as Borrower continues to diligently attempt to cure such default, and within such reasonable time period the failure to have cured such default shall not be deemed an Event of Default but no Credit Extensions will be made;

8.3 Material Adverse Change. If there occurs any circumstance or circumstances that could reasonably he expected to have a Material Adverse Effect;

8.4 Defective Perfection. If Bank shall receive at any time following the Closing Date an SOS Report indicating that except for Permitted Liens, Bank's security interest in the Collateral is not prior to all other security interests or Liens of record reflected in the report;

8.5 Attachment. If any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within five (5) days, or if Borrower or any of it Subsidiaries is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's or any of its Subsidiaries' assets, or if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower's or any of its Subsidiaries' assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within five (5) days after Borrower or Subsidiary of Borrower, as applicable, receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower or a Subsidiary of Borrower, as applicable (provided that no Credit Extensions will be made during such cure period);

8.6 Insolvency. If Borrower or any Subsidiary of Borrower becomes insolvent, or if an Insolvency Proceeding is commenced by Borrower or any Subsidiary of Borrower, or if an Insolvency Proceeding is commenced against Borrower or any Subsidiary of Borrower and is not dismissed or stayed within 30 days (provided that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.7 Other Agreements. If there is a default or other failure to perform in any agreement to which Borrower or any Subsidiary of Borrower is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of One Hundred Thousand Dollars ($100,000) or that would reasonably be expected to have a Material Adverse Effect;

8.8 Subordinated Debt. If Borrower or any of its Subsidiaries makes any payment on account of Subordinated Debt, except to the extent such payment is allowed under the terms of any subordination agreement entered into with Bank;

8.9 Judgments; Settlements. If a judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least One Hundred Thousand Dollars ($100,000) shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of ten (10) days (provided that no Credit Extensions will be made prior to the satisfaction or stay of the judgment); or if a settlement or settlements is agreed upon for an amount individually or in the aggregate of at least One Hundred Thousand Dollars ($100,000); or

8.10 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth herein or in any certificate delivered to Bank by any Responsible Officer pursuant to this Agreement or to induce Bank to enter into this Agreement or any other Loan Document.

9. BANK'S RIGHTS AND REMEDIES.

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence of an Event of Default described in Section 8.6 (insolvency), all Obligations shall become immediately due and payable without any action by Bank);

(b) [Reserved];

(c) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Bank;

(d) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order that Bank reasonably considers advisable;

(e) Make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Bank so requires, and to make the Collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Bank's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Bank a license to enter into possession of such premises and to occupy the same, without charge, in order to exercise any of Bank's rights or remedies provided herein, at law, in equity, or otherwise;

(f) Set off and apply to the Obligations any and all (i) balances and deposits of Borrower held by Bank, and (ii) indebtedness at any time owing to or for the credit or the account of Borrower held by Bank;

(g) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Bank is hereby granted a license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral in connection with Bank's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Bank's benefit;

(h) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Bank determines is commercially reasonable, and apply any proceeds to the Obligations in whatever manner or order Bank deems appropriate. Bank may sell the Collateral without giving any warranties as to the Collateral. Bank may specifically disclaim any warranties of title or the like. This procedure will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. If Bank sells any of the Collateral upon credit, Borrower will be credited only with payments actually made by the purchaser, received by Bank, and applied to the indebtedness of the purchaser. If the purchaser fails to pay for the Collateral, Bank may resell the Collateral and Borrower shall be credited with the proceeds of the sale;

(i) Bank may credit bid and purchase at any public sale;

(j) Apply for the appointment of a receiver, trustee, liquidator or conservator of the Collateral, without notice and without regard to the adequacy of the security for the Obligations and without regard to the solvency of Borrower, any guarantor or any other Person liable for any of the Obligations; and

(k) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

Bank may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral.

9.2 Power of Attorney. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Bank (and any of Bank's designated officers, or employees) as Borrower's true and lawful attorney to: (a) send requests for verification of Accounts or notify account debtors of Bank's security interest in the Accounts; (b) endorse Borrower's name on any checks or other forms of payment or security that may come into Bank's possession; (c) sign Borrower's name on any invoice or bill of lading relating to any Account, drafts against account debtors, schedules and assignments of Accounts, verifications of Accounts, and notices to account debtors; (d) dispose of any Collateral; (e) make, settle, and adjust all claims under and decisions with respect to Borrower's policies of insurance; (f) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Bank determines to be reasonable; and (g) file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral without the signature of Borrower where permitted by law; provided Bank may exercise such power of attorney to sign the name of Borrower on any of the documents described in clause (g) above, regardless of whether an Event of Default has occurred. The appointment of Bank as Borrower's attorney in fact, and each and every one of Bank's rights and powers, being coupled with an interest, is irrevocable until all of the Obligations have been fully repaid and performed and Bank's obligation to provide advances hereunder is terminated.

9.3 Accounts Collection. At any time after the occurrence and during the continuation of an Event of Default, Bank may notify any Person owing funds to Borrower of Bank's security interest in such funds and verify the amount of such Account. Borrower shall collect all amounts owing to Borrower for Bank, receive in trust all payments as Bank's trustee, and immediately deliver such payments to Bank in their original form as received from the account debtor, with proper endorsements for deposit.

9.4 Bank Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Bank may do any or all of the following after reasonable notice to Borrower: (a) make payment of the same or any part thereof; (b) set up such reserves under the Equipment Line as Bank deems necessary to protect Bank from the exposure created by such failure; or (c) obtain and maintain insurance policies of the type discussed in Section 6.5 of this Agreement, and take any action with respect to such policies as Bank deems prudent. Any amounts so paid or deposited by Bank shall constitute Bank Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Bank shall not constitute an agreement by Bank to make similar payments in the future or a waiver by Bank of any Event of Default under this Agreement.

9.5 Bank's Liability for Collateral. Bank has no obligation to clean up or otherwise prepare the Collateral for sale. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 No Obligation to Pursue Others. Bank has no obligation to attempt to satisfy the Obligations by collecting them from any other person liable for them and Bank may release, modify or waive any collateral provided by any other Person to secure any of the Obligations, all without affecting Bank's rights against Borrower. Borrower waives any right it may have to require Bank to pursue any other Person for any of the Obligations.

9.7 Remedies Cumulative. Bank's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Bank shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election, or acquiescence by it. No waiver by Bank shall be effective unless made in a written document signed on behalf of Bank and then shall be effective only in the specific instance and for the specific purpose for which it was given. Borrower expressly agrees that this Section 9.7 may not be waived or modified by Bank by course of performance, conduct, estoppel or otherwise.

9.8 Demand; Protest. Except as otherwise provided in this Agreement, Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment and any other notices relating to the Obligations.

10. NOTICES.

Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid) shall be personally delivered or sent by a recognized overnight delivery service, certified mail, postage prepaid, return receipt requested, or by telefacsimile to Borrower or to Bank, as the case may be, at its addresses set forth below:

If to Borrower: Bellicum Pharmaceuticals, Inc.
2130 West Holcombe Blvd.
Suite 850
Houston, TX 77030
Attn: Thomas J. Farrell
FAX: (832) 384-1150

If to Bank: Comerica Bank
M/C 7578
39200 Six Mile Rd.
Livonia, MI 48152
Attn: National Documentation Services

with a copy to: Comerica Bank
300 W. Sixth St.
Suite 1300
Austin, TX 78701
Attn: Steven J. DiPasquale
FAX: (512) 427-7178

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER.

This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Each of Borrower and Bank hereby submits to the exclusive jurisdiction of the State and Federal courts located in the State of California. THE UNDERSIGNED ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED UNDER CERTAIN CIRCUMSTANCES. TO THE EXTENT PERMITTED BY LAW, EACH PARTY, AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL

OF ITS, HIS OR HER CHOICE, KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, WAIVES ANY RIGHT TO TRIAL BY JURY IN THE EVENT OF LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT OR ANY OTHER DOCUMENT, INSTRUMENT OR AGREEMENT BETWEEN THE UNDERSIGNED PARTIES.

12. REFERENCE PROVISION.

12.1 In the event the jury Trial Waiver set forth above is not enforceable, the parties elect to proceed under this Judicial Reference Provision.

12.2 With the exception of the items specified in Section 12.3, below, any controversy, dispute or claim (each, a "Claim") between the parties arising out of or relating to this Agreement or any other document, instrument or agreement between the undersigned parties (collectively in this Section, the "Loan Documents"), will be resolved by a reference proceeding in California in accordance with the provisions of Sections 638 et seq. of the California Code of Civil Procedure ("CCP"), or their successor sections, which shall constitute the exclusive remedy for the resolution of any Claim, including whether the Claim is subject to the reference proceeding. Except as otherwise provided in the Loan Documents, venue for the reference proceeding will be in the Superior Court in the County where the real property involved in the action, if any, is located or in a County where venue is otherwise appropriate under applicable law (the "Court").

12.3 The matters that shall not be subject to a reference are the following: (i) foreclosure of any security interests in real or personal property, (ii) exercise of selfhelp remedies (including, without limitation, set off), (iii) appointment of a receiver and (iv) temporary, provisional or ancillary remedies (including, without limitation, writs of attachment, writs of possession, temporary restraining orders or preliminary injunctions). This Agreement does not limit the right of any party to exercise or oppose any of the rights and remedies described in clauses (i) and (ii) or to seek or oppose from a court of competent jurisdiction any of the items described in clauses (iii) and (iv). The exercise of or opposition to, any of those items does not waive the right of any party to a reference pursuant to this Agreement.

12.4 The referee shall be a retired Judge or Justice selected by mutual written agreement of the parties. If the parties do not agree within ten (10) days of a written request to do so by any party, then, upon request of any party, the referee shall be selected by the Presiding Judge of the Court (or his or her representative). A request for appointment of a referee may be heard on an ex parte or expedited basis, and the parties agree that irreparable harm would result if ex parte relief is not granted.

12.5 The parties agree that time is of the essence in conducting the reference proceedings. Accordingly, the referee shall be requested, subject to change in the time periods specified herein for good cause shown, to (i) set the matter for a status and trial-setting conference within fifteen (15) days after the date of selection of the referee, (ii) if practicable, try all issues of law or fact within one hundred twenty (120) days after the date of the conference and (iii) report a statement of decision within twenty (20) days after the matter has been submitted for decision.

12.6 The referee will have power to expand or limit the amount and duration of discovery. The referee may set or extend discovery deadlines or cutoffs for good cause, including a party's failure to provide requested discovery for any reason whatsoever. Unless otherwise ordered based upon good cause shown, no party shall be entitled to "priority" in conducting discovery, depositions may be taken by either party upon seven (7) days written notice, and all other discovery shall be responded to within fifteen (15) days after service. All disputes relating to discovery which cannot be resolved by the parties shall be submitted to the referee whose decision shall be final and binding.

12.7 Except as expressly set forth in this Agreement, the referee shall determine the manner in which the reference proceeding is conducted including the time and place of hearings, the order of presentation of evidence, and all other questions that arise with respect to the course of the reference proceeding. All proceedings and hearings conducted before the referee, except for trial, shall be conducted without a court reporter, except that when any party so requests, a court reporter will be used at any heating conducted before the referee, and the referee will be provided a courtesy copy of the transcript. The party making such a request shall have the obligation to arrange for and pay the court reporter. Subject to the referee's power to award costs to the prevailing party, the parties will equally share the cost of the referee and the court reporter at trial.

