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

Form 10-K

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .

Commission file number 001-36783

Bellicum Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-1450200**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2130 W. Holcombe Blvd., Ste. 800, Houston, TX	**77030**
(Address of principal executive offices)	**(Zip Code)**

(832) 384-1100
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	**The NASDAQ Global Market**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No x

The approximate aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based upon the last sale price of the common stock reported on The NASDAQ Global Market as of June 30, 2016 was $251,404,832. *

As of February 28, 2017, there were 27,157,680 shares of the Registrant's common stock, par value $0.01 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement relating to its 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K. Such Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days following the Registrant's fiscal year ended December 31, 2016.

*Excludes 7,644,2070 shares of common stock held by directors and officers and by stockholders that the registrant concluded were affiliates of the Registrant as of June 30, 2016. Exclusion of such shares should not be construed to indicate that any such holder possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant, or that such person is controlled by or under common control with the Registrant.

BELLICUM PHARMACEUTICALS, INC.
Form 10-K
For the Fiscal Year Ended December 31, 2016

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," may contain "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 Annual Report 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 Chemical Induction of Dimerization, or CID, CID-based technologies, including CaspaCIDe and GoCAR-T;
- 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 and the success of any such collaborations;
- 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, or U.S., 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;
- 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 Jumpstart Our Business Startups Act of 2012, or the JOBS Act;
- our use of cash and other resources; 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 filing date of this Annual Report and are subject to risks and uncertainties. We discuss many of these risks in greater detail under the heading "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 carefully read this Annual Report and the documents that we reference in this Annual Report 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 Annual Report by these cautionary statements.

Except as required by law, we undertake no obligation to update these forward-looking statements publicly, or to update the reasons that actual results could differ materially from those anticipated in any forward-looking statements, whether as a result of new information, future events or otherwise.

ITEM 1. 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. We are using our proprietary CID technology platform to engineer our product candidates with switch technologies that are designed to 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, chimeric antigen receptor T cell therapy, or CAR T, and T cell receptors, or TCRs. HSCT, also known as bone marrow transplantation, has for decades been curative for many patients with hematological cancers or orphan inherited blood disorders. However, adoption of HSCT to date has been limited by the risks of transplant-related morbidity and mortality from graft-versus-host-disease, or GvHD, and the potential for serious infections due to the lack of an effective immune system following a transplant. CAR T and TCR cell therapies are an innovative approach in which a patient's T cells are genetically modified to carry chimeric antigen receptors, or CARs, or TCRs 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. These toxicities include instances in which the CAR T cells have caused high levels of cytokines due to over-activation, referred to as "cytokine release syndrome," or CRS, neurologic toxicities and cases in which they have attacked healthy organs. In each case, these toxicities have sometimes resulted in death. 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 that raise even greater safety concerns.

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, 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 and/or persistence of the immunotherapy cells. Each of our product candidates 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 candidate, where it is inactive unless the patient experiences a serious side effect. In that event, rimiducid is administered to induce Caspase-9, or iCaspase, switch activation to fully or partially eliminate the cells, with the goal of terminating or attenuating the therapy and resolving the serious side effect.

- Our "Go" switch incorporated into our GoCAR-T product candidates, is an activation switch designed to allow control of the activation and proliferation of the 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 extending the interval between rimiducid doses, reducing the dosage per infusion, or suspending further rimiducid administration.

In addition, we have an active research effort to develop other advanced molecular switch approaches, including a "dual-switch" that is designed to provide a user-controlled system for managing persistence and safety of tumor antigen-specific CAR T cells.
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 lead clinical product candidate is described below.

- **BPX-501** is a CaspaCIDe product candidate designed as an adjunct T cell therapy administered after allogeneic HSCT. BPX-501 is designed to improve transplant outcomes by enhancing the recovery of the immune system following an HSCT procedure. BPX-501 addresses the risk of infusing donor T cells by enabling the elimination of donor T cells through the activation of the CaspaCIDe safety switch if there is an emergence of uncontrolled GvHD.

The European Commission has granted orphan drug designations to BPX-501 for treatment in HSCT, and for activator agent rimiducid for the treatment of GvHD. Additionally, BPX-501 and rimiducid have received orphan drug status from the U.S. Food and

Drug Administration, or the FDA, as a combination replacement T-cell therapy for the treatment of immunodeficiency and GvHD after allogeneic HSCT.

During 2016, we discussed with the European Medicines Agency, or the EMA, clinical and regulatory plans to support the filing of Marketing Authorization Applications, or MAAs, for BPX-501 and rimiducid in Europe, initially for pediatric patients with certain orphan inherited blood disorders or treatment-refractory hematological cancers. Based on the regulatory discussions, we believe that data from the European arm of our BP-004 trial, expanded to enroll additional patients, with a primary endpoint of event-free survival (death, severe GvHD and severe infection) at six months, could form the basis of MAAs for BPX-501 and rimiducid. In addition, the EMA's Committee for Medicinal Products for Human Use, or the CHMP, has agreed that review and approval under "exceptional circumstances" may be suitable, recognizing that a randomized trial may not be feasible in the pediatric haploidentical hematopoeitic stem cell transplant setting. Exceptional circumstances may be granted for medicines that treat very rare diseases, or where controlled studies are impractical or not consistent with accepted principles of medical ethics. In place of a randomized trial, we intend to collect data from a concurrent observational study in the pediatric matched unrelated donor hematopoietic stem cell transplant setting, which will include both retrospective patients and prospective patients.

We have discussions ongoing with the FDA regarding the regulatory path to approval in the U.S. and we expect to provide updates in the first half of 2017.

In addition to BPX-501, our clinical stage product candidates which are designed to overcome limitations of CAR T and TCR therapies, include the following:

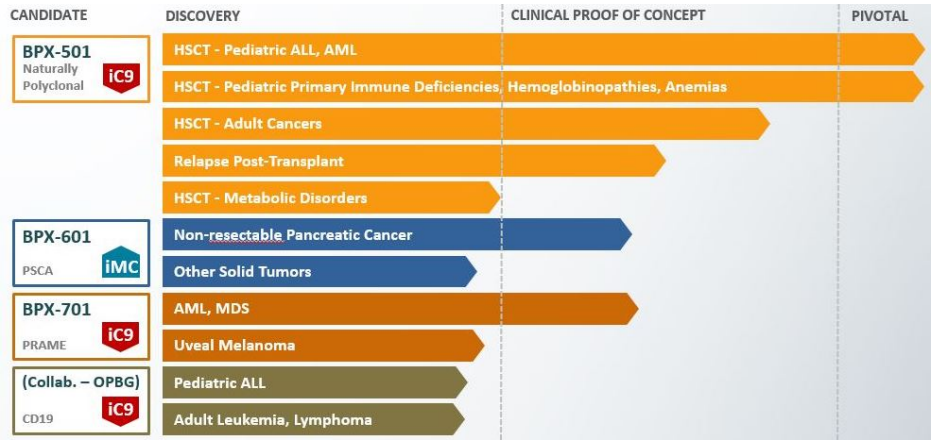
- **BPX-701** is a CaspaCIDe-enabled natural high affinity TCR product candidate designed to target malignant cells expressing the preferentially-expressed antigen in melanoma, or PRAME. Initial planned indications for BPX-701 development are refractory or relapsed acute myeloid leukemia, or AML, and myelodysplastic syndromes, or MDS, with an additional study planned for metastatic uveal melanoma. Each of these is an orphan indication where PRAME is highly expressed and for which current treatment options are limited. A Phase 1 dose finding clinical trial in patients with relapsed or refractory myeloid neoplasms is being conducted at the Oregon Health & Science University Hospital in Portland, Oregon.

- **BPX-601** is a GoCAR-T product candidate containing our proprietary inducible MyD88/CD40, or iMC, activation switch, designed to treat solid tumors expressing prostate stem cell antigen, or PSCA. Preclinical data shows enhanced T cell proliferation, persistence and *in vivo* anti-tumor activity compared to traditional CAR T therapies. A Phase 1 clinical trial in patients with non-resectable pancreatic cancer is being conducted at the Baylor Sammons Cancer Center in Dallas, Texas.

We have developed an efficient and scalable process to manufacture genetically modified T cells of high quality, which is currently being used by our third-party contract manufacturers to produce BPX-501 for our clinical trials. We are leveraging this process, as well as our resources, capabilities and expertise for the manufacture of our CAR T and TCR product candidates.

Pipeline

The following table summarizes our product candidate pipeline:



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.

The following therapeutic applications of cellular immunotherapy have been 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 chronic myeloid leukemia. 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.

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.