12.8 The referee shall be required to determine all issues in accordance with existing case law and the statutory laws of the State of California. The rules of evidence applicable to proceedings at law in the State of California will be applicable to the reference proceeding. The referee shall be empowered to enter equitable as well as legal relief, enter equitable orders that will be binding on the parties and rule on any motion which would be authorized in a court proceeding, including without limitation motions for summary judgment or summary adjudication. The referee shall issue a decision at the close of the reference proceeding which disposes of all claims of the parties that are the subject of the reference. Pursuant to CCP § 644, such decision shall be entered by the Court as a judgment or an order in the same manner as if the action had been tried by the Court and any such decision will be final, binding and conclusive. The parties reserve the right to appeal from the final judgment or order or from any appealable decision or order entered by the referee. The parties reserve the right to findings of fact, conclusions of laws, a written statement of decision, and the right to move for a new trial or a different judgment, which new trial, if granted, is also to be a reference proceeding under this provision.

12.9 If the enabling legislation which provides for appointment of a referee is repealed (and no successor statute is enacted), any dispute between the parties that would otherwise be determined by reference procedure will be resolved and determined by arbitration. The arbitration will be conducted by a retired judge or Justice, in accordance with the California Arbitration Act §1280 through §1294.2 of the CCP as amended from time to time. The limitations with respect to discovery set forth above shall apply to any such arbitration proceeding.

12.10 THE PARTIES RECOGNIZE AND AGREE THAT ALL CONTROVERSIES, DISPUTES AND CLAIMS RESOLVED UNDER THIS REFERENCE PROVISION WILL BE DECIDED BY A REFEREE AND NOT BY A JURY. AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS, HIS OR HER OWN CHOICE, EACH PARTY KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, AGREES THAT THIS REFERENCE PROVISION WILL APPLY TO ANY CONTROVERSY, DISPUTE OR CLAIM BETWEEN OR AMONG THEM ARISING OUT OF OR IN ANY WAY RELATED TO, THIS AGREEMENT OR THE OTHER LOAN DOCUMENTS.

13. GENERAL PROVISIONS.

13.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties and shall bind all persons who become bound as a debtor to this Agreement; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Bank's prior written consent, which consent may be granted or withheld in Bank's sole discretion. Bank shall have the right without the consent of or notice to Borrower to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights and benefits hereunder.

13.2 Indemnification. Borrower shall defend, indemnify and hold harmless Bank and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement and/or the Loan Documents; and (b) all losses or Bank Expenses in any way suffered, incurred, or paid by Bank, its officers, employees and agents as a result of or in any way arising out of, following, or consequential to transactions between Bank and Borrower whether under this Agreement, or otherwise (including without limitation reasonable attorneys fees and expenses), except for losses caused by Bank's gross negligence or willful misconduct.

13.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

13.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

13.5 Correction of Loan Documents. Bank may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

13.6 Amendments in Writing, Integration. All amendments to or terminations of this Agreement or the other Loan Documents must be in writing signed by the parties. All prior agreements, understandings, representations, warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement and the other Loan Documents, if any, are merged into this Agreement and the Loan Documents.

13.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

13.8 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations remain outstanding or Bank has any obligation to make any Credit Extension to Borrower. The obligations of Borrower to indemnify Bank with respect to the expenses, damages, losses, costs and liabilities described in Section 13.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Bank have run.

13.9 Confidentiality. In handling any confidential information, Bank and all employees and agents of Bank shall exercise the same degree of care that Bank exercises with respect to its own proprietary information of the same types to maintain the confidentiality of any non-public information thereby received or received pursuant to this Agreement except that disclosure of such information may be made (i) to the subsidiaries or Affiliates of Bank in connection with their present or prospective business relations with Borrower, (ii) to prospective transferees or purchasers of any interest in the Obligations, (iii) as required by law, regulations, rule or order, subpoena, judicial order or similar order, (iv) as may be required in connection with the examination, audit or similar investigation of Bank, (v) to Bank's accountants, auditors and regulators, and (vi) as Bank may determine in connection with the enforcement of any remedies hereunder. Confidential information hereunder shall not include information that either: (a) is in the public domain or in the knowledge or possession of Bank when disclosed to Bank, or becomes part of the public domain after disclosure to Bank through no fault of Bank; or (b) is disclosed to Bank by a third party, provided Bank does not have actual knowledge that such third party is prohibited from disclosing such information.

[signatures on following page]

IN WITNESS WHEREOF, the parties hereto have caused this Loan and Security Agreement to be executed as of the date first above written.

BELLICUM PHARMACEUTICALS, INC.,
a Delaware corporation

By: /s/ Thomas J. Farrell

Name: Thomas J. Farrell

Title: President & CEO

COMERICA BANK

By: /s/ Steven J. DiPasquale

Name: Steven J. DiPasquale

Title: Vice President

EXHIBIT A

DEFINITIONS

"Accounts" means all presently existing and hereafter arising accounts, contract rights, payment intangibles and all other forms of obligations owing to Borrower arising out of the sale or lease of goods (including, without limitation, the licensing of software and other technology) or the rendering of services by Borrower and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower's Books relating to any of the foregoing.

"Affiliate" means, with respect to any Person, any Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and each of such Person's senior executive officers, directors, and partners.

"Bank Expenses" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses, whether generated in-house or by outside counsel) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; reasonable Collateral audit fees; and Bank's reasonable attorneys' fees and expenses (whether generated in-house or by outside counsel) incurred in amending, enforcing or defending the Loan Documents (including fees and expenses of appeal), incurred before, during and after an Insolvency Proceeding, whether or not suit is brought.

"Borrower State" means Delaware, the state under whose laws Borrower is organized.

"Borrower's Books" means all of Borrower's books and records including: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

"Business Day" means any day that is not a Saturday, Sunday, or other day on which banks in the State of California are authorized or required to close.

"Cash" means unrestricted cash and cash equivalents.

"Change in Control" shall mean a transaction in which any "person" or "group" (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934) becomes the "beneficial owner" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of a sufficient number of shares of all classes of stock then outstanding of Borrower ordinarily entitled to vote in the election of directors, empowering such "person" or "group" to elect a majority of the Board of Directors of Borrower, who did not have such power before such transaction.

"Chief Executive Office State" means Texas, where Borrower's chief executive office is located.

"Closing Date" means the date of this Agreement.

"Code" means the California Uniform Commercial Code as amended or supplemented from time to time.

"Collateral" means the property described on Exhibit B attached hereto and all Negotiable Collateral to the extent not described on Exhibit B, except to the extent any such property (i) is nonassignable by its terms without the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections 9406 and 9408 of the Code), (ii) the granting of a security interest therein is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically become part of the Collateral, or (iii) constitutes the capital stock of a controlled foreign corporation (as defined in the IRC), in excess of 65% of the voting power of all classes of capital stock of such controlled foreign corporations entitled to vote.

"Collateral State" means the state or states where the Collateral is located, which is Texs.

"Contingent Obligation" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Copyrights" means any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held.

"Credit Extension" means each Equipment Advance or any other extension of credit by Bank to or for the benefit of Borrower hereunder.

"Environmental Laws" means all laws, rules, regulations, orders and the like issued by any federal state, local foreign or other governmental or quasi-governmental authority or any agency pertaining to the environment or to any hazardous materials or wastes, toxic substances, flammable, explosive or radioactive materials, asbestos or other similar materials.

"Equipment" means all present and future machinery, equipment, tenant improvements, furniture, fixtures, vehicles, tools, parts and attachments in which Borrower has any interest.

"Equipment Advance(s)" means a cash advance or cash advances under the Equipment Line.

"Equipment Advance Availability End Date" means June 13, 2013.

"Equipment Line" means a Credit Extension of up to One Million Dollars ($1,000,000).

"Equipment Line Maturity Date" means December 13, 2015.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

"Event of Default" has the meaning assigned in Article 8.

"GAAP" means generally accepted accounting principles, consistently applied, as in effect from time to time.

"Guarantor" means a Person that guarantees the Obligations under the terms of a guaranty acceptable to Bank.

"Indebtedness" means (a) all indebtedness for borrowed money or the deferred purchase price of property or services, including without limitation reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

"Insolvency Proceeding" means any proceeding commenced by or against any Person or entity under any provision of the United States Bankruptcy Code, as amended, or under any other bankruptcy or insolvency law, including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"Intellectual Property" means all of Borrower's right, title, and interest in and to the following:

(a) Copyrights, Trademarks and Patents;

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights which may be available to Borrower now or hereafter existing, created, acquired or held;

(d) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(e) All licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights; and

(f) All amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"Interest Rate Addendum" has the meaning set forth for such term in Section 2.3(a) of this Agreement.

"Inventory" means all present and future inventory in which Borrower has any interest.

"Investment" means any beneficial ownership of (including stock, partnership or limited liability company interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"IRC" means the Internal Revenue Code of 1986, as amended, and the regulations thereunder.

"Lien" means any mortgage, lien, deed of trust, charge, pledge, security interest or other encumbrance.

"Loan Documents" means, collectively, this Agreement, any note or notes executed by Borrower, and any other document, instrument or agreement entered into in connection with this Agreement, all as amended or extended from time to time.

"Material Adverse Effect" means (i) a material adverse change in Borrower's, a Guarantor's or a Pledgor's prospects, business or financial condition (including without limitation, evidence of a lack of investor support and/or Borrower's inability to attract sufficient additional equity financing from its investors), (ii) a material impairment in the prospect of repayment of all or any portion of the Obligations or in otherwise performing Borrower's obligations under the Loan Documents, or (iii) a material impairment in the perfection, value or priority of Bank's security interests in the Collateral.

"Negotiable Collateral" means all of Borrower's present and future letters of credit of which it is a beneficiary, drafts, instruments (including promissory notes), securities, documents of title, and chattel paper, and Borrower's Books relating to any of the foregoing.

"Obligations" means all debt, principal, interest, Bank Expenses and other amounts owed to Bank by Borrower pursuant to this Agreement or any other agreement, whether absolute or contingent, due or to become due, now existing or hereafter arising, including any interest that accrues after the commencement of an Insolvency Proceeding and including any debt, liability, or obligation owing from Borrower to others that Bank may have obtained by assignment or otherwise.

“Patents” means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

“Periodic Payments” means all installments or similar recurring payments that Borrower may now or hereafter become obligated to pay to Bank pursuant to the terms and provisions of any instrument, or agreement now or hereafter in existence between Borrower and Bank.

“Permitted Indebtedness” means:

(a) Indebtedness of Borrower in favor of Bank arising under this Agreement or any other Loan Document;

(b) Indebtedness existing on the Closing Date and disclosed in the Schedule;

(c) Indebtedness not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year of Borrower secured by a lien described in clause (c) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the lesser of the cost or fair market value of the equipment financed with such Indebtedness;

(d) Subordinated Debt;

(e) Indebtedness to trade creditors incurred in the ordinary course of business; and

(f) Extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose more burdensome terms upon Borrower or its Subsidiary, as, the case may be.

“Permitted Investment” means:

(a) Investments existing on the Closing Date disclosed in the Schedule;

(b) (i) Marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one (1) year from the date of acquisition thereof, (ii) commercial paper maturing no more than one (1) year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor’s Corporation or Moody’s Investors Service, (iii) Bank’s certificates of deposit maturing no more than one (1) year from the date of investment therein, and (iv) Bank’s money market accounts;

(c) Investments accepted in connection with Permitted Transfers;

(d) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in Subsidiaries not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year;

(e) Investments not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plan agreements approved by Borrower’s Board of Directors;

(f) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower’s business;

(g) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this subparagraph (h) shall not apply to Investments of Borrower in any Subsidiary; and

(h) Joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by Borrower do not exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year

"Permitted Liens" means the following:

(a) Any Liens existing on the Closing Date and disclosed in the Schedule (excluding Liens to be satisfied with the proceeds of the Advances) or arising under this Agreement or the other Loan Documents;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings and for which Borrower maintains adequate reserves, provided the same have no priority over any of Bank's security interests;

(c) Liens securing obligations not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate (i) upon or in any Equipment (other than Equipment financed by a Credit Extension) acquired or held by Borrower or any of its Subsidiaries to secure the purchase price of such Equipment or indebtedness incurred solely for the purpose of financing the acquisition or lease of such Equipment, or (ii) existing on such Equipment at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such Equipment;

(d) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (c) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase;

(e) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Sections 8.5 (attachment) or 8.9 (judgments); and

(f) Liens in favor of other financial institutions arising in connection with Borrower's deposit accounts held at such institutions to secured standard fees for deposit services charged by, but not financing made available by such institutions, provided that Bank has a perfected security interest in the amounts held in such deposit accounts.

"Permitted Stock Repurchases" means repurchases of stock from former employees or directors of Borrower under the terms of applicable repurchase agreements (i) in an aggregate amount not to exceed One Hundred Thousand Dollars ($100,000) in any fiscal year, provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases, or (ii) in any amount where the consideration for the repurchase is the cancellation of indebtedness owed by such former employees to Borrower regardless of whether an Event of Default exists.

"Permitted Transfer" means the conveyance, sale, lease, transfer or disposition by Borrower or any Subsidiary of:

(a) Inventory in the ordinary course of business;

(b) Non-exclusive licenses and similar arrangements for the use of the property of Borrower or its Subsidiaries in the ordinary course of business;

(c) Worn-out or obsolete Equipment not financed with the proceeds of a Credit Extension; or

(d) Other assets of Borrower or its Subsidiaries that do not in the aggregate exceed One Hundred Thousand Dollars ($100,000) during any fiscal year.

“Person” means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

“Pledgor” means a Person that has granted a security interest in its assets in favor of Bank to secure the Obligations.

“Prime Rate” means the variable rate of interest, per annum, most recently announced by Bank, as its “prime rate,” whether or not such announced rate is the lowest rate available from Bank.

“Prohibited Territory” means any person or country listed by the Office of Foreign Assets Control of the United States Department of Treasury as to which transactions between a United States Person and that territory are prohibited.

“Responsible Officer” means each of the Chief Executive Officer, the Chief Operating Officer, the Chief Financial Officer and the Controller of Borrower.

“Schedule” means the schedule of exceptions attached hereto and approved by Bank.

“SOS Reports” means the official reports from the Secretaries of State of each Collateral State, Chief Executive Office State and the Borrower State and other applicable federal, state or local government offices identifying all current security interests filed in the Collateral and Liens of record as of the date of such report.

“Subordinated Debt” means any debt incurred by Borrower that is subordinated in writing to the debt owing by Borrower to Bank on terms reasonably acceptable to Bank (and identified as being such by Borrower and Bank).

“Subsidiary” means any corporation, partnership or limited liability company or joint venture in which (i) any general partnership interest or (ii) more than 50% of the stock, limited liability company interest or joint venture of which by the terms thereof ordinary voting power to elect the Board of Directors, managers or trustees of the entity, at the time as of which any determination is being made, is owned by Borrower, either directly or through an Affiliate.

“Trademarks” means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

DEBTOR: **BELLICUM PHARMACEUTICALS, INC.**

SECURED PARTY: **COMERICA BANK**

EXHIBIT B

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Debtor of every kind, whether presently existing or hereafter created or acquired, and wherever located, including but not limited to: (a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), general intangibles (including payment intangibles and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records; and (b) any and all cash proceeds and/or noncash proceeds thereof, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the California Uniform Commercial Code, as amended or supplemented from time to time.

Notwithstanding the foregoing, the Collateral shall not include any copyrights, patents, trademarks, servicemarks and applications therefor, now owned or hereafter acquired, or any claims for damages by way of any past, present and future infringement of any of the foregoing (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment from the sale, licensing or disposition of all or any part of or rights in, the Intellectual Property (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of December 13, 2012, include the Intellectual Property to the extent necessary to permit perfection of Bank's security interest in the Rights to Payment.

EXHIBIT C

TECHNOLOGY & LIFE SCIENCES DIVISION
LOAN ANALYSIS
LOAN ADVANCE/PAYDOWN REQUEST FORM
DEADLINE FOR SAME DAY PROCESSING IS 3:00* P.M. C.S.T.
DEADLINE FOR CREDIT EXTENSIONS IS 3:00 P.M., C.S.T.**
DEADLINE FOR WIRE TRANSFERS IS 1.30 P.M, C.S.T.

**At month end and the day before a holiday, the cut off time is 1:30 P.M, C.S.T.*
*** Subject to 3 day advance notice.*

TO: Loan Analysis DATE: TIME:
FAX #: (650) 462-6061

FROM: BELLICUM PHARMACEUTICALS, INC. Borrower's Name	TELEPHONE REQUEST (For Bank Use Only):
FROM: _____ Authorized Signer's Name	The following person is authorized to request the loan payment transfer/loan advance on the designated account and is known to me.
FROM: _____ Authorized Signature (Borrower)	_____ Authorized Requested & Phone #
PHONE # _____	_____ Received by (Bank) & Phone #
FROM ACCOUNT#: _____ (please include Note number, if applicable)	_____ Authorized Signature (Bank)
TO ACCOUNT#: _____ (please include Note number, if applicable)	

REQUESTED TRANSACTION TYPE	REQUESTED DOLLAR AMOUNT	For Bank Use Only
PRINCIPAL INCREASE* (ADVANCE)	$ _____	Date Rec'd:
PRINCIPAL PAYMENT (ONLY)	$ _____	Time:
		Comp. Status: YES NO
OTHER INSTRUCTIONS:		Status Date:
_____		Time:
_____		Approval:
_____		

All representations and warranties of Borrower stated in the Loan and Security Agreement are true, correct and complete in all material respects as of the date of the telephone request for and advance confirmed by this Borrowing Certificate, including without limitation the representation that Borrower has paid for and owns the equipment financed by Bank; provided, however, that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such date.

***IS THERE A WIRE REQUEST TIED TO THIS LOAN ADVANCE? (PLEASE CIRCLE ONE) YES NO**
If YES, the Outgoing Wire Transfer Instructions must be completed below.

OUTGOING WIRE TRANSFER INSTRUCTIONS	Fed Reference Number	Bank Transfer Number

The items marked with an asterisk(*) are required to be completed.

*Beneficiary Name	
*Beneficiary Account Number	
*Beneficiary Address	
Currency Type	US DOLLARS ONLY
*ABA Routing Number (9 Digits)	
*Receiving Institution Name	
*Receiving Institution Address	
*Wire Amount	$

EXHIBIT D

INTEREST RATE ADDENDUM

(See Attached)

EXHIBIT E

COMPLIANCE CERTIFICATE

Please send all Required Reporting to:

Comerica Bank
Technology & Life Sciences Division
Loan Analysis Department
300 W. Sixth St.
Suite 1300
Austin, TX, 78701
Fax: (512) 427-7178

FROM: BELLICUM PHARMACEUTICALS, INC.

The undersigned authorized Officer of Bellicum Pharmaceuticals, Inc. ("Borrower"), hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"), (i) Borrower is in complete compliance for the period ending , 201 with all required covenants, including without limitation the ongoing registration of intellectual property rights in accordance with Section 6.8, except as noted below and (i) all representations and warranties of Borrower stated in the Agreement are true and correct in all material respects as of the date hereof; provided, however, that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such date. Attached herewith are the required documents supporting the above certification ("Supporting Documents"). The Officer further certifies the Supporting Documents are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes.

Please indicate compliance status by circling Yes/No under "Complies" or "Applicable" column.

REPORTING COVENANTS	REQUIRED	COMPLIES		NA
Company Prepared Monthly F/S	Monthly, within 30 days	YES	NO	
Compliance Certificate	Monthly, within. 30 days	YES	NO	
CPA Reviewed F/S	Annually, within 180 days of FYE	YES	NO	
Annual Business Plan	Annually, by 1/31	YES	NO	
Intellectual Property Report	Upon Bank's request, quarterly, within 30 days	YES	NO	
Audit	Annual	YES	NO	
If Public:				
10-Q	Quarterly, within 5 days of SEC filing (50 days)	YES	NO	
10-K	Annually, within 5 days of SEC filing (95 days)	YES	NO	
Total amount of Borrower's cash and investments	Amount $	YES	NO	
Total amount of Borrower's cash and investments maintained with Bank	Amount $	YES	NO	

	DESCRIPTION	APPLICABLE	
Legal Action > $100,000 (Sect. 6.2(iv))	Notify promptly upon notice	YES	NO
Inventory Disputes> $100,000 (Sect. 6.3)	Notify promptly upon notice	YES	NO
Mergers & Acquisitions> $100,000 (Sect. 7.3)	Notify promptly upon notice	YES	NO
Cross default with other agreements >$100,000 (Sect. 8.7)	Notify promptly upon notice	YES	NO
Judgments > $100,000 {Sect. 8.9)	Notify promptly upon notice	YES	NO

FINANCIAL COVENANTS	REQUIRED		ACTUAL	COMPLIES	
Permitted Indebtedness for equipment leases	<$100,000	$		YES	NO
Permitted Investments for stock repurchase	<$100,000	$		YES	NO
Permitted Investments for subsidiaries	<$100,000	$		YES	NO
Permitted Investments for employee loans	<$100,000	$		YES	NO
Permitted Investments for joint ventures	<$100,000	$		YES	NO
Permitted Liens for equipment leases	<$100,000	$		YES	NO
Permitted Transfers	<$100,000	$		YES	NO

Please Enter Below Comments Regarding Violations:

The undersigned further acknowledges that at any time Borrower is not in compliance with all the terms set forth in the Agreement, including, without limitation, the financial covenants, no credit extensions will be made.

Very truly yours,

_____
Authorized Signer

_____
Name

_____
Title

SCHEDULE OF EXCEPTIONS

TO LOAN AND SECURITY AGREEMENT

Permitted Indebtedness (Exhibit A)

None

Permitted Investments (Exhibit A)

None

Permitted Liens (Exhibit A)

None

Prior Names (Section 5.5)

None

Litigation (Section 5.6)

None

Inbound Licenses (Section 5.12)

Ariad Pharmaceuticals, Inc. license
Baylor College of Medicine license
Takara Bio license

Exhibit 10.23

FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT

This First Amendment to Loan and Security Agreement ("Amendment") is entered into as of March 1, 2014, by and between **Comerica Bank** ("Bank") and **Bellicum Pharmaceuticals**, **Inc.**, a Delaware corporation ("Borrower").

RECITALS

Borrower and Bank are parties to that Loan and Security Agreement dated December 13, 2012 (as it may be amended from time to time, the "Agreement"). The parties desire to amend the Agreement in accordance with the terms of this Amendment.

NOW, THEREFORE, the parties agree as follows:

1. Exhibit A of the Agreement is amended by adding (in the appropriate alphabetical order), or amending and restating, as applicable, the following defined terms to read in their entireties as follows:

"'Credit Extension' means each Equipment Advance, Growth Capital Advance or any other extension of credit by Bank to or for the benefit of Borrower hereunder."

"'Growth Capital Advance(s)' means a cash advance or cash advances under the Growth Capital Line."

"'Growth Capital Line' means a Credit Extension of up to Five Hundred Thousand Dollars ($500,000)."

"'Growth Capital Maturity Date' means March 1, 2017."