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	Ÿ GvHD and viral infections are frequent and potentially fatal side effects	Ÿ Attempts to control GvHD (steroids, T Cell depletion, etc.) increase likelihood of non-engraftment, relapse of underlying disease and viral infection
CAR T	Ÿ Serious immune toxicity (CRS) or neurotoxicity Ÿ Standard-of-care (steroids) and/or cytokine receptor antagonists, such as tocilizumab, can be ineffective; long ICU stay, relapse of underlying disease, infections and death Ÿ Other safety approaches* have slow onset of action or have safety issues of their own	Ÿ CARs have not demonstrated the same high response rates to solid tumor antigens as have been seen against CD19-positive homological malignancies Ÿ Small number of validated tumor-specific antigens that can be targeted Ÿ For certain antigen targets, severe toxicity from treatment prevents sufficient therapeutic window for clinical benefit
TCR	Ÿ High risk of off-target or off-organ toxicities	Ÿ Human clinical data still early

* See discussion of other approaches below under "Our Proprietary Switch Technologies - CaspaCIDe"

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 current 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 apoptosis, and the "activation switch" is designed to lead to proliferation and/or activation and/or persistence 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 infusion. Rimiducid has been designed to bind to a 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-9i: Signaling Molecule for Apoptosis.*** Caspase-9, or iCaspase is the initiating enzyme in the apoptosis pathway. When activated, caspase starts a signaling cascade, including the activation of caspase-3, which ultimately leads to apoptosis, a non-inflammatory process of cell elimination.
- ***iMC: 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 two most advanced switch technologies.

	CaspaCIDe	GoCAR-T
Cell Type	Donor T cells (HSCT) or patient T cells (TCRs)	Patient T cells
Proprietary Components	iCaspase - safety switch	iMC co-stimulation switch
Applications	HSCT and TCR therapy	CAR T therapy
Potential Safety Benefit	Modulation of effect with rimiducid triggers T cell apoptosis	Modulation of effect with rimiducid triggers T-cell activation & proliferation
Potential Efficacy Benefit	Widens therapeutic window for maximum benefit from treatment	Widens therapeutic window; iMC may enhance T cell activity
Product Candidates	BPX-501 and BPX-701	BPX-601

CaspaCIDe

CaspaCIDe is our CID based 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 iCaspase, an enzyme that is part of the apoptotic, cell death pathway. Infusion of rimiducid is designed to trigger activation of this domain of iCaspase, 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 provided after allogeneic HSCT, and to our TCR product candidate, BPX-701.

We believe that CaspaCIDe is the optimal cell therapy safety switch technology described to-date. The only other widely reported clinically validated approach 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 nonclinical studies have demonstrated CaspaCIDe's potential benefits relative to HSV-tk, including 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 activity 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-based switch, and has no other clinical use. In contrast, ganciclovir has side effects, and physicians are reluctant to lose the ability to use it to treat herpes virus family infections in patients treated with HSV-tk-containing cells.

Other cell elimination approaches described in the literature include gene modification of cells to express truncated epidermal growth factor receptor or codon-optimized CD20. Administration of the monoclonal antibodies cetuximab or rituximab, respectively, is intended to trigger complement-mediated cytotoxicity, or CMC, or 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 a CMC/ADCC-mediated mechanism may add to complications in patients already in an inflammatory crisis, such as seen with serious CRS, 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.

CaspaCIDe has been evaluated in both preclinical and clinical studies, with additional Phase 1/2 clinical trials ongoing and planned. 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. 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 our internal preclinical and clinical development activities, we have selectively entered into agreements with renowned cancer research centers with expertise in cellular immunotherapy to allow the use of our CaspaCIDe safety switch with the collaborators' CAR T product candidates. While we are not the sponsor of these clinical trials, we believe that they may facilitate the adoption of CaspaCIDe in the CAR T cell setting and provide opportunities for license arrangements of our technology in the future.

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 CD3-ζ domain and one or more co-stimulatory molecules that are both activated when a cancer antigen binds to the portion of the CAR on the surface 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 in excess of 100,000-fold in some patients, ultimately comprising over 50% of circulating lymphocytes. Solid tumor CAR T cells, on the other hand, often fail to proliferate or persist at all for more than a few days or weeks and have been largely ineffective. 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 the current paradigm by placing our proprietary co-stimulatory domain MC under rimiducid control. GoCAR-T cells are designed to only be fully activated when exposed to both the cancer cells and rimiducid. This separation is designed to control the degree of activation of the CAR T cells through adjustments to the schedule of rimiducid administration, but still in a tumor-dependent manner.

In a proof-of-principle *in vitro* study of our GoCAR-T technology, GoCAR-T cells targeting the PSCA antigen were found to be only fully activated when the GoCAR-T cells were 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 HPAC human pancreatic tumors, which were established in immune-deficient mice, were eliminated by administration of GoCAR-T cells targeting PSCA along with weekly rimiducid administration.

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.

Our Product Candidates

BPX-501: Adjunct T Cell Therapy for Allogeneic Hematopoietic Stem Cell Transplantation

Our lead product candidate, BPX-501, is an adjunct T cell therapy administered after allogeneic HSCT using genetically modified donor T cells incorporating our CaspaCIDe safety switch. BPX-501, in combination with rimiducid, was recently granted orphan drug designation by the FDA for the treatment of immunodeficiency and GvHD following allogeneic HSCT, and is currently being evaluated in multiple Phase 1/2 clinical trials in adults and pediatric patients with leukemias, lymphomas and genetic blood diseases in the U.S. and Europe. We believe that BPX-501 could enable physicians to maximize the benefits of T cell therapy for allogeneic HSCT, such as immune system reconstitution, prevention or treatment of relapse of underlying disease and improvement in stem cell

engraftment, while mitigating some of the safety issues associated with a stem cell transplant. We reported initial top-line data from ongoing clinical trials in the HSCT setting in December 2016 at 58th Annual Meeting of the American Society of Hematology.

The goal of our BPX-501 clinical program is to provide better overall transplant outcomes-lower rates of infection and faster immune recovery-than one would generally expect from an alternative allogeneic transplant procedure. We are currently conducting multiple Phase 1/2 clinical trials of BPX-501 in the U.S. and Europe. In November 2014, we initiated BP-004, a Phase 1/2 clinical trial in children with leukemias, lymphomas, or orphan inherited blood disorders, such as severe combined immunodeficiency, Wiskott-Aldrich Syndrome and beta thalassemia, all chronic life-long disorders for which HSCT is curative. The trial is being conducted in both European and U.S. pediatric transplant centers. The clinical trial is evaluating whether BPX-501 T cells from a haploidentical donor, typically the child's mother or father, administered following a T-depleted HSCT, are safe and can enhance immune reconstitution. Additional ongoing clinical studies include BP-001, BP-005 and BP-008 in adults in which BPX-501 is administered after initial allogeneic HSCT for hematological cancers, and BP-003, a single site 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 U.S. and Europe, as part of our strategy to pursue global regulatory approvals and expand the potential addressable patient population for BPX-501.

In July 2016, the intellectual property for BPX-501 was strengthened with a U.S. method of use patent issued to Baylor College of Medicine, or Baylor. The patent, licensed exclusively to us, is scheduled to expire in 2031.

During 2016, we discussed with the EMA clinical and regulatory plans to support the filing of MAAs for BPX-501 and rimiducid in Europe, initially for pediatric patients with certain orphan inherited blood disorders or treatment-refractory hematological cancers. Based on regulatory discussions, we believe that data from the European arm of our BP-004 trial, expanded to enroll additional patients, could form the basis of MAAs for BPX-501 and rimiducid. In addition, the CHMP has agreed that review and approval under "exceptional circumstances" may be suitable, recognizing that a randomized trial may not be feasible in the pediatric setting. Exceptional circumstances may be granted for medicines that treat very rare diseases, or where controlled studies are impractical or not consistent with accepted principles of medical ethics. In place of a randomized trial, we intend to collect data from a concurrent observational study of allogeneic HSCT outcomes in the pediatric setting, in a total of approximately 120 patients, and include both retrospective patients and up to 40 prospective patients and up to 40 prospective patients, with a primary endpoint of event-free survival (with events defined as death, Grade 3-4 acute GvHD, chronic GvHD, and Grade 3-4 infection) at six months and expect to provide updates in the first half of 2017.

We have discussions ongoing with the FDA regarding the regulatory path to approval in the U.S. and expect to provide an update in the first half of 2017.

In addition to BPX-501, our clinical stage and preclinical product candidates, which are designed to overcome the current limitations of CAR T and TCR therapies, include the following:

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

We are developing BPX-601, a GoCAR-T product candidate containing Bellicum's proprietary iMC activation switch, for the treatment of solid tumors expressing PSCA. PSCA is a cancer antigen expressed in many malignancies, including prostate, pancreatic, bladder, esophagus, and gastric cancers. Preclinical data shows enhanced T-cell proliferation, persistence and *in vivo* anti-tumor activity compared to traditional CAR T therapies.