2. New Section 2.1(c) is added to the Agreement to read in its entirety as follows:

"(c) Growth Capital Advances.

(i) Subject to and upon the terms and conditions of this Agreement, Bank agrees to make Growth Capital Advances to Borrower. Borrower may request Growth Capital Advances from the date hereof through September 1, 2014. The aggregate amount of Growth Capital Advances shall not exceed the Growth Capital Line.

(ii) Interest shall accrue from the date of each Growth Capital Advance at the rate specified in the Interest Rate Addendum, and shall be payable in accordance with Section 2.3(b) and on the terms set forth in the Interest Rate Addendum. Any Growth Capital Advances that are outstanding on September 1, 2014 shall be payable in thirty (30) equal monthly installments of principal, plus all accrued interest, beginning on October 1, 2014, and continuing on the same day of each month thereafter until the Growth Capital Maturity Date, at which time all Growth Capital Advances made under this Section 2.1(d) and any other amounts due under this Agreement shall be immediately due and payable. Growth Capital Advances, once repaid, may not be reborrowed. Borrower may prepay any Growth Capital Advances without penalty or premium.

(iii) When Borrower desires to obtain an Growth Capital Advance, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:00 p.m. Central time three (3) Business Days before the day on which the Growth Capital Advance is to be made. Such notice shall be substantially in the form of Exhibit C. The notice shall be signed by a Responsible Officer or its designee. Bank shall be entitled to rely on any facsimile or telephonic notice given by a person who Bank reasonably believes to be a Responsible Officer or a designee thereof, and Borrower shall indemnify and hold Bank harmless for any damages or loss suffered by Bank as a result of such reliance to the Agreement."

3. Section 2.3(a) of the Agreement is amended and restated to read in its entirety as follows:

"(a) Interest Rates.

(i) Equipment Advances. The Equipment Advances shall bear interest, on the outstanding daily balance thereof, on the terms set forth in the Prime Referenced Rate Addendum to Loan and Security Agreement attached hereto as Exhibit D ('Interest Rate Addendum').

(ii) Growth Capital Advances. The Growth Capital Advances shall bear interest, on the outstanding daily balance thereof, on the terms set forth in the Interest Rate Addendum."

4. Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remains in full force and effect in accordance with its terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof.

5. Borrower waives, discharges, and forever releases Bank, Bank's employees, officers, directors, attorneys, stockholders, and their successors and assigns, from and of any and all claims, causes of action, allegations or assertions that Borrower has or may have had at any time up through and including the date of this Amendment, against any or all of the foregoing, regardless of whether any such claims, causes of action, allegations or assertions are known to Borrower or whether any such claims, causes of action, allegations or assertions arose as result of Bank's actions or omissions in connection with the Loan Documents, or any amendments, extensions or modifications thereto, or Bank's administration of the Obligations or otherwise.

6. Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment, and that no Event of Default has occurred and is continuing.

7. As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

(a) this Amendment, executed by Borrower;

(b) an Itemization of Amount Financed Disbursement Instructions (Growth Capital Line), executed by Borrower;

(c) a Certificate of the Secretary of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Amendment;

(d) a nonrefundable $5,000 facility fee with respect to the Growth Capital Line, which may be debited from any of Borrower's accounts at Bank; and

(e) all reasonable Bank Expenses incurred through the date of this Amendment, which may be debited from any of Borrower's accounts.

8. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

BELLICUM PHARMACEUTICALS, INC., a Delaware corporation

By: /s/ Thomas J. Farrell

Title: President & CEO

COMERICA BANK

By: /s/ Steven J. DiPasquale

Title: Vice President

Exhibit 10.24

SECOND AMENDMENT TO LOAN AND SECURITY AGREEMENT

This Second Amendment to Loan and Security Agreement ("Amendment") is entered into as of July 3, 2014, by and between **Comerica Bank** ("Bank") and **Bellicum Pharmaceuticals, Inc.**, a Delaware corporation ("Borrower").

RECITALS

Borrower and Bank are parties to that Loan and Security Agreement dated December 13, 2012, as amended by that certain First Amendment to Loan and Security Agreement dated March 1, 2014 (as it may be amended from time to time, the "Agreement"). The parties desire to further amend the Agreement in accordance with the terms of this Amendment.

NOW, THEREFORE, the parties agree as follows:

1. Sections 2.1(c)(i) and 2.1(c)(ii) of the Agreement are amended and restated to read in their entireties as follows:

> "(i) Subject to and upon the terms and conditions of this Agreement, Bank agrees to make Growth Capital Advances to Borrower. Borrower may request Growth Capital Advances from the date hereof through March 1, 2015. The aggregate amount of Growth Capital Advances shall not exceed the Growth Capital Line.
>
> (ii) Interest shall accrue from the date of each Growth Capital Advance at the rate specified in the Interest Rate Addendum, and shall be payable in accordance with Section 2.3(b) and on the terms set forth in the Interest Rate Addendum, Any Growth Capital Advances that are outstanding on March 1, 2015 shall be payable in twenty four (24) equal monthly installments of principal, plus all accrued interest, beginning on April 1, 2015, and continuing on the same day of each month thereafter until the Growth Capital Maturity Date, at which time all Growth Capital Advances made under this Section 2.1(d) and any other amounts due under this Agreement shall be immediately due and payable. Growth Capital Advances, once repaid, may not be reborrowed. Borrower may prepay any Growth Capital Advances without penalty or premium."

2. Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remains in full force and effect in accordance with its terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof.

3. Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment, and that no Event of Default has occurred and is continuing,

4. As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

(a) this Amendment, executed by Borrower;

(b) Corporation Resolutions and Incumbency Certification, executed by Borrower;

(c) all reasonable Bank Expenses incurred through the date of this Amendment, which may be debited from any of Borrower's accounts.

5. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

BELLICUM PHARMACEUTICALS, INC., a Delaware corporation

By: _____

Title: _____

COMERICA BANK

By: _____

Title: _____

Exhibit 10.25

Execution Copy

THIS WARRANT AND THE SECURITIES ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR THE SECURITIES LAWS OF ANY STATE (THE "STATE SECURITIES ACTS") AND MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT AS TO THE SECURITIES UNDER THE SECURITIES ACT AND/OR THE STATE SECURITIES ACTS, UNLESS AN EXEMPTION FROM SUCH REGISTRATION IS AVAILABLE.

COMMON STOCK PURCHASE WARRANT
OF
BELLICUM PHARMACEUTICALS, INC.

Dated: September 27, 2007

THIS WARRANT CERTIFIES THAT, for the value received, the State of Texas, acting by and through the Office of Governor Economic Development and Tourism, together with its assigns (the "***Warrantholder***"), is entitled to purchase from **Bellicum Pharmaceuticals, Inc. a Delaware corporation** (the "***Company***"), up to the number of shares set forth in Section 1.1 below (subject to adjustment in accordance with the provisions hereof) of the Company's common stock, par value $0.001 per share (the "***Common Stock***") at an exercise price (the "***Exercise Price***") equal to $0.001 per share. This Warrant is issued in connection with the Texas Emerging Technology Fund Grant Agreement, executed of oven date herewith by and between the Warrantholder and the Company (the "***Grant Agreement***").

Upon delivery of this Warrant, together with payment of the applicable Exercise Price (which may be accomplished by either a "***Cash Exercise***" or a "***Cashless Exercise***" as described in Section 1.3 below) multiplied by the total number of shares of Common Stock thereby purchased (the "***Aggregate Exercise Price***"), at the principal office of the Company or at such other office or agency as the Company may designate by notice in writing to the Warrantholder, the Warrantholder shall be entitled to receive a certificate or certificates for the number of shares of Common Stock so purchased. The date on which the Company receives (i) this Warrant and (ii) payment for the shares of Common Stock in the 'manner provided for in Section 1.3 below shall be referred to herein as the "***Exercise Date***." All shares of Common Stock which may be issued upon the exercise of this Warrant ("***Warrant Shares***") shall, upon issuance, be fully paid, validly issued and non-assessable, free from all taxes, liens and charges.

This Warrant is subject to the following terms and conditions:

1. **Exercise of Warrant.**

1.1 **Number of Shares**. Subject to adjustment as provided in Section 2 hereof, the number of shares of Common Stock issuable upon the exercise of this Warrant shall be equal to the quotient obtained by dividing

(a) The total amount of the Grant (as defined in the Grant Agreement) disbursed to the Company under the Grant Agreement as of the Exercise Date, by

(b) Either:

(i) if the first Qualifying Financing Transaction (as defined below) to occur following the execution of this Warrant is closed and consummated within ninety (90) days of the date hereof, then the Common Stock Price (as defined below) of such Qualifying Financing Transaction; or

(ii) if the first Qualifying Financing Transaction to occur following the execution of this Warrant is closed and consummated after ninety (90) days of the date hereof but on or prior to the eighteenth (18th) month anniversary of the date hereof, then eight-tenths (0.80) multiplied by the Common Stock Price of such Qualifying Financing Transaction; or

(iii) if no Qualifying Financing Transaction is closed and consummated on or before the eighteenth (18th) month anniversary of the date hereof or the Warrantholder exercises this Warrant prior to the closing and consummation of any such Qualifying Financing Transaction, then **0.5080**.

"***Common Stock Price***" shall mean (i) if Common Stock is sold in a Qualifying Financing Transaction, the price per share at which such Common Stock is sold in such Qualifying Financing.Transaction or (ii) if Common Stock is not sold in a Qualifying Financing Transaction, the price per share of capital stock that is sold in such Qualifying Financing Transaction as determined by dividing (A) the total amount received by the Company as consideration for the sale of such capital stock, plus the minimum aggregate amount of additional consideration payable to the Company upon the conversion or exchange of all such capital stock into Common Stock, if any, by (B) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of such capital stock.

"***Qualifying Financing Transaction***" shall mean the issuance and sale of Common Stock or other classes or series of authorized capital stock of the Company (excluding, however, any securities of the Company, other than capital stock, that are convertible into or exchangeable or exercisable for capital stock of the Company, such as warrants, options, or convertible debt) in a public offering or private placement for an aggregate amount equal to or greater than Five Hundred Thousand Dollars ($500,000) to any investors or financing source; *provided, however*, that a Qualifying Financing Transaction does not include a transaction in which more than forty percent (40%) of the total amount of capital stock issued and sold is acquired by Company Associates. As used herein, "***Company Associates***" shall include as of the date hereof the following persons or entities, including any affiliates of such person or entities: the current shareholders of the Company (including the holders of Common Stock, preferred stock, or other capital stock of the Company), current debtholders of the Company, and current holders of convertible securities or holders of any right to purchase or acquire any capital stock of the Company. It is the intent and expectation of the Company and the Warrantholder that the investors or financing sources who are purchasing capital stock in a Qualifying Financing Transaction and who are not Company Associates will play a significant role in establishing company valuation at the time of such transaction.

1.2 **Time of Exercise**. This Warrant may be exercised in whole or in part commencing on the earlier of (i) the date of the eighteenth (18th) month anniversary of the execution of this Warrant or (ii) the date on which any of the following events occur: (a) any capital reorganization or any reclassification of the capital stock of the Company, (b) any consolidation or merger of the Company, (c) the disposition or transfer of assets of the Company other than in the ordinary course of the Company's business, (d) any dividend or other distribution to the holders of capital stock of the Company in the form of any asset, including without limitation securities of the Company, or (e) the dissolution, liquidation or winding up of the Company. As used herein, the "***Vesting Date***" shall mean the date on which this Warrant becomes exercisable in accordance with this Section 1.2. This Warrant shall remain outstanding and exercisable into perpetuity following the Vesting Date and shall not expire.

1.3 **Method of Exercise**. The Warrantholder may exercise, but is not obligated to exercise, in whole or in part, the purchase rights evidenced hereby on or after the Vesting Date. Such exercise shall be effected by:

(a) the surrender of the Warrant at the principal office of the Company together with the completed Exercise Form in substantially the form attached as "Exhibit A"; and

(b) the payment to the Company of the Aggregate Exercise Price for all shares of Common Stock purchased. At the option 'of the Warrantholder, payment of the Aggregate Exercise Price may be made either by a Cash Exercise or a Cashless Exercise as follows. In the case of a Cash Exercise, the Warrantholder shall deliver to the Company a check or wire transfer of immediately available funds in an amount equal to the Aggregate Exercise Price. In the case of a Cashless Exercise, the Warrantholder shall surrender to the Company this Warrant as described below. The Cashless Exercise is effected by converting the Warrant (the "***Conversion Right***") into shares of Common Stock as follows. Upon exercise of the Conversion Right with respect to a particular number of shares of Common Stock under the Warrant (the "***Converted Warrant or Portion***"), the Company shall deliver to the Warrantholder (without payment by the Warrantholder of any cash, cancellation of indebtedness or delivery of any other consideration) that number of shares of Common Stock equal to the quotient obtained by dividing (a) the difference between (i) the product of the Fair Market Value (as defined in Section 1.8 below) of a share of Common Stock as of the date the Conversion Right is exercised (the "***Conversion Date***") and the number of shares of Common Stock into which the Converted Warrant or Portion could have been exercised hereunder and (ii) the Aggregate Exercise Price that would have been payable upon such exercise of the Converted Warrant or Portion as of the Conversion Date, by (b) the Fair Market Value of a share of Common Stock as of the Conversion Date.

1.4 **Issuance of Certificates for Shares**.

(a) Within ten (10) business days of the Company's receipt of the Warrant, the completed and signed Exercise Form substantially in the form attached hereto and the requisite payment (if any), the Company shall issue and deliver (or cause to be delivered) to the exercising Warrantholder stock certificates representing, in the aggregate, the total number of shares of Common

Stock purchased. In case the Warrantholder shall exercise this Warrant with respect to less than all of the shares of Common Stock that may be purchased under this Warrant, or if future disbursements are made under the Grant Agreement following such exercise, the Company shall execute a new warrant in the form of this Warrant for the balance of such shares and deliver such new warrant to the Warrantholder.

(b) The issuance of certificates for shares upon exercise of this Warrant shall be made without charge to the holder thereof for any issuance tax in respect thereof or other cost incurred by the Company in connection with such exercise and the related issuance of the shares.

1.5 **Reservation of Shares**. The Company shall at all times reserve and keep available out of its authorized but unissued Common Stock solely for the purpose of issuance upon the exercise of this Warrant, the maximum number of shares issuable upon the exercise of this Warrant. If at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to permit exercise of this Warrant, the Company will take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes.

1.6 **Warrant Register**. The Company shall maintain at its principal executive offices books for the registration and the registration of transfer of the Warrant. The Company may deem and treat the Warrantholder as the absolute owner hereof (notwithstanding any notation of ownership or other writing thereon made by anyone) for all purposes, and neither the Company nor the Warrantholder shall be affected by any notice to the contrary.

1.7 **Transfers**. The Company shall not close its books against the transfer of this Warrant or of any shares issued or issuable upon the exercise of this Warrant in any manner which interferes with the timely exercise of this Warrant.

1.8 **Fair Market Value**. As used herein, "***Fair Market Value***" as of a particular date shall mean with respect to each share of Common Stock the average of the closing prices of the Company's Common Stock sold on all securities exchanges on which the Common Stock may at the time be listed, or, if there have been no sales on any such exchange on any day, the average of the highest bid and lowest asked prices on all such exchanges at the end of such day, or, if on any day the Common Stock is not so listed, the average of the representative bid and asked prices quoted in the NASDAQ System as of 4:00 p.m., New York City time, or, of on any day the Common Stock is not quoted in the NASDAQ System, the average of the highest bid and lowest asked price on such day in the domestic over-the-counter market as reported by the National Quotation Bureau, Incorporated, or any similar successor organization, in each such case averaged over a period of ten (10) days consisting of the day as of which the current fair market value of Common Stock is being determined and the nine (9) consecutive business days prior to such day. If at any time the Common Stock is not listed on any securities exchange or quoted in the NASDAQ System or the over-the-counter market, the current fair market value of Common Stock shall be the highest price per share which the Company could obtain from a willing buyer (not a current employee or director) for shares of Common Stock sold by the Company, from authorized but unissued shares, as mutually determined in good faith by the Company's Board of Directors and the

Warrantholder, unless (i) the Company shall become subject to a merger, acquisition, or other consolidation pursuant to which the Company is not the surviving party, in which case the current fair market value of the Common Stock shall be deemed to be the value received by the holders of the Company's Common Stock for each share of stock, pursuant to the Company's acquisition or (ii) the Company shall sell such shares in conjunction with the initial underwritten public offering of the Company's Common Stock pursuant to a registration statement filed under the Securities Act, in which case, the fair market value of the shares of stock subject to this Warrant shall be the price at which all registered shares are sold to the public in such offering.

2. **Certain Adjustments.**

2.1 **Exercise Price; Adjustment of Number of Shares**. The Exercise Price set forth above and the number of Warrant Shares purchasable hereunder shall be subject to adjustment from time to time as hereinafter provided.

2.2 **Reorganization; Asset Sales; Etc**. In case of (i) any capital reorganization or any reclassification of the capital stock of the Company, (ii) any consolidation or merger of the Company, (iii) the disposition or transfer of assets of the Company other than in the ordinary course of the Company's business, (iv) any dividend or other distribution to the holders of capital stock of the Company in the form of additional shares of capital stock of the Company or rights, options or warrants to purchase or otherwise acquire shares of capital stock of the Company, or (v) the dissolution, liquidation or winding up of the Company, this Warrant shall thereafter be convertible into and the Warrantholder shall thereafter be entitled to purchase (and it shall be a condition to the consummation of any such transaction or event that appropriate provision shall be made so that such Warrantholder shall thereafter be entitled to purchase) the kind and amount of shares of stock and other securities and property receivable in such transaction by a holder of the number of Warrant Shares of the Company into which this Warrant entitled the Warrantholder to purchase immediately prior to such capital reorganization, reclassification of capital stock, non-surviving combination or disposition; and in any such case appropriate adjustments shall be made in the application of the provisions of this paragraph with respect to rights and interests thereafter purchasable upon the exercise of this Warrant and the Exercise Price of this Warrant. In the case of a capital reorganization or reclassification, the number of Warrant Shares shall be proportionately increased in the case of a split or subdivision or proportionately decreased in the case of a combination and the Exercise Price shall be proportionately decreased in the case of a split or subdivision or proportionately increased in the case of a combination.

2.3 **Dividends**. In the case of any dividends declared or paid on the Common Stock of the Company prior to the exercise of this Warrant, other than dividends payable solely in additional shares of capital stock of the Company, or rights, options or warrants to purchase or otherwise acquire capital stock of the Company which are addressed in clause (iv) of Section 2.2 hereof, the Warrantholder shall be entitled to receive the value of any such dividends to the full extent as if Warrantholder had exercised this Warrant as of the date of declaration or payment of any such dividend. The Warrantholder, in its sole discretion, shall elect one of the two following methods for the Company to pay the value of such dividends to the Warrantholder: (i) in cash or (ii) by adjusting this Warrant to represent the right to acquire, in addition to the number of Warrant Shares receivable upon exercise of the Warrant, and without payment of any

additional consideration therefor, the amount of such other or additional stock or other securities or property (other than cash) of the Company that such holder would hold on the date of such exercise had it been the holder of record of the shares of Common Stock receivable upon exercise of the Warrant on the date hereof and the date of the dividend and had thereafter retained such shares and/or all other additional stock available by it as aforesaid during such period, giving effect to all adjustments called for during such period by the provisions hereof.

2.4 **Notice of Adjustments or Dividends**. Upon the occurrence of any event which causes an adjustment as provided herein or if dividends are declared or paid on the Common Stock of the Company, the Company shall promptly deliver to the Warrantholder a notice setting forth a brief statement of such and, if applicable, the adjusted Exercise Price and number of shares of Common Stock or such other or additional stock or other securities or property that this Warrant then represents the right to acquire following such adjustment.

3. **Piggyback Registration Rights; Market Stand-Off.**

3.1 **Registration Rights**. In the event of a public offering or any other registration of the Company's Common Stock or such other type or class of stock or securities issued or issuable upon exercise of this Warrant, the Warrantholder shall enjoy and be entitled to standard piggyback registration rights granted by the Company to any shareholder on terms no less favorable than granted to any such shareholder with respect to the securities issued or issuable upon exercise this Warrant.

3.2 **Company Obligations**. This Section 3 comprises the sole obligation of the Company to register any of the Warrant Shares or such other or additional stock or securities that this Warrant represents the right to acquire. The Warrantholder does not have any "demand" registration rights with respect to any securities issued upon exercise of this Warrant.

3.3 **Notice of Registration Event**. The Company shall promptly deliver to the Warrantholder a notice of any public offering or other registration of the Company's Common Stock or other type or class of stock or securities that have been issued or may be issuable upon exercise of this Warrant. The Company shall deliver such notice to the Warrantholder in a manner and at a time sufficient to permit the Warrantholder to enjoy the piggyback registration rights as provided in this Section 3.

3.4 **Market Stand-Off**. If requested by the lead managing underwriter in connection with an initial public offering of shares of Common Stock of the Company pursuant to a registration statement filed under the Securities Act and declared effective by the Securities and Exchange Commission (an "***IPO***"), unless expressly authorized to do so by the lead managing underwriter, the Warrantholder agrees not to effect any sale or distribution of any Common Stock or other shares of capital stock of the Company held by the Warrantholder, including any securities convertible into or exchangeable or exercisable for Common Stock or other shares of capital stock of the Company, for such a period of time no greater than and upon such terms no less favorable than as are provided in the lock-up arrangements or market stand-off agreements that the Company's directors, officers and shareholders owning five percent (5.0%) or more of the Company's fully diluted capital stock have entered into with the managing underwriters (the "***Lock-Up Period***"); *provided*, *however*, that the Warrantholder shall not be subject

to such market stand-off obligation unless (i) all of the Company's directors, officers and shareholders owning five percent (5.0%) or more of the Company's fully diluted capital stock have entered into lock-up arrangements or market stand-off agreements with the managing underwriters; and (ii) at such time of the IPO, the Warrantholder owns five percent (5.0%) or more of the Company's fully diluted capital stock, including any securities convertible into or exchangeable or exercisable for capital stock.

The Company agrees not to effect any public sale or distribution of any securities for its own account (except pursuant to registrations on Form S-4 or S-8 or any similar or successor form) during the Lock-Up Period, to the extent reasonably requested by the managing underwriter (except for securities being sold by the Company for its own account under such registration statement).

4. **Representations and Covenants of the Company.**

4.1 **No Impairment**. So long as this Warrant is outstanding, the Company will not, by amendment of its Certificate of Incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Company, but will at all times in good faith assist in the carrying out of all the provisions of this section and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Warrantholder hereunder against impairment.

4.2 **Securities Law**. The Company shall comply with the Securities Act, the State Securities Acts, and all other applicable laws and regulations in respect of the issuance of this Warrant and the issuance of any securities issued or issuable hereunder, and shall timely make all required filings and reports under such laws and regulations.