The initial planned indication for BPX-601 development is non-resectable pancreatic cancer. The BPX-601 initial Phase 1 protocol and related documents were reviewed by the National Institutes of Health, or NIH, Recombinant DNA Advisory Committee, or RAC, in March 2016. Subsequently, we filed an Investigational New Drug Application, or IND, for BPX-601, and a Phase 1 clinical trial in patients with non-resectable pancreatic cancer is now underway at the Baylor Sammons Cancer Center in Dallas, Texas.

In December, 2015 we entered into a license agreement with Agensys, Inc., or Agensys, an affiliate of Astellas Pharma Inc., under which we were granted an exclusive worldwide license for rights to PSCA and related antibodies.

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, or Leiden. BPX-701 is designed to target malignant cells expressing PRAME. As initially reported in *Clinical Cancer Research* in 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. 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, BPX-701 cells containing the CaspaCIDe safety switch, have demonstrated complete elimination in response to the administration of rimiducid.

Planned indications for initial BPX-701 clinical development are refractory or relapsed AML and MDS, with an additional study planned for metastatic uveal melanoma. Each of these are orphan indications where PRAME is highly expressed and for which current treatment options are limited. The initial BPX-701 Phase 1 protocol and related documents were reviewed by the RAC in March 2016. Subsequently, we filed an IND for BPX-701, and we have initiated a Phase 1 clinical trial in patients with relapsed or refractory myeloid neoplasms at the Oregon Health & Science University Hospital in Portland, Oregon.

Manufacturing, Processing and Delivering to Patients

We have developed an efficient and scalable process to manufacture genetically modified T cells of high quality. We have been working with third-party contract manufacturers in both Europe and the U.S. to produce BPX-501 for our clinical trials. We have leased an additional 30,400 square feet of space in our headquarters building in Houston, Texas and have construction ongoing to build out this space to facilitate in house manufacturing for the planned U.S. clinical and early commercial requirements for BPX-501, and the clinical supply needs of our other product candidates. This site has been designed and is being constructed to satisfy both U.S. and European regulatory requirements. Our current plan is to rely primarily on contract manufacturers for our European needs and have our U.S. facility qualified and available as a back-up site. We are leveraging the processes, as we have developed for BPX-501, as well as our resources, capabilities and expertise for the manufacture of our CAR T and TCR product candidates.

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 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 sufficient capacity for DNA content, and has been safely used in clinical trials. As an alternative approach, we are investigating in parallel the use of lentivirus for several of our product candidates. In certain embodiments, lentiviral vectors may provide advantages over retroviral vectors. The vector production is performed at multiple third-party supplier facility under good manufacturing practices, or GMPs, procedures and requirements.
- ***Genetically Modified T Cells.*** We have agreements with reputable contract manufacturing organizations, or CMOs, with facilities in both the U.S. and Europe for processing and manufacturing our genetically modified T cells. We have started construction in the U.S. on a facility to allow the transition to in house manufacturing for the planned U.S. clinical and early commercial requirements for BPX-501, and the clinical supply needs of our other product candidates. 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 U.S. 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.

We are focused on continuously refining our overall cell therapy process, manufacturing, processing and delivery to patients to be more efficient. Our current process cycles for 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.

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. 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.

For example, 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 "Item 1A. Risk Factors—Risks Related to Our Intellectual Property" herein for associated risks.

To our knowledge, our patent estate, on a worldwide basis, includes 156 issued patents, 38 of which are in the U.S., and 60 pending patent applications, 17 of which are in the U.S., which we own or for which we have an exclusive, either in its entirety or within our field of use, commercial license as of February 28, 2017.

- We have internally developed technology disclosed in two pending utility patent applications in the U.S. and thirteen pending foreign patent applications which relates to our GoCAR-T technology. If U.S. patents issue from the U.S. applications, the estimated expiration date of the last to expire patent is in 2035. If patents are issued in foreign jurisdictions, the anticipated expiration dates will be in 2035.
- Pursuant to our licenses from Baylor, we have exclusive commercial rights to nine issued U.S. patents expiring in 2024 or later, four pending U.S. utility patent applications, nine issued foreign patents expiring in 2024 or later and 11 pending patent applications in foreign jurisdictions that relate to our GoCAR-T, BPX-501 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. If patents from the currently pending patent applications are issued in foreign jurisdictions, the estimated expiration dates range from 2024 to 2031.
- Pursuant to our license agreement with ARIAD Pharmaceuticals, Inc., or ARIAD, as amended, we have exclusive commercial rights within our field of use to 22 patents, seven in the U.S. and 15 in foreign jurisdictions, which relate to dimerizer technology. The estimated expiration date of the last to expire U.S. patent is 2032. The estimated expiration date of the last to expire foreign patent is 2032.

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

Composition of matter patent coverage on rimiducid, the dimerization molecule AP1903, has expired. However, we believe that additional barriers to entry exist for a competitor attempting to use rimiducid. This is significant because, if true, then potential competitors will not be able to use the abbreviated new drug application pathway for approval of rimiducid. With respect to our investigational products, the FDA has assigned combination product status to BPX-501, and we plan to submit a biologic license application, or BLA, for the combination product. We believe that this will be the case for each future product candidate of ours that incorporates rimiducid. If our investigational products incorporating rimiducid receive FDA approval through BLAs, then the FDA would not approve any biosimilar of these combination products until at least 12 years from the date that we receive FDA approval. Additionally, although 'biosimilar' provisions exist for products approved through BLAs, it is not clear if the FDA will permit the biosimilar route to be used for complex biological products such as our investigational products.

Rimiducid is a relatively complex drug substance to manufacture. We have substantial experience in manufacturing 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 U.S., 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, or the USPTO, 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 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 Collaboration and License Agreements

Co-Development and Co-Commercialization Agreement - Adaptimmune

In December 2016, we and Adaptimmune Therapeutics plc, or Adaptimmune entered into a Co-Development and Co-Commercialisation Agreement, or the Adaptimmune Agreement, in order to facilitate a staged collaboration to evaluate, develop and commercialize next generation T cell therapies.

Under the Adaptimmune Agreement, the parties agreed to evaluate our GoTCR technology, iMC co-stimulation, with Adaptimmune's affinity-optimized SPEAR® T cells for the potential to create enhanced TCR product candidates. Depending on results of the preclinical proof-of-concept phase, the parties expect to progress to a two-target co-development and co-commercialization phase. To the extent necessary, and in furtherance of the parties' proof-of-concept and co-development efforts, the parties granted each other a royalty-free, non-transferable, non-exclusive license covering their respective technologies for purposes of facilitating such proof-of-concept and co-development efforts. In addition, as to covered therapies developed under the Adaptimmune Agreement, the parties granted each other a reciprocal exclusive license for the commercialization of such therapies.

With respect to any joint commercialization of a covered therapy, the parties agreed to negotiate in good faith the commercially reasonable terms of a co-commercialization agreement. The parties also agreed that any such agreement shall provide for, among other things, equal sharing of the costs of any such joint commercialization and the calculation of profit shares as set forth in the Adaptimmune Agreement.

The Adaptimmune Agreement will expire on a country-by-country basis once the parties cease commercialization of the T cell therapies covered by the Adaptimmune Agreement, unless earlier terminated by either party for material breach, non-performance or cessation of development, bankruptcy/insolvency, or failure to progress to co-development phase.

Collaboration Agreement - OPBG

In October 2016, we and Ospedale Pediatrico Bambino Gesú, or OPBG, entered into a collaboration agreement, or the OPBG Agreement, pursuant to which we and OPBG agreed to collaborate on research projects and early stage clinical trials for the design and development of various T cell immunotherapies, or the OPBG Research.

As consideration for OPBG's performance of the OPBG Research and grant of certain licenses to us, we agreed to fund an aggregate of up to $4.4 million in project costs payable to OPBG or certain third party service providers, as applicable, over the term of the OPBG Research, estimated to be four years. With respect to any inventions arising from the OPBG Research, OPBG agreed to grant us an exclusive license to any such inventions, the terms of which would be set forth in a separate agreement. In addition, OPBG granted us paid-up, worldwide co-exclusive licenses for non-commercial development of OPBG's CD19 and CAR.GD2 CAR T technologies, as well as paid-up, worldwide exclusive licenses to commercialize OPBG's CD19 and CAR.GD2 CAR T technologies, each to be governed by a separate agreement.

The initial term of the OPBG Agreement expires on June 30, 2017, unless the parties agree to an extension. Either party may terminate the OPBG Agreement upon written notice delivered 30 days in advance if the OPBG Research fails and such failure cannot be remedied within 60 days of such notice. We may terminate the OPBG Agreement at any time upon providing OPBG with written notice 60 days in advance.