4.3 **Authority**. The Company represents that it has the power to issue this Warrant and to carry out the obligations hereunder, and the execution, delivery and performance by the Company of this Warrant have been duly authorized by all necessary corporate action.

4.4 **Record Keeping and Reports**. The Company shall maintain or cause to be maintained books, records, documents and other evidence pertaining to compliance with the requirements contained in this Warrant, and during all such time when the Warrantholder is holding this Warrant or any securities issued upon the exercise of this Warrant, upon request shall allow or cause the entity which is maintaining such items to allow the Warrantholder, or auditors for the Warrantholder, including the State Auditor for the State of Texas, to inspect, audit, copy, or abstract, all of books, records, papers, or other documents relevant to this Warrant and the securities issued or issuable upon exercise hereof. The Company shall use or cause the entity which is maintaining such books and records to use generally accepted accounting principles in the maintenance of such books and records, and shall retain or cause to be retained all of such books, records, documents and other evidence for a period of 7 years from the date that this Warrant is exercised in full or this Warrant is terminated.

4.5 **Required Notices**. If at any time during which the Warrantholder is holding this Warrant or any securities issued upon the exercise of this Warrant, the Company shall (i) pay any dividend payable on shares of its Common Stock or make any

distribution to the holders of its capital stock, (ii) offer for subscription pro rata to the holders of its capital stock any additional shares of stock of any class or any other rights, (iii) effect any capital reorganization or any reclassification of or change in its outstanding capital stock, or any consolidation or merger, or any sale, transfer or other disposition of all or substantially all of its property, assets, business and goodwill as an entirety, or the liquidation, dissolution or winding up of the Company, (iv) effect or become aware of any transaction in which one or more shareholders of the Company effect a transaction involving the purchase or sale of the Company's capital stock involving an amount equal to or greater than five percent (5%) the Company's then outstanding capital stock, or (v) effect any transaction resulting in a transfer of ownership of the Company whereby persons obtain the right to elect a majority of the directors of the Company who did not have such right prior to such transaction; then, in any such event, the Company shall cause written notice to be mailed to the Warrantholder on or before the occurrence thereof. The notice shall also specify the date on which such transaction occurred or will occur and such facts with respect thereto as shall be reasonably necessary to indicate the effect of such action on the rights of the Warrantholder.

4.6 **No Other Agreements**. Other than the Grant Agreement, the Warrantholder shall not be required to enter into any other agreement or type of agreement, including but not limited to a shareholder agreement, in connection with this Warrant and the Company's obligation to issue and deliver to the Warrantholder the shares issuable upon exercise of this Warrant.

5. **Representations and Covenants of the Warrantholder.**

5.1 **Investment Purposes**. The Warrantholder, by acceptance hereof, agrees that this Warrant and the shares of Common Stock or other securities to be issued upon exercise hereof are being acquired for the Warrantholder's own account to be held on behalf of the State of Texas pursuant to the provisions of Chapter 490 of the Texas Government Code and that the Warrantholder will not offer, sell or otherwise dispose of this Warrant or any shares of Common Stock or other securities issuable hereunder except under circumstances which will not result in a violation of the Securities Act or any State Securities Acts. Otherwise, the Warrantholder is permitted at any time and without limitation to offer, sell or otherwise dispose of this Warrant and any shares of Common Stock or other securities issued hereunder in a manner that is in compliance with the Securities Act and any applicable State Securities Acts, including making such offers, sales or dispositions under Rule 144 of the Securities Act.

5.2 **Securities Law**. Warrantholder understands and acknowledges that the shares of Common Stock or other securities to be issued upon exercise hereof have not been registered with the SEC under the Securities Act, but have been issued under an exemption or exemptions from the registration requirements of the Securities Act, and they have not been registered under any State Securities Act. Warrantholder understands that only the Company may file a registration statement with the SEC or appropriate state agency and, except as provided in Section 3 above, the Company is under no obligation to do so with respect to any of the shares of Common Stock or other securities to be issued hereunder.

6. **Miscellaneous.**

6.1 **Successor and Assigns**. Warrantholder may assign this Warrant or a portion thereof. The terms of this Warrant shall be binding upon and shall inure to the benefit of any successors or assigns of the Company and of the Warrantholder and of the Common Stock or other securities issued upon the exercise hereof.

6.2 **No Rights as Shareholder**. Warrantholder, as such, shall not be entitled to vote or be deemed to be a shareholder of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the holder of this Warrant, as such, any rights of a shareholder of the Company or any right to vote, give or withhold consent to any corporate action, or control, elect or appoint any member or members of the Company's Board of Directors. Further, following any exercise of this Warrant, for so long as the Warrantholder holds any of the shares of Common Stock or other securities issued upon exercise hereof, the Warrantholder, as a shareholder, hereby waives its right to vote, give or withhold consent to any corporate action, or control, elect or appoint any member or members of the Company's Board of Directors; *provided, however*, that following exercise of this Warrant, if the Warrantholder has sold this Warrant or any shares of Common Stock or other securities issued upon exercise of this Warrant, the purchaser thereof shall enjoy full rights as a shareholder of the Company.

6.3 **No Fractional Shares**. No fractional share shall be issued upon exercise of this Warrant. The Company shall, in lieu of issuing any fractional share, pay Warrantholder a sum in cash equal to the Fair Market Value of such fraction on the date of exercise.

6.4 **Replacement**. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and., in the case of any such loss, theft or destruction, upon delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company, or in the case of any such mutilation, upon surrender and cancellation of such Warrant, the Company will execute and deliver, in lieu thereof, a new Warrant of like date and tenor.

6.5 **Business Days**. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or Sunday or shall be a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a legal holiday.

6.6 **Governing Law**. This Warrant is made and executed in the State of Texas, and this Warrant and all disputes arising out of or relating thereto shall be governed by the laws of the State of Texas, without regard to any otherwise applicable conflict of law rules or requirements.

The Company agrees that any action, suit, litigation or other proceeding (collectively "litigation") arising out of or in any way relating to this Warrant, or the matters referred to therein, shall be commenced exclusively in the Travis County District Court or the United States District Court for the Western District of Texas, Austin Division, and hereby irrevocably and unconditionally consent to the exclusive jurisdiction of those courts for the purpose of prosecuting and/or defending such litigation. The Company hereby waives and agrees not to assert by way of motion, as a defense, or otherwise, in any suit, action or proceeding, any claim that (a) the Company is

not personally subject to the jurisdiction of the above-named courts, (b) the suit, action or proceeding is brought in an inconvenient forum or (c) the venue of the suit, action or proceeding is improper.

6.7 **Agreement by Warrantholder**. Receipt of this Warrant by the Warrantholder hereof shall constitute acceptance of and agreement to the foregoing terms and conditions.

6.8 **Amendment**. Any term of this Warrant May be amended and the observance of any term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively) with the written consent of the Company and the holder hereof.

6.9 **Stock Certificate Legend**. Each certificate representing shares of Common Stock issued pursuant to this Warrant shall bear the following legend:

> THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), AND MAY NOT BE OFFERED, SOLD, ASSIGNED, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF UNLESS AND UNTIL REGISTERED UNDER THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR UNLESS SUCH OFFER, SALE, ASSIGNMENT, PLEDGE, HYPOTHECATION, TRANSFER OR OTHER DISPOSITION IS EXEMPT FROM REGISTRATION OR IS OTHERWISE IN COMPLIANCE WITH THE ACT AND SUCH LAWS, AS THE SAME MAY BE AMENDED FROM TIME TO TIME.

6.10 **Notices**. All notices, requests, demands and other communications will be in writing and will be deemed given and received (i) on the date of delivery when delivered by hand, (ii) on the following business day when sent by confirmed simultaneous telecopy, (iii) on the following business day when sent by receipted overnight courier, or (iv) three (3) business days after deposit in the United States Mail when mailed by registered or certified mail, return receipt requested, first class postage prepaid, as follows:

If to the Warrantholder to:

ATTN: Emerging Technology Fund Grant Program
General Counsel
Office of the Governor
P.O. Box 12428
Austin, Texas 78711
Phone: 512-463-1788
Fax: 512-463-1932

If to Company to:

Mr. Thomas Farrell
Bellicum Pharmaceuticals, Inc.
Twelve Greenway Plaza, Suite 1380
Houston, Texas 77046
Phone: (512) 542-0010
Fax: (512) 542-0062

6.11 **Proceeds**. This Warrant, the securities issuable upon exercise hereof, and all amounts of cash or other benefits earned or received by the Warrantholder hereunder or by sale hereof are held for and on behalf of the State of Texas. Any and all cash received by the Warrantholder under or by sale of this Warrant or the securities issuable hereunder shall be deposited into the Emerging Technology Fund in accordance with Chapter 490 of the Texas Government Code.

6.12 **Descriptive Headings**. The descriptive headings of the several sections and paragraphs of this Warrant are inserted for convenience only and do, not constitute a part of this Warrant.

6.13 **Severability**. If any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable in any respect for any reason, the validity, legality and enforceability of any such provision in every other respect and of the remaining provisions hereof shall not be in any way impaired, unless the provisions held invalid, illegal or unenforceable shall substantially impair the benefits of the remaining provisions hereof.

6.14 **Further Assurances**. Each of the parties shall execute such documents and perform such further acts (including, without limitation, obtaining any consents, exemptions, authorizations or other actions by, or giving any notices to, or making any filings with, any governmental authority or any other person, and otherwise fulfilling, or causing the fulfillment of, the various obligations made herein), as may be reasonably required or desirable to carry out or to perform the provisions of this Warrant and to consummate and make effective as promptly as possible the transactions contemplated by this Warrant.

6.15 **Survival**. The representations and covenants of the respective parties contained herein or made pursuant to this Warrant as well as contained in Section 3 hereof shall survive the execution, delivery and exercise of this Warrant. Further, this Warrant and all representations, covenants, agreements and obligations contained herein shall survive any breach, expiration or termination of the Grant Agreement.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its duly authorized officer as of the date first written above.

Bellicum Pharmaceuticals, Inc.

By: /s/ Thomas J. Farrell
Name: Thomas J. Farrell
Its: CEO

Exhibit "A"

Exercise Form

The undersigned, representing the State of Texas, acting by and through the Office of Governor Economic Development and Tourism (the "***Warrantholder***"), pursuant to the provisions of the Common Stock Purchase Warrant, dated (the "***Warrant***"), granted to the Warrantholder by **Bellicum Pharmaceuticals, Inc., a Delaware corporation** (the "***Company***"), hereby agrees to subscribe for and purchase shares of the Common Stock, par value $0.001 per share, of the Company covered by the Warrant, and makes such payment therefor in full either at the price per share or by Cashless Exercise as provided by the Warrant.

Signature: _____

Name: _____

Title: _____

Dated: _____

INSTRUCTION'S FOR REGISTRATION OF STOCK:

Name _____
(please type or print in block letters)

Address _____

Address _____

Exhibit 10.26

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR UNDER ANY STATE SECURITIES LAWS ("ACTS"). THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE ACTS OR AN OPINION OF COUNSEL SATISFACTORY TO THE CORPORATION THAT SUCH REGISTRATION IS NOT REQUIRED.

LOAN ADVANCE WARRANT

WARRANT TO PURCHASE STOCK

Date of Issuance: September , 2010

This Warrant is issued to John Bird and Jennifer Bird, as Joint Tenants with Right of Survivorship (the "Warrantholder" or the "Holder"), by Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "Company").

1. Purchase of Shares. Subject to the terms and conditions of this Warrant, the Holder is entitled, upon surrender of this Warrant at the principal office of the Company (or at such other place as the Company shall notify the Holder hereof in writing), to purchase from the Company up to 16,667 fully paid and nonassessable shares of the Company's Common Stock. These shares of Common Stock issuable pursuant to this Section 1 (the "Shares") shall also be subject to adjustment pursuant to Section 9 hereof.

2. Purchase Price. The purchase price per share for the Shares shall be $0.30, subject to adjustment pursuant to Section 9 hereof (such price, as adjusted from time to time, is herein referred to as the "Exercise Price").

3. Exercise Period. This Warrant shall be exercisable, in whole or in part, during the term commencing on the date of issuance set forth above and ending at 5:00 p.m. on the fifth anniversary of such date; *provided*, *however,* that in the event of (X) the closing of the issuance and sale of shares of Common Stock of the Company in the Company's first underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), (Y) the closing of the Company's sale or transfer of all or substantially all of its assets or (Z) the closing of the acquisition of the Company by another entity by means of merger, consolidation or other transaction or series of related transactions, resulting in the exchange of the outstanding shares of the Company's capital stock such that the stockholders of the Company prior to such transaction own, directly or indirectly, less than 50% of the voting power of the surviving entity, this Warrant shall, on the date of such event, no longer be exercisable and become null and void. In the event of a proposed transaction of the kind described above, the Company shall notify the Holder at least thirty (30) days prior to the consummation of such event or transaction.

4. Method of Exercise. While this Warrant remains outstanding and exercisable in accordance with Section 3 above, the Holder may exercise, in whole or in part, the purchase rights evidenced hereby. Such exercise shall be effected by:

(a) the surrender of the Warrant, together with a duly executed copy of the form of subscription attached hereto, to the Secretary of the Company at its principal offices; and

(b) the payment to the Company of an amount equal to the aggregate Exercise Price for the number of Shares being purchased.

If this Warrant is exercised in part, the Company shall issue to the Holder a new Warrant upon the same terms as this Warrant but for the balance of the Shares for which this Warrant remains exercisable.

5. Net Issue Exercise.

(a) In addition to and without limiting the rights of the Holder under the terms hereof, the Holder may elect to receive Shares equal to the value of this Warrant (or the portion thereof being canceled) by surrender of this Warrant at the principal office of the Company together with notice of such election in which event the Company shall issue to Holder the number of the Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where

X - The number of Shares to be issued to the Holder of this Warrant after exercise.

Y - The number of Shares to be exercised.

A - The fair market value of one Share.

B - Exercise price of the Shares at the date of exercise.

(b) No payment of any cash or other consideration to the Company shall be required from the Holder of this Warrant in connection with any exercise of this Warrant by exchange pursuant to this Section 5. Such exchange shall be effective upon the date of receipt by the Company of this Warrant surrendered for cancellation and a written request from the Holder that the exchange pursuant to this Section 5 be made, or at such later date as may be specified in such request. No fractional shares arising out of the above formula for determining the number of shares issuable in such exchange shall be issued and the Company shall in lieu thereof make payment to the Holder of cash in the amount of such fraction multiplied by the fair market value of one Share.

(c) For the purposes of this Section 5, “fair market value” of the Shares shall be determined in good faith by the Board of Directors of the Company.

6. Certificates for Shares. Upon the exercise of the purchase rights evidenced by this Warrant, one or more certificates for the number of Shares so purchased shall be issued as soon as practicable thereafter.

7. Issuance of Shares. The Company covenants that the Shares, when issued pursuant to the exercise of this Warrant, will be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

8. Lock-Up Period. The Holder hereby agrees that, if so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any registration of the offering of any securities of the Company under the Securities Act, the Holder will not offer, sell, contract to sell, grant any option to purchase, make any short sale or otherwise dispose of, make a distribution of, or otherwise reduce the economic risk of owning any capital stock of the Company held by or on behalf of the Holder or beneficially owned by the Holder in accordance with the rules and regulations of the Securities and Exchange Commission during the 180-day period (or such other period as may be requested in writing by the Managing Underwriter and agreed to in writing by the Company (the "Market Standoff Period") following the effective date of a registration statement of the Company filed under the Securities Act. Such restriction shall apply only to the first registration statement of the Company to become effective under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period. This restriction shall be binding on any transferee of shares from the holder; provided, however, that if any officer, director or 5% beneficial owner of the Company is not prohibited from transferring any securities of the Company, then the Holder shall not be bound by this provision.

9. Adjustment of Exercise Price and Number of Shares. The number of and kind of securities purchasable upon exercise of this Warrant and the Exercise Price shall be subject to adjustment from time to time as follows:

(a) If the Company shall at any time prior to the expiration of this Warrant subdivide the class and series of the Company's equity securities that will be issued upon exercise of this Warrant, by split-up or otherwise, or combine or issue additional shares of the class and series of the Company's equity securities that will be issued upon exercise of this Warrant as a dividend with respect to any shares of the class and series of the Company's equity securities that will be issued upon exercise of this Warrant, the number of Shares issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination. Appropriate adjustments shall also be made to the Exercise Price, but the aggregate purchase price payable for the total number of Shares purchasable under this Warrant (as adjusted) shall remain the same. Any adjustment under this Section 9(a) shall become effective at the close of business on the date the subdivision or combination becomes effective, or as of the record date of

such dividend, or in the event that no record date is fixed, upon the making of such dividend. The provisions of this Section 9(a) shall apply similarly to successive subdivisions, combinations or stock dividends.

(b) In case of any reclassification, capital reorganization or change in the class and series of the Company's equity securities that will be issued upon exercise of this Warrant (other than as a result of a subdivision, combination or stock dividend provided for in Section 9(a) above), then the Holder of this Warrant shall have the right at any time prior to the expiration of this Warrant to purchase, at a total price equal to that payable upon the exercise of this Warrant, the kind and amount of shares of stock and other securities and property receivable in connection with such reclassification, reorganization or change by a Holder of the same number of shares of the class and series of the Company's equity securities that will be issued upon exercise of this Warrant as were purchasable by the Holder of this Warrant immediately prior to such reclassification, reorganization or change. In any such case, appropriate provisions shall be made with respect to the rights and interest of the Holder of this Warrant so that the provisions hereof shall thereafter be applicable with respect to any shares of stock or other securities and property deliverable upon exercise hereof, and appropriate adjustments shall be made to the purchase price per share payable hereunder, provided the aggregate purchase price shall remain the same. The provisions of this Section 9(b) shall apply similarly to successive reclassifications, capital reorganizations or changes.

(c) Notice of Adjustment. When any adjustment is required to be made in the number or kind of shares purchasable upon exercise of the Warrant, the Company shall promptly notify the Holder of such event and of the number of shares of securities or property thereafter purchasable upon exercise of the Warrant.

10. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant, but in lieu of such fractional shares the Company shall make a cash payment therefore on the basis of the exercise price then in effect.

11. Charges, Taxes and Expenses. Issuance of certificates for Shares upon the exercise of this Warrant shall be made without charge to Warrantholder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of Warrantholder.

12. Exchange and Registry of Warrant.

(a) This Warrant is exchangeable, upon the surrender hereof by Warrantholder at the above-mentioned office or agency of the Company, for a new Warrant of like tenor and dated as of such exchange, or for new Warrants of like tenor and dated the date of such exchange, exercisable for no more than the aggregate number of Shares equal to the number of Shares for which the Warrant so exchanged was exercisable in denominations designated by Warrantholder at the time of surrender.

(b) The Company shall maintain at the above-mentioned office or agency a registry showing the name and address of Warrantholder. This Warrant may be surrendered for exchange, transfer or exercise, in accordance with its terms, at such office or agency of the Company, and the Company shall be entitled to rely in all respects, prior to written notice to the contrary, upon such registry.

13. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it, and upon reimbursement to the Company of all reasonable expenses incidental thereto, and upon surrender and cancellation of this Warrant, if mutilated, the Company will make and deliver a new Warrant of like tenor and dated as of such cancellation, in lieu of this Warrant.

14. Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

15. Cash Distributions. No adjustment on account of cash dividends on any capital stock of the Company or other securities purchasable hereunder will be made to the exercise price.

16. Communications. All notices or other communications hereunder shall be in writing and shall be given by registered or certified mail (postage prepaid and return receipt requested) or by facsimile transmission or sent by a recognized overnight delivery service that can provide proof of delivery upon request addressed to Warrantholder or the Company at their respective addresses as set forth on the signature page hereof or such other address as any party may designate to the other in accordance with the aforesaid procedure.

17. Successors and Assigns. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto and of the holder of the Shares issued upon the exercise hereof; provided, however, the Company may not assign its rights or delegate its obligations hereunder; and provided further, that, subject to compliance with the Securities Act, this Warrant and the Shares may be assigned or pledged in a financing transaction in connection with the exercise of this Warrant, in whole or in part. In case of any such transfer by any legal representative, duly authenticated evidence of their authority shall be produced, and may be required to be deposited with the Company in its discretion.

18. No Stockholder Rights. Prior to exercise of this Warrant, the Holder shall not be entitled to any voting or other rights of a stockholder with respect to the Shares.

19. Amendments and Waivers. Any term of this Warrant may be amended and the observance of any term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively,) with the written consent of the Company and the Holder.

20. Governing Law. This Warrant shall be governed by the laws of the State of Texas as applied to agreements among Texas residents made and to be performed entirely within the State of Texas.

[The Remainder of this Page is Intentionally Left Blank]

This Warrant is issued effective as of the date first above written.

BELLICUM PHARMACEUTICALS, INC.

By: _____
Name: Thomas J. Farrell
Title: Chief Executive Officer

Address: 6400 Fannin Street, Suite 2300
Houston, TX 77030

ACCEPTED AND AGREED:

JOHN BIRD AND JENNIFER BIRD,
JOINT TENANTS WITH RIGHT OF SURVIVORSHIP

JOHN BIRD

_____

JENNIFER BIRD

_____

Address: 5107 Gregg Lane
Manor, TX 78653

SUBSCRIPTION

Attention: Corporate Secretary

The undersigned hereby elects to purchase, pursuant to the provisions of the Warrant to Purchase Stock issued by Bellicum Pharmaceuticals, Inc., and held by the undersigned, shares of Common Stock. Payment of the exercise price per share required under such Warrant accompanies this Subscription.

The undersigned hereby represents and warrants that the undersigned is acquiring such shares for its own account for investment purposes only, and not for resale or with a view to distribution of such shares or any part thereof.

Date: _____

WARRANTHOLDER:

_____
Signature

_____
Print Name

_____
Title

Name in which shares should be registered:

_____

Address: _____
_____
_____

THIS WARRANT AND THE UNDERLYING SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED UNLESS (A) THERE IS AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT COVERING ANY SUCH TRANSACTION INVOLVING THESE SECURITIES, (B) THE COMPANY RECEIVES AN OPINION OF LEGAL COUNSEL IN A FORM REASONABLY SATISFACTORY TO THE COMPANY STATING THAT SUCH TRANSACTION IS EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE ACT OR (C) THE COMPANY OTHERWISE SATISFIES ITSELF THAT SUCH TRANSACTION IS EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE ACT.

BELLICUM PHARMACEUTICALS, INC.

WARRANT TO PURCHASE SERIES C PREFERRED STOCK

No. PCW- **August 22, 2014**

Void After August 22, 2019

THIS CERTIFIES THAT, for value received, [ ], with its principal office at [ ], or assigns (the "***Holder***"), is entitled to subscribe for and purchase at the Exercise Price (defined below) from **BELLICUM PHARMACEUTICALS, INC.**, a Delaware corporation, with its principal office at 2130 W. Holcombe Blvd., #850, Houston, TX 77030 (the "***Company***") up to [ ] shares of the Series C Preferred Stock of the Company (the "***Preferred Stock***").