Collaboration Agreement - Leiden

In May 2016, we and Academisch Ziekenhuis Leiden, also acting under the name Leiden University Medical Centre, or Leiden, entered into a research collaboration agreement, or the Leiden Agreement, pursuant to which we will provide Leiden with financial support for research to discover and validate high-affinity TCR product candidates targeting several cancer-associated antigens, or the Research.

As consideration for Leiden's performance of the Research, we agreed to pay Leiden an aggregate of EUR 2,547,415 in quarterly installments during the three-year term of the Research. With respect to any inventions arising from the Research that are relevant to or useful for any high affinity TCR that is studied in the Research, Leiden granted us an exclusive option to obtain an exclusive, worldwide license to practice and exploit such inventions. The parties agreed to negotiate in good faith the commercially reasonable terms of each such license agreement entered into between the parties, based on terms similar to those set forth in the previously executed license agreement between the parties and those specified in the Leiden Agreement.

The Research will be conducted during a three-year term, after which the Leiden Agreement will expire. We and Leiden have agreed to negotiate in good faith a potential extension of such term, dependent on Leiden's progress in the performance of the Research. Either party may terminate the Leiden Agreement upon a material breach by the other party that remains uncured following 30 days after the date of written notice of such breach. Leiden may terminate the Leiden Agreement in the event of a failure by us to pay any amounts due under the Leiden Agreement that remains uncured on the date that is 30 days after written notice of such failure.

License Agreement - Agensys

In December 2015, we and Agensys, entered into a license agreement, or the Agensys Agreement, pursuant to which (i) Agensys granted us, within the field of cell and gene therapy of diseases in humans, an exclusive, worldwide license and sublicense to its patent rights directed to PSCA and related antibodies, and (ii) we granted Agensys a non-exclusive, fully paid license to our patents directed to inventions that were made by us in the course of developing our licensed products, solely for use with Agensys therapeutic products containing a soluble antibody that binds to PSCA or, to the extent not based upon our other proprietary technology, to non-therapeutic applications of antibodies not used within the field.

As consideration for the rights granted to us under the Agensys Agreement, we agreed to pay to Agensys a non-refundable upfront fee of $3.0 million. We are also required to make aggregate milestone payments to Agensys of up to (i) $5.0 million upon the first achievement of certain specified clinical milestones for its licensed products, (ii) $50.0 million upon the achievement of certain specified clinical milestones for each licensed product, and (iii) $75.0 million upon the achievement of certain sales milestones for each licensed product. The Agensys Agreement additionally provides that we will pay to Agensys a royalty percentage that ranges from the mid to high single digits based on the level of annual net sales of licensed products by us, our affiliates or permitted sublicensees. The royalty payments are subject to reduction under specified circumstances.

Under the Agensys Agreement, Agensys also was granted the option to obtain an exclusive license, on a product-by-product basis, from us to commercialize in Japan each licensed product developed under the Agensys Agreement that has completed a phase 2 clinical trial. As to each such licensed product, if Agensys or its affiliate, Astellas Pharma, Inc., exercises the option, the Agensys Agreement provides that we will be paid an option exercise fee of $5.0 million. In addition, the Agensys Agreement provides that we will be paid a royalty that ranges from the mid to high single digits based on the level of annual net sales in Japan of each such licensed product. If the option is exercised, the aggregate milestone payments payable by us to Agensys, described above with respect to each licensed product, would be reduced by up to an aggregate of $65.0 million upon the achievement of certain specified clinical and sales milestones.

The Agensys Agreement will terminate upon the expiration of the last royalty term for the products covered by the Agensys Agreement, which is the earlier of (i) the date of expiration or abandonment of the last valid claim within the licensed patent rights covering any licensed products under the Agensys Agreement, (ii) the expiration of regulatory exclusivity as to a licensed product, and (iii) 10 years after the first commercial sale of a licensed product. Either party may terminate the Agensys Agreement upon a material breach by the other party that remains uncured following 60 days after the date of written notice of such breach (or 30 days if such material breach is related to failure to make payment of amounts due under the Agensys Agreement) or upon certain insolvency events. In addition, Agensys may terminate the Agensys Agreement immediately upon written notice to us if we or any of our affiliates or permitted sublicensees commence an interference proceeding or challenge the validity or enforceability of any of Agensys' patent rights.

License Agreement - BioVec

In June 2015, we and BioVec Pharma, Inc., or BioVec, entered into a license agreement, or the BioVec Agreement, pursuant to which BioVec agreed to supply us with certain proprietary cell lines and granted us a non-exclusive, worldwide license to certain of its patent rights and related know-how related to such proprietary cell lines.

As consideration for the products supplied and rights granted to us under the BioVec Agreement, we agreed to pay to BioVec an upfront fee of $100,000 within ten business days of the effective date of the BioVec Agreement and a fee of $300,000 within ten business days of its receipt of the first release of GMP lot of the products licensed under the BioVec Agreement. In addition, we agreed to pay to BioVec an annual fee of $150,000, commencing 30 days following the first filing of an IND, or its foreign equivalent, for a product covered by the license; with such annual fees being creditable against any royalties payable by us to BioVec under the BioVec Agreement. We also are required to make a $250,000 milestone payment to BioVec for each of the first three licensed products to enter

into a clinical phase trial and one-time milestone payments of $2.0 million upon receipt of a registration granted by the FDA or EMA on each of our first three licensed products. The BioVec Agreement additionally provides that we will pay to BioVec a royalty in the low single digits on net sales of products covered by the BioVec Agreement. We may also grant sublicenses under the licensed patent rights and know-how to third parties for limited purposes related to the use, sale and other exploitation of the products licensed under the BioVec Agreement. The BioVec Agreement will continue until terminated. The BioVec Agreement may be terminated by us, in our sole discretion, at any time upon 90 days written notice to BioVec. Either party may terminate the BioVec Agreement in the event of a breach by the other party of any material provision of the BioVec Agreement that remains uncured on the date that is 60 days after written notice of such failure or upon certain insolvency events that remain uncured following the date that is 30 days after the date of written notice to a party regarding such insolvency event.

License Agreement - Leiden

In April 2015, we and Leiden, entered into a license agreement, or the 2015 Leiden Agreement, pursuant to which Leiden granted to us an exclusive, worldwide license to its patent rights covering high affinity T-cell receptors targeting PRAME, and POU2AF1 epitopes. The license granted under the 2015 Leiden Agreement is subject to certain restrictions and to Leiden's retained right to use the licensed patents solely for academic research and teaching purposes, including research collaborations by Leiden with academic, non-profit research third parties; provided that Leiden provides 30 days advance written notice to us of such academic research collaborations.

As consideration for the rights granted to us under the 2015 Leiden Agreement, we agreed to pay to Leiden an aggregate of EUR 75,000 in upfront fees within 30 days of the effective date of the 2015 Leiden Agreement. In addition, we agreed to pay to Leiden, beginning on the eighth anniversary of the effective date of the 2015 Leiden Agreement, annual minimum royalty payments of EUR 30,000. We are also required to make milestone payments to Leiden of up to an aggregate of EUR 1,025,000 for each of the first licensed product that is specific to PRAME and to POU2AF1. The 2015 Leiden Agreement additionally provides that we will pay to Leiden a royalty in the low single digits on net sales of products covered by the 2015 Leiden Agreement. If we enter into a sublicensing agreement with a third party related to a product covered by the Leiden Agreement, we have agreed to pay Leiden a percentage ranging in the low double digits on all non-royalty income received from sublicensing revenue directly attributable to the sublicense, dependent on whether we are in phase 1/2, phase 2 or phase 3 at the time that we enter into any such sublicensing agreement.

Under the 2015 Leiden Agreement, we and Leiden entered into a sponsored research agreement, pursuant to which we are required to pay Leiden up to EUR 300,000 over a three-year period during the term of the sponsored research agreement. The 2015 Leiden Agreement will expire upon the expiration of the last patent included in the licensed patent rights. The 2015 Leiden Agreement may be terminated earlier upon mutual written agreement between us and Leiden, and at any time by us upon six months written notice to Leiden. Leiden may terminate the 2015 Leiden Agreement in the event of a failure by us to pay any amounts due under the 2015 Leiden Agreement that remains uncured on the date that is 30 days after written notice of such failure. Either party may terminate the 2015 Leiden Agreement upon a material breach by the other party that remains uncured following 30 days after the date of written notice of such breach or upon certain insolvency events that remain uncured following the date that is 45 days after the date of written notice to a party of such insolvency event.

License Agreement - ARIAD Pharmaceuticals, Inc.

2011 License Agreement

In March 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 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 original license from ARIAD, in 2006 we issued 121,242 shares of our common stock to ARIAD which were subject to antidilution protection that ultimately resulted in additional issuances to ARIAD by us of 556,221 shares of our common stock, such that ARIAD received a total of 677,463 shares of our common stock under the original license agreement. In addition, we paid ARIAD a license fee of $250,000 in connection with the restated license 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.

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., an ARIAD affiliate that 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 (1) 12 years from the date of the first commercial sale of the licensed product, or (2) 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 October 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 made an initial payment of $15.0 million and we issued a promissory note to ARIAD for a principal amount of $35.0 million in return for the broader scope of the license and the termination of all obligations to make milestone and royalty payments to ARIAD in the future. On December 23, 2014, the closing of our initial public offering triggered an acceleration of the payment of $15.0 million due to ARIAD under the amendment and the promissory note. As a result of such acceleration, on December 29, 2014, we paid to ARIAD an aggregate amount of $35.0 million, which included an additional payment of $20.0 million to extinguish the promissory note. In exchange, ARIAD returned to us all of the 677,463 shares of our common stock then held by ARIAD and all of the agreements related to ARIAD's rights as a stockholder were terminated.

License Agreements - 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 23,529 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 (1) the making or use of the licensed intellectual property for use in non-commercial research, patient care, teaching, and other educational purposes; (2) any non-exclusive license covering the licensed intellectual property that Baylor grants to other academic or research institutions for noncommercial research purposes; (3) 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 (4) 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 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 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. Bellicum 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 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.

2014 Baylor License Agreement

Pursuant to an Exclusive License Agreement with Baylor, effective November 1, 2014, or the 2014 Baylor license agreement, we obtained an exclusive, worldwide license to certain intellectual property, including intellectual property related to methods for inducing selective apoptosis.

Pursuant to the terms of the 2014 Baylor license agreement, we paid Baylor a license execution fee of $25,000. In addition, we are required to pay Baylor a low annual maintenance fee on each anniversary of the agreement date. The terms of the 2014 Baylor license agreement also require us to make royalty payments in the low single digits, subject to certain annual minimums, on net sales of products covered by the license. To the extent we enter into a sublicensing agreement relating to a licensed product, Bellicum is also required to pay Baylor a percentage in the low double-digits on all non-royalty income received from sublicensing revenue. We are required to make milestone payments, of up to $275,000 in aggregate, upon successful completion of clinical and regulatory milestones regarding the first product covered by this license. The 2014 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 each such country.

Baylor may terminate or modify the 2014 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 2014 Baylor license agreement, or any portion thereof, at our sole discretion at any time upon 60 days' written notice to Baylor.

2016 Baylor License Agreements

In March 2016, we and Baylor entered into two additional license agreements pursuant to which we obtained exclusive rights to technologies and patent rights owned by Baylor. We paid Baylor a non-refundable license fee of $100,000, and could incur additional payments upon the achievement of certain milestone events as set forth in the agreements. If we are successful in developing any of the licensed technologies under either agreement, resulting sales would be subject to a royalty payment in the low single digits.

Grant Agreement

Grant Agreement with Cancer Prevention and Research Institute of Texas

In July 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 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 have received approximately $4.9 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 CPRIT 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 buy out 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 (1) make the required effort to commercialize any product covered by this agreement or (2) 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.

In November 2016, we announced that the Company received notice of a product development award totaling approximately $16.9 million from CPRIT. Assuming successful contract negotiations and execution, the CPRIT award would fund a portion of a three-year global clinical program comprising clinical trials for adult and pediatric patients with high-risk and intermediate-risk AML. The proposed studies are designed to evaluate the benefit of BPX-501 and rimiducid in the context of in vivo and ex vivo T cell depleted haploidentical HSCT. The CPRIT oversight committee met in February 2017 and agreed to move forward with the proposed terms of the grant agreement. We are currently in the process of completing a new contract with CPRIT and expect to begin a clinical development program supported by the CPRIT funding in the second half of 2017.

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 is designed to provide improved outcomes through enhanced time to reconstitution of the immune system and address the safety risks of GvHD and susceptibility to infections. 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-601 and BPX-701 based on our GoCAR-T and CaspaCIDe technologies may compete with product candidates from a number of companies that are currently focused on this therapeutic modality, including Adaptimmune, bluebird bio, Inc., Celgene Corporation, Cellectis SA, Cell Medica Limited, GlaxoSmithKline plc, Intrexon Corporation, Immune Design Corp., Juno Therapeutics, Inc., Kiadis Pharma B.V., Kite Pharma, Inc., Lion Biotechnologies, Inc., Medigene AG, MolMed S.p.A., Novartis AG, Pfizer Inc., Unum Therapeutics, Precision Biosciences, Inc. and Ziopharm Oncology.

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. For example, if a third party is able to obtain a stand-alone new drug application for rimiducid, then potential generic manufacturers may be able to file abbreviated new drug applications for that product.

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 U.S., 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 the current good manufacturing practice, or 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 IND. The FDA must review and approve a BLA before a new biologic may be marketed.

The 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, rimiducid. In general, biologics such as our engineered cells are regulated through the FDA's Center for Biologics Evaluation and Research, or CBER, while synthetic drugs are regulated through the FDA's Center for Drug Evaluation and Research. When the 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. The cellular component of our combination contributes the primary mode of action and, as a result, the FDA will regulate our investigational products as biologics, through CBER.

Government authorities in the U.S., at the federal, state and local levels, 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 U.S. 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 U.S., 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 U.S., 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. The 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 U.S. 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. Gene therapy clinical trials conducted at institutions that receive funding for recombinant DNA research from the NIH, are also subject to review by the RAC. Although the FDA decides whether individual gene therapy protocols may proceed, the RAC review process can delay the initiation of a clinical trial, even if the FDA has reviewed the trial design and details and approved its initiation. Conversely, the FDA can put an IND on clinical hold even if the RAC has provided a favorable review of the drug.

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. This is a relatively new and expanding area of novel therapeutic interventions, and therefore there is uncertainty 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, and the eventual quality of data to be generated in these clinical trials for 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, and accordingly we disclose information on our clinical trials on www.clintrials.gov. 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. The 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, the 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 U.S., or more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making available in the U.S. a drug or biologic for this type of disease or condition will be recovered from sales in the U.S. 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 the 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 U.S. 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.

On February 22, 2016, we announced that the FDA granted orphan drug designation for the combination of BPX-501 genetically modified T cells and activator agent rimiducid as "replacement T-cell therapy for the treatment of immunodeficiency and graft versus host disease(GvHD) after allogeneic hematopoietic stem cell transplant." BPX-501 is an adjunct T-cell therapy incorporating our proprietary CaspaCIDe safety switch.

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 efficacy. 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 commitment, 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, the 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-501, BPX-601 and BPX-701. 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. 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 USPTO, 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 U.S., 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, or HHS, such as 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 Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively, 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 either the referral of an individual for, or the 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. The Anti-Kickback Statute may be violated if only one purpose of the remuneration is to induce referrals. 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 law 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, that is, 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 their 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, 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 require that certain manufacturers and group purchasing organizations report annually certain ownership and investment interests held by physicians and their immediate family members.

We will also be required to begin satisfying the product tracing, verification, and reporting requirements set out in the 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, individual imprisonment, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, 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 U.S. 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 U.S., 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 U.S. 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 signed the Affordable Care Act, which was intended to broaden access to health insurance, improve quality, and reduce or constrain the growth of healthcare spending among other health policy reforms. The Affordable Care Act has substantially changed healthcare financing and delivery by both governmental and private insurers, and continues to significantly

impact the pharmaceutical and biotechnology industry. The Affordable Care Act has changed existing government healthcare programs and resulted 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;
- 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 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.

Since its enactment there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act. In January, Congress voted to adopt a budget resolution for fiscal year 2017, or the Budget Resolution, that authorizes the implementation of legislation that would repeal portions of the Affordable Care Act. The Budget Resolution is not a law, however, it is widely viewed as the first step toward the passage of repeal legislation. Further, on January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the Affordable Care Act to waive, defer, grant exemptions from, or delay the implementation of any provision of the Affordable Care Act that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. Congress also could consider subsequent legislation to replace elements of the Affordable Care Act that are repealed.

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, President Obama 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, and, due to subsequent legislative amendments will stay in effect through 2025 unless additional Congressional action is taken. 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. Further, there has been heightened governmental scrutiny recently over the manner in which manufacturers set prices for their marketed products. For example, there have been several recent Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, reduce the cost of drugs under Medicare, and reform government program reimbursement methodologies for drug products. 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 U.S. 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 U.S., 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 U.S. 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 U.S. 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 December 31, 2016, we had 110 employees, all of whom were full-time, 95 of whom were engaged in research and development activities and 15 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.

Corporate Information

We were incorporated in Delaware in July 2004. Our principal executive offices are located at 2130 W. Holcombe Blvd., Ste. 800, Houston, Texas and our telephone number is (832) 384-1100. Our corporate website address is www.bellicum.com. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, will be made available free of charge on our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or the SEC. The contents of our website are not incorporated into this Annual Report and our reference to the URL for our website is intended to be an inactive textual reference only.

We are an "emerging growth company," as defined in the JOBS Act. 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 our IPO in December 2014, (b) in which we have total annual gross revenue of at least $1.0 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeded $700.0 million as of the prior June 30th, or (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period. References to "emerging growth company" in this Annual Report on Form 10-K have the meaning associated with it in the JOBS Act.

ITEM 1A. Risk Factors

You should carefully consider the following risk factors, as well as the other information in this report, and in our other public filings. The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. You should consider all of the risk factors described when evaluating our business.

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, have no products approved for commercial sale and have incurred losses in each period since our inception in 2004. To date, we have financed our operations primarily through equity and debt financings. For the fiscal years ended December 31, 2016 and 2015, we reported a net loss of $69.2 million and $48.5 million, respectively.

As of December 31, 2016, we had an accumulated deficit of $230.7 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 and as we plan for the potential commercial launch of our lead product candidate, BPX-501.

Even if we succeed in commercializing BPX-501 or other 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 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, including BPX-501. 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 BPX-501 and our other current product candidates, as well as the product candidates that are being developed by our partners and licensees;
- seeking and obtaining marketing approvals for BPX-501 and any other product candidates that successfully complete clinical trials, if any;
- launching and commercializing BPX-501 and other product candidates for which we obtain marketing approval, if any, 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 for BPX-501 and our other product candidates, or if there are any delays in our or our partners completing clinical trials or the development of any of our product candidates, including BPX-501. If one or more of the product candidates that we independently develop is approved for commercial sale, we expect to incur significant costs associated with commercializing any 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 successfully commercialize and launch BPX-501 and 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 stockholders to lose all or part of their 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 and the success of BPX-501**.**

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;
- establishing sales and marketing capabilities upon obtaining any regulatory approval to gain market acceptance of a novel therapy; and
- the availability of coverage and adequate reimbursement from third-party payors for our novel and personalized 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.

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 still 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, and access to sufficient commercial manufacturing capacity and significant marketing efforts before we can expect to 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, regulatory issues or other problems, our development plans and business for our other product candidates would be significantly harmed.

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, including for BPX-501, 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, and 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 larger-scale clinical trials will succeed. We have designed our planned Phase 1/2 clinical trials of BPX-501 primarily to assess safety and efficacy in a small number of patients with malignant disease or inherited blood disorders. 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-601 and 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, the FDA or foreign regulatory authorities may not 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 our clinical trials, including for BPX-501, 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 and GoCAR-T 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 could require us to perform additional clinical trials before approving our marketing applications. It is possible that, upon inspection, such regulatory authorities could determine that any of our clinical trials fail to comply with the cGCP regulations. In addition, our clinical trials must be conducted with biologic product produced under 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, for example, 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 companies' 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 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.

BPX-501 and rimiducid have received orphan drug designation, but we may be unable to maintain or receive the benefits associated with orphan drug status, including market exclusivity.

The FDA or European Commission 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 that jurisdiction a drug or biologic for a disease or condition will be recovered from sales in that jurisdiction for that drug or biologic. If a product that has orphan drug designation subsequently receives the first FDA or European Commission approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA or European Commission may not approve any other applications, including a full authorization to market the same biologic for the same indication for seven years in the U.S. and for 10 years in Europe, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity.

The European Commission has granted orphan drug designations to BPX-501 for treatment in HSCT, and for activator agent rimiducid for the treatment of GvHD. Additionally, BPX-501 and rimiducid have received orphan drug designation from the FDA, as a combination replacement T-cell therapy for the treatment of immunodeficiency and GvHD after allogeneic HSCT. However, in each case exclusive marketing rights may be limited if we seek approval for an indication broader than the orphan designated indication and may be lost if the European Commission or FDA, as applicable, later determines that the request for designation was materially defective or if we are unable to assure the availability of sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Although the respective designations may provide seven years of market exclusivity in the U.S. and 10 years of market exclusivity in Europe, the designations are subject to certain limited exceptions. Therefore, even though we have obtained orphan drug designation for certain indications, we may be unable to obtain orphan drug designation for our future product candidates and we may not be the first to obtain marketing approval for any particular orphan indication.

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, bluebird bio, Inc., Celgene Corporation, Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG, Pfizer Inc. and Ziopharm Oncology. 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. 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 "Item 1. 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 President and Chief Executive Officer, our Chief Financial Officer and Treasurer and our Chief Operating Officer and Executive Vice President of Clinical Development. 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 March 1, 2017, we had 115 employees. As our development and commercialization plans and strategies develop for the potential launch of BPX-501, and as we continue our transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth imposes significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- 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 these 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. The services of independent organizations, advisors and consultants may not continue to be available to us on a timely basis when needed, and we may not be able to 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. We may not 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, including BPX-501, and, accordingly, may not achieve our research, development and commercialization goals.

In addition to expanding our organization, we are increasing the size of our facility and building out our development and manufacturing capabilities, which requires 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 BPX-501 and our other product candidates.

As of December 31, 2016, we had cash and cash equivalents of approximately $33.1 million and total investments in marketable securities of $70.6 million. We believe that cash and cash equivalents and investments in marketable securities, or a total of $103.7 million, will be sufficient to fund our operations through the first quarter of 2018.

We maintain our cash, cash equivalents, and marketable securities with high quality, accredited financial institutions. These amounts at times may exceed federally insured limits. We have not experienced any credit losses in such accounts and do not believe we are exposed to significant risk on these funds. We have no off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts or other hedging arrangements.

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 expect to require additional capital for the further development and commercialization of our product candidates.

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.

The terms of our debt facility place restrictions on our operating and financial flexibility, and failure to comply with covenants or to satisfy certain conditions of the agreement governing the debt facility may result in acceleration of our repayment obligations and foreclosure on our pledged assets, which could significantly harm our liquidity, financial condition, operating results, business and prospects and cause the price of our common stock to decline.

In March 2016, we entered into a loan and security agreement with Hercules Capital, Inc., Hercules Technology II, L.P., and Hercules Technology III, L.P., or collectively, Hercules, that is secured by a lien covering substantially all of our assets, excluding intellectual property, but including proceeds from the sale, license, or disposition of our intellectual property under which we have borrowed $30.0 million. The loan and security agreement governing the debt facility requires us to comply with a number of covenants (affirmative and negative), including restrictive covenants that limit our ability to: incur additional indebtedness; encumber the collateral securing the loan; acquire, own or make investments; repurchase or redeem any class of stock or other equity interest; declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest; transfer a material portion of our assets; acquire other businesses; and merge or consolidate with or into any other organization or otherwise suffer a change in control, in each case subject to exceptions. Our intellectual property also is subject to customary negative covenants. In addition, subject to limited exceptions, Hercules could declare an event of default upon the occurrence of any event that it interprets as having a material adverse effect upon our business, operations, properties, assets, or financial condition or upon our ability to perform or pay the secured obligations under the loan and security agreement or upon the collateral or Hercules' liens on the collateral under the agreement, thereby requiring us to repay the loan immediately, together with a prepayment charge of up to 2% of the then outstanding principal balance and an end-of-term charge of $2.085 million. Although, in and of itself, the occurrence of adverse results or delays in any clinical study or the denial, delay or limitation of approval of or taking of any other regulatory action by the FDA or another governmental entity will not constitute a material adverse effect under our loan and security agreement with Hercules, Hercules may determine that such an event together with contemporaneous events or circumstances constitutes a material adverse effect upon our business, operations, properties, assets, or financial condition or upon our ability to perform or pay the secured obligations under the loan and security agreement. If we default under the facility, Hercules may accelerate all of our repayment obligations and, if we are unable to access funds to meet those obligations or to renegotiate our agreement, Hercules could take control of our pledged assets and we could immediately cease operations. If we were to renegotiate our agreement under such circumstances, the terms may be significantly less favorable to us. If we were liquidated, Hercules' right to repayment would be senior to the rights of our stockholders to receive any proceeds from the

liquidation. Any declaration by Hercules of an event of default could significantly harm our liquidity, financial condition, operating results, business, and prospects and cause the price of our common stock to decline.

We may incur additional indebtedness in the future. The debt instruments governing such indebtedness may contain provisions that are as, or more, restrictive than the provisions governing our existing indebtedness under the loan and security agreement with Hercules. If we are unable to repay, refinance or restructure our indebtedness when payment is due, the lenders could proceed against the collateral or force us into bankruptcy or liquidation.

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, including through the sale of securities from our registration statement on Form S-3 filed with the U.S. Securities and Exchange Commission, or SEC, the ownership interests of our existing stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our 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.

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 the 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 Europe.

We do not currently own a European 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 complete our own manufacturing facility for supply of U.S. clinical and/or commercial cell therapy product candidate requirements, but we may not be able to do so.

We have leased space and initiated work for the design and build out of manufacturing space at our headquarters building in Houston, Texas. 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 these 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 these 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 processes, there are timing and operational risks 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, we may not be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they may not 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.

We may not 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 U.S. 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, including BPX-501, outside of the U.S. and, accordingly, 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 U.S.;
- potential liability under the FCPA 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 U.S.;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- differing payor reimbursement regimes, governmental payors or patient self-pay systems and price controls; 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 and 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. It is possible that, following a strategic transaction or license, we may not 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 pursuing clinical and preclinical development program in each of our CaspaCIDe 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, including BPX-501. 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 U.S. 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.

System outages, network disruptions and cyber-security threats could interrupt the operation of our business.

We are dependent on the use of information technology systems for our operations. Outages, disruptions and threats could have an adverse impact on our ability to conduct operations. Cyber-security threats, such as malware, phishing and network attacks, are on the rise. These attacks can affect the availability of our information technology systems, including their data, as well as the confidentiality and integrity of these systems. A security breach poses a risk to confidential data, including but not limited to intellectual property and trade secrets resulting in financial, legal or reputational harm to us. Insider threats may exist if an individual authorized to access our technology systems improperly discloses sensitive data to unauthorized persons or the public. We also have outsourced elements of our operations, including elements of our information technology infrastructure, and thus manage several independent vendor relationships with third parties who may have access to our confidential information. Confidentiality agreements are in place for authorized users and third parties to support the prevention of confidential information being improperly disclosed. We have policies and procedures in place, including controls around the access and activity of authorized users, active system monitoring, back-up and recovery, information technology security and mandatory annual information technology security awareness training to assist in the prevention and mitigation of an outage, disruption or threat. In addition, we have invested in high availability, redundant technologies that will reduce the risk of an outage, disruption or threat. However, our efforts may not prevent an outage, disruption or threat that would materially adversely affect us. We also may not have sufficient liability insurance, either type or amount, to cover us against claims related to a cyber-security threat.

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 U.S. 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 U.S., 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 for, 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 penalties law, 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;
- 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 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, and its implementing regulations, which requires certain 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 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 require certain manufacturers and group purchasing organizations to report annually 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.

We have adopted 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, individual imprisonment, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, 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 U.S. will also 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 or cease 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 $10.0 million of product liability insurance covering our clinical trials, with other coverage limits as appropriate for certain foreign jurisdictions. 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 initial IPO in December 2014 and our private placements and other transactions that have occurred over the past three years, we may have experienced 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, 2016, we had gross federal income tax net operating loss, or NOL, carry forwards of $142.2 million and federal research tax credits of $4.3 million. The NOL carryforwards will expire beginning in 2025, if not utilized.

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;
- 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.

Gene therapy clinical trials conducted at institutions that receive funding for recombinant DNA research from the NIH, are also subject to review by the RAC. Although the FDA decides whether individual gene therapy protocols may proceed, the RAC review process can delay the initiation of a clinical trial, even if the FDA has reviewed the trial design and details and approved its initiation. Conversely, the FDA can put an IND on clinical hold even if the RAC has provided a favorable review of the drug. Also, before a clinical trial can begin at an NIH-funded institution, that institution's independent institutional review board, or IRB, and its Institutional Biosafety Committee must review the proposed clinical trial to assess the safety of the trial. In addition, adverse developments in clinical trials of gene therapy products conducted by others may cause the FDA or other regulatory bodies to change the requirements for approval of any of our product candidates.

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 a mismatched allogeneic (donor cells as opposed to the patient's own cells) HSCT. We have initiated dialogue with regulators in the U.S. to discuss our clinical trial design that could serve as the registration trial 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 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 US and European regulators 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 regulatory marketing 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 regulatory authorities 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 U.S. 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. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the U.S., 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

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the U.S. 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 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 U.S. 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. Many 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.

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 U.S., 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 U.S. 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 those 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 U.S. 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 Affordable Care Act was enacted in the U.S. The Affordable Care 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. Since its enactment there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to it in the future. In January, Congress voted to adopt a budget resolution for fiscal year 2017, or the Budget Resolution, that authorizes the implementation of legislation that would repeal portions of the Affordable Care Act. The Budget Resolution is not a law, however, it is widely viewed as the first step toward the passage of repeal legislation. Further, on January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the Affordable Care Act to waive, defer, grant exemptions from, or delay the implementation of any provision of the Affordable Care Act that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. Congress also could consider subsequent legislation to replace elements of the Affordable Care Act that are repealed. We cannot predict how the Affordable Care Act, its possible repeal, or any legislation that may be proposed to replace the Affordable Care Act will impact our business.

Other legislative changes have been proposed and adopted in the U.S. since the Affordable Care 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 due to subsequent legislative amendments, will stay in effect through 2025 unless Congressional action is

taken. In January 2013, then 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. Further, there has been heightened governmental scrutiny recently over the manner in which manufacturers set prices for their marketed products. For example, there have been several recent Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, reduce the cost of drugs under Medicare, and reform government program reimbursement methodologies for drug products.

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, including BPX-501, 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 for BPX-501 and our other potential product candidates 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, for example, reimbursement for administration of our product candidates 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.

We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, or collectively, Trade Laws. We can face serious consequences for violations.

Among other matters, Trade Laws prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors, and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We engage third parties for clinical trials and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We also expect our non-U.S. activities to increase in time. We can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

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 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, to certain genetic constructs and to certain methods for inducing apoptosis. 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 of Texas 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 also dependent on our license agreements with Agensys with respect to BPX 601, Leiden with respect to BPX 701 and BioVec with respect to making retrovirus for all of our programs. The termination of any of these licenses could have a material adverse effect on our business.

Any termination of these agreements, or other agreements to which we are a party could result in the loss of significant rights and could harm our ability to commercialize our product candidates. See “Item 1. 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. 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 U.S. 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 U.S. 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 U.S. 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 U.S. 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 U.S. and most other countries are confidential for a period of time after filing, it is possible that patent applications in our portfolio may not be the first filed patent applications related to our product candidates. Furthermore, for U.S. 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 U.S. 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.

Patent coverage on the dimerization molecule rimiducid, expired in February 2016. Therefore, any additional barriers to entry for competitors to use rimiducid may not be effective in preventing such use. There remain significant questions regarding how the FDA will interpret the 'biosimilar' provisions recently added to the PHSA as applied to complex biological products such as our investigational products. Depending on how the FDA ultimately interprets these provisions, if our investigational products incorporating rimiducid receive FDA approval through a combination product BLA, then a biosimilar of these combination products could be approved by the FDA twelve years from the date that we receive FDA approval for our application. In addition, if a third party were able to obtain FDA approval of a new drug application for rimiducid on its own, then it is possible that other third parties could later seek approval of an abbreviated new drug application for 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, it is possible that our trade secrets and other confidential proprietary information could be disclosed or that competitors may 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 U.S. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the U.S. 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 parties* 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. It is possible that any such license would not be available at all or 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.

For example, we are aware of a third party patent having claims directed to chimeric DNA comprising DNA segments encoding (1) a single chain antibody domain and (2) transmembrane and cytoplasmic domains of an endogenous protein. Even though we have reason to believe that our 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.

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.

Also, while we are aware there are other third party patents having claims that may be considered relevant to 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 (1) certain of these requirements may not be met, and/or (2) 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 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.

We may not 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 or other proceedings 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. It also is possible that a competitor we sue for patent infringement could countersue us for allegedly infringing one or more of their own patents or one or more patents they licensed from another entity. 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 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. It also is possible that third parties could institute a patent office post-grant proceeding against one or more of our patents, or one or more patents licensed to us, such as a post grant review proceeding, inter partes review proceeding or reexamination proceeding at the USPTO, or an opposition proceeding in a jurisdiction outside the U.S. An unfavorable outcome in a post-grant proceeding could result in a loss of our patent rights. Litigation, interference proceedings or patent office post-grant 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 also 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 U.S.

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 (1) non-U.S. patents and patent applications owned by us, and (2) 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 U.S., 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 U.S. or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions, for example, opposition proceedings. Any 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. 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 U.S. 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 U.S. 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 U.S. can be less extensive than those in the U.S. In addition, the laws of some foreign countries do not protect intellectual property to the same extent as federal and state laws in the U.S. Consequently, we may not be able to prevent third parties from practicing

our inventions in all countries outside the U.S., or from selling or importing products made using our inventions in and into the U.S. 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 U.S. 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 China and certain other 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. To date, we have not sought to enforce any issued patents in these foreign jurisdictions. 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. The requirements for patentability may differ in certain countries, particularly developing countries. Furthermore, generic drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or other proceedings. Certain countries in Europe and developing countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. 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 Ownership of our Common Stock

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

Prior to our December 2014 IPO, there was no public market for our common stock. The trading price of our common stock is likely to continue to be highly volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control, including market conditions in general and a limited trading volume for our shares. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this Annual Report, 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 our ongoing or future clinical trials, including for BPX-501;
- 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 maintain successful collaborations or to establish new 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. 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. In addition, the terms of our loan and security agreement with Hercules restrict our ability to declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest. 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 can exert significant control over matters subject to stockholder approval.

As of February 28, 2017, our executive officers, directors and 10% stockholders beneficially owned approximately 31.4% of our outstanding voting shares. Therefore, these stockholders may have the ability to significantly influence us through this ownership

position. These stockholders may be able to significantly influence all matters requiring stockholder approval. For example, these stockholders may be able to significantly influence 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.

We are an emerging growth company and the reduced reporting requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an emerging growth company, as defined in 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 Annual Report 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 completed our IPO, December 23, 2014, 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 our IPO, (b) in which we have total annual gross revenue of at least $1.0 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 $700.0 million as of the prior June 30th, or (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

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

We completed our IPO on December 23, 2014. As a new public company, we will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. We are now subject to the reporting requirements of the Exchange Act, which requires, among other things, that we file with 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 an IPO. We intend to take advantage of this new legislation, but it is possible that we will 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.

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.

Certain holders of our outstanding shares of common stock, are entitled to rights with respect to the registration of their shares under the Securities Act of 1933, as amended, or Securities Act. Any sales of these shares by such stockholders could have a material adverse effect on the trading price of our common stock.

We register on Form S-8 all shares of common stock that are issuable under our 2014 Equity Incentive Plan, as amended, or the EIP. As a consequence, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our EIP and recently filed shelf registration statement, 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 will be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts for BPX-501, 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, including pursuant to our shelf registration statement on Form S-3 that we filed with the SEC. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Any such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the existing holders of our common stock.

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

Our management has broad discretion in the application of the net proceeds from our December 2014 IPO. Because of the number and variability of factors that will determine our use of the net proceeds from our IPO, 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 our common stock. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from our IPO 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 our IPO in ways that enhance stockholder value, we may fail to achieve 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 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 depends in part on the research and reports that securities or industry analysts publish about us or our business. In the event securities or industry analysts that cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of us 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.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

We lease an aggregate of approximately 65,608 square feet of space in Houston, Texas, which consists of a 35,251 square foot facility for administrative and research and development activities under a lease that expires in January, 2020 with five, one-year lease renewal options, and a 30,357 square foot facility for in-house cell therapy manufacturing activities under a lease that expires in August 2026, with an option to renew for one additional period of five years. During 2016, the Company leased an aggregate of 3,540 additional square foot primarily for manufacturing and clean room space which is included in the manufacturing square footage above. 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.

ITEM 3. 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.

ITEM 4. Mine Safety Disclosures

Not applicable.

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock began trading on The NASDAQ Global Market on December 18, 2014 under the symbol "BLCM." Prior to such time, there was no public market for our common stock.

The following table sets forth the high and low sales prices per share of our common stock as reported on The NASDAQ Global Market for the periods indicated:

	Price Range	
	High	Low
Year Ended December 31, 2014		
Fourth Quarter (commencing December 18, 2014)	$ 27.38	$ 18.20
Year Ended December 31, 2015		
First Quarter	$ 33.63	$ 19.73
Second Quarter	$ 29.33	$ 20.20
Third Quarter	$ 21.71	$ 13.66
Fourth Quarter	$ 23.84	$ 12.25
Year Ended December 31, 2016		
First Quarter	$ 20.25	$ 7.24
Second Quarter	$ 13.75	$ 8.61
Third Quarter	$ 21.58	$ 12.71
Fourth Quarter	$ 23.11	$ 13.50

Holders of Record

As of February 28, 2017, there were approximately 41 stockholders of record of our common stock. Certain shares are held in "street" name and thus the actual number of beneficial owners of such shares is not known or included in the foregoing number.

Dividend Policy

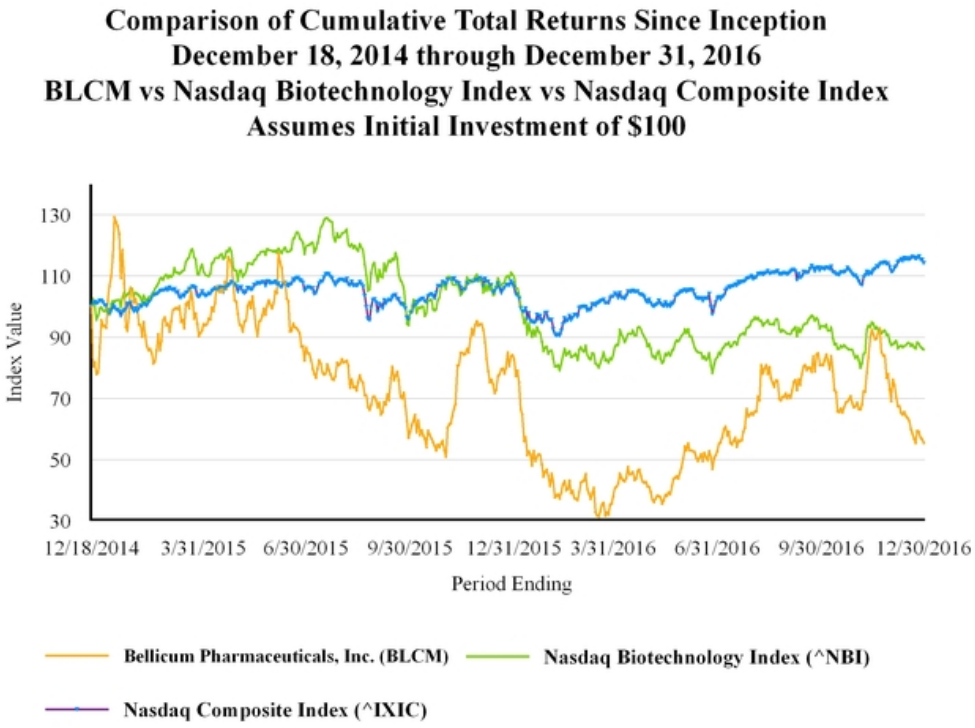
We have never declared or paid any dividends on our common stock. In addition, the terms of our loan and security agreement with Hercules restrict our ability to declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business and we do not anticipate paying any cash dividends in the foreseeable future. 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.

Securities Authorized for Issuance under Equity Compensation Plans

Information about our equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report.

Stock Performance Graph

The following stock performance graph illustrates a comparison of the total cumulative stockholder return on our common stock since December 18, 2014, which is the date our common stock first began trading on The NASDAQ Global Market, to two indices: the NASDAQ Composite Index (^IXIC), and the NASDAQ Biotechnology Index (^NBI). The graph assumes an initial investment of $100 on December 18, 2014 and assumes reinvestment of the full amount of all dividends, if any. The comparisons in the graph are required by the SEC and are not intended to forecast or be indicative of possible future performance of our common stock.



	Cumulative Total Return Date Ended								
	12/18/2014 (Inception)	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016
Bellicum	$ 100.00	$ 94.34	$ 86.60	$ 59.16	$ 82.53	$ 38.07	$ 52.77	$ 81.03	$ 55.46
Nasdaq Composite	$ 100.00	$ 111.41	$ 119.70	$ 98.16	$ 109.66	$ 84.46	$ 83.42	$ 93.76	$ 85.88
Nasdaq Biotechnology	$ 100.00	$ 104.00	$ 105.82	$ 98.04	$ 106.26	$ 103.34	$ 102.76	$ 112.72	$ 114.23

The performance graph shall not be deemed to be incorporated by reference by means of any general statement incorporating by reference this Form 10-K into any filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate such information by reference, and shall not otherwise be deemed filed under such acts.

Recent Sales of Unregistered Securities

None.

Use of Proceeds from Initial Public Offering

On December 17, 2014, we commenced our initial public offering pursuant to a registration statement on Form S-1 (File No. 333- 200328) that was declared effective by the SEC on December 17, 2014. Since the effective date of our registration statement through the date of these financial statements, we have used approximately $98.8 million of the proceeds to fund our operating activities, and the remainder is invested in cash and cash equivalent securities, or highly-liquid investment securities. See Notes 3 and 4 to the audited financial statements contained herein.

ITEM 6. Selected Financial Data

The following selected financial data should be read in conjunction with our audited financial statements and the notes thereto and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" located elsewhere in this Annual Report. Amounts are in thousands, except share and per share data.

We derived the statements of operations data for the years ended December 31, 2016, 2015 and 2014 and the balance sheet data as of December 31, 2016 and 2015 from our audited financial statements included in this annual report. We derived the statements of operations data for the years ended December 31, 2013 and 2012 and the balance sheet data as of December 31, 2014, 2013 and 2012 from our audited financial statements