Immediately prior to the closing of the Company's initial public offering, this Warrant shall become exercisable for that number of shares of Common Stock of the Company into which the shares of Preferred Stock issuable under this Warrant would then be convertible, so long as such shares, if this Warrant has been exercised prior to such offering, would have been converted into shares of the Company's Common Stock pursuant to the automatic conversion provisions (or otherwise) of the Company's Certificate of Incorporation.

This Warrant is being issued pursuant to the terms of the Series C Preferred Stock and Warrant Purchase Agreement, dated August 22, 2014 by and among the Company and the Purchasers therewith (the "***Purchase Agreement***").

1. DEFINITIONS. As used herein, the following terms shall have the following respective meanings:

(a) "***Exercise Period***" shall mean the period commencing with the date hereof and ending five (5) years later, unless sooner terminated as provided below.

(b) "***Exercise Price***" shall mean $6.00 per share, subject to adjustment pursuant to Section 4 below.

(c) "***Exercise Shares***" shall mean the shares of the Company's Preferred Stock issuable upon exercise of this Warrant, subject to adjustment pursuant to the terms herein, including but not limited to adjustment pursuant to Section 4 below.

(d) "***Qualifying IPO***" shall mean a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on the NASDAQ Global Market, the NASDAQ Capital Market or the New York Stock Exchange, at a per share price of not less than $6.50 (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares after the filing date of the Company's Third Amended and Restated Certificate of Incorporation) and resulting in at least $50,000,000 of gross proceeds, prior to underwriting discounts, commissions and expenses, to the Company.

2. EXERCISE OF WARRANT. The rights represented by this Warrant may be exercised in whole or in part at any time during the Exercise Period, by delivery of the following to the Company at its address set forth above (or at such other address as it may designate by notice in writing to the Holder):

(a) An executed Notice of Exercise in the form attached hereto;

(b) Payment of the Exercise Price (which may take the form of a "cashless exercise" if so indicated in the Notice of Exercise and if a "cashless exercise" may occur at such time pursuant to Section 2.1 below) either (i) in cash or by check, (ii) by cancellation of indebtedness or (iii) by any combination of the foregoing; and

(c) This Warrant.

Upon the exercise of the rights represented by this Warrant, a certificate or certificates for the Exercise Shares so purchased, registered in the name of the Holder or persons affiliated with the Holder, if the Holder so designates, shall be issued and delivered to the Holder within a reasonable time after the rights represented by this Warrant shall have been so exercised.

The person in whose name any certificate or certificates for Exercise Shares are to be issued upon exercise of this Warrant shall be deemed to have become the holder of record of such shares on the date on which this Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery of such certificate or certificates, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

2.1 Net Exercise Following March 31, 2015. Notwithstanding any provisions herein to the contrary, if the fair market value of one share of the Company's Preferred Stock is greater than the Exercise Price (at the date of calculation as set forth below), in lieu of exercising this Warrant by payment of cash, the Holder may elect to receive shares equal to the value (as determined below) of this Warrant (or the portion thereof being canceled) by surrender of this Warrant at the principal office of the Company together with the properly endorsed Notice of Exercise in which event the Company shall issue to the Holder a number of shares of Preferred Stock computed using the following formula:

$$X = \frac{Y\,(A-B)}{A}$$

Where X = the number of shares of Preferred Stock to be issued to the Holder

Y = the number of shares of Preferred Stock purchasable under the Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being canceled (at the date of such calculation)

A = the fair market value of one share of the Company's Preferred Stock (at the date of such calculation)

B = Exercise Price (as adjusted to the date of such calculation)

For purposes of the above calculation, the fair market value of one share of Preferred Stock shall be determined by the Company's Board of Directors in good faith; provided, however, that in the event that this Warrant is exercised pursuant to this Section 2.1 in connection with the Company's initial public offering of its Common Stock, the fair market value per share shall be the product of (i) the per share offering price to the public of the Company's initial public offering, and (ii) the number of shares of Common Stock into which each share of Preferred Stock is convertible at the time of such exercise.

Notwithstanding anything to the contrary herein, the Holder may not make the election provided for in this Section 2.1 prior to April 1, 2015.

3. COVENANTS OF THE COMPANY.

3.1 Covenants as to Exercise Shares. The Company covenants and agrees that all Exercise Shares that may be issued upon the exercise of the rights represented by this Warrant will, upon issuance, be validly issued and outstanding, fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issuance thereof. The Company further covenants and agrees that the Company will at all times during the Exercise Period, have authorized and reserved, free from preemptive rights, a sufficient number of shares of its Preferred Stock to provide for the exercise of the rights represented by this Warrant. If at any time during the Exercise Period the number of authorized but unissued shares of Preferred Stock shall not be sufficient to permit exercise of this Warrant, the Company will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Preferred Stock to such number of shares as shall be sufficient for such purposes.

3.2 Notices of Record Date. In the event of any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend which is the same as cash dividends paid in previous quarters) or other distribution, the Company shall mail to the Holder, at least ten (10) days prior to the date specified herein, a notice specifying the date on which any such record is to be taken for the purpose of such dividend or distribution.

4. ADJUSTMENT OF EXERCISE PRICE. In the event of changes in the outstanding Series C Preferred Stock of the Company by reason of stock dividends, split-ups, recapitalizations, reclassifications, combinations or exchanges of shares, separations, reorganizations, liquidations, or the like, the number and class of shares available under the Warrant in the aggregate and the Exercise Price shall be correspondingly adjusted to give the Holder of the Warrant, on exercise for the same aggregate Exercise Price, the total number, class, and kind of shares as the Holder would have owned had the Warrant been exercised prior to the event and had the Holder continued to hold such shares until after the event requiring adjustment; provided, however, that such adjustment shall not be made with respect to, and this Warrant shall terminate if not exercised prior to, the events set forth in Section 6 below. The form of this Warrant need not be changed because of any adjustment in the number of Exercise Shares subject to this Warrant.

5. FRACTIONAL SHARES. No fractional shares shall be issued upon the exercise of this Warrant as a consequence of any adjustment pursuant hereto. All Exercise Shares (including fractions) issuable upon exercise of this Warrant may be aggregated for purposes of determining whether the exercise would result in the issuance of any fractional share. If, after aggregation, the exercise would result in the issuance of a fractional share, the Company shall, in lieu of issuance of any fractional share, pay the Holder otherwise entitled to such fraction a sum in cash equal to the product resulting from multiplying the then current fair market value of an Exercise Share by such fraction.

6. EARLY TERMINATION. In the event of, at any time during the Exercise Period, a consolidation or merger of the Company with or into another corporation (other than a merger solely to effect a reincorporation of the Company into another state) or the sale or other disposition of all or substantially all the properties and assets of the Company in its entirety to any other person, the Company shall provide to the Holder at least twenty (20) days advance written notice of such consolidation, merger or sale or other disposition of the Company's assets, and this Warrant shall terminate unless exercised prior to the occurrence of such consolidation, merger or sale or other disposition of the Company's assets. In the event of Qualifying IPO pursuant to a registration statement filed with the U.S. Securities and Exchange Commission (the "***SEC***") under the Act and declared effective on or prior to March 31, 2015 (the date of such declaration of effectiveness by the SEC is referred to below as the "***effective date***"), the Company shall provide to the Holder at least twenty (20) days advance written notice of such public offering, and this Warrant shall terminate unless exercised on or prior to the date immediately following the effective date.

7. NO STOCKHOLDER RIGHTS. This Warrant in and of itself shall not entitle the Holder to any voting rights or other rights as a stockholder of the Company.

8. TRANSFER OF WARRANT. Subject to applicable laws, the restriction on transfer set forth on the first page of this Warrant, and any restrictions applicable to the transfer of shares set forth in the Company's bylaws, as they may be amended from time to time, or an agreement between the Company and the Holder, this Warrant and all rights hereunder are transferable, by

the Holder in person or by duly authorized attorney, upon delivery of this Warrant and the form of assignment attached hereto to any transferee designated by Holder. The transferee shall sign an investment letter in form and substance satisfactory to the Company.

9. LOST, STOLEN, MUTILATED OR DESTROYED WARRANT. If this Warrant is lost, stolen, mutilated or destroyed, the Company may, on such terms as to indemnity or otherwise as it may reasonably impose (which shall, in the case of a mutilated Warrant, include the surrender thereof), issue a new Warrant of like denomination and tenor as the Warrant so lost, stolen, mutilated or destroyed. Any such new Warrant shall constitute an original contractual obligation of the Company, whether or not the allegedly lost, stolen, mutilated or destroyed Warrant shall be at any time enforceable by anyone.

10. NOTICES, ETC. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed telex or facsimile if sent during normal business hours of the recipient, if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at the address listed on the signature page and to Holder at the address first written above or at such other address as the Company or Holder may designate by at least ten (10) days advance written notice to the other parties hereto.

11. ACCEPTANCE. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

12. GOVERNING LAW. This Warrant and all rights, obligations and liabilities hereunder shall be governed by the laws of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its duly authorized officer as of the date first set forth above.

BELLICUM PHARMACEUTICALS, INC.

By: _____

Name: Thomas J. Farrell

Title: President and Chief Executive Officer

Address: 2130 West Holcombe Boulevard
Suite 850
Houston, Texas 77030

NOTICE OF EXERCISE

TO: BELLICUM PHARMACEUTICALS, INC.

(1) ☐ The undersigned hereby elects to purchase shares of the Series C Preferred Stock of **BELLICUM PHARMACEUTICALS**, **INC**. (the "***Company***") pursuant to the terms of the attached Warrant, and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

☐ The undersigned hereby elects to purchase shares of the Series C Preferred Stock of **BELLICUM PHARMACEUTICALS, INC.** (the "***Company***") pursuant to the terms of the net exercise provisions set forth in Section 2.1 of the attached Warrant, and shall tender payment of all applicable transfer taxes, if any.

(2) Please issue a certificate or certificates representing said shares of Series C Preferred Stock in the name of the undersigned or in such other name as is specified below:

_____
(Name)

_____

_____
(Address)

(3) The undersigned represents that (i) the aforesaid shares of Series C Preferred Stock are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares; (ii) the undersigned is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision regarding its investment in the Company; (iii) the undersigned is experienced in making investments of this type and has such knowledge and background in financial and business matters that the undersigned is capable of evaluating the merits and risks of this investment and protecting the undersigned's own interests; (iv) the undersigned understands that the shares of Series C Preferred Stock issuable upon exercise of this Warrant have not been registered under the Securities Act of 1933, as amended (the "***Securities Act***"), by reason of a specific exemption from the registration provisions of the Securities Act, which exemption depends upon, among other things, the bona fide nature of the investment intent as expressed herein, and, because such securities have not been registered under the Securities Act, they must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available; (v) the undersigned is aware that the aforesaid shares of Series C Preferred Stock may not be sold pursuant to Rule 144 adopted under the Securities Act unless certain conditions are met and until the undersigned has held the shares for the number of years prescribed by Rule 144, that among the conditions for use of the Rule is the availability of current information to the public about the Company and the Company has not made such information available and has no present plans to do so; and (vi) the undersigned agrees not to make any disposition of all or any part of the aforesaid shares of Series C Preferred Stock unless and until there is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with said registration statement, or the undersigned has provided the Company with an opinion of counsel satisfactory to the Company, stating that such registration is not required.

_____
(Date)

_____
(Signature)

_____
(Print name)

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: , 201

Holder's Signature: _____

Holder's Address: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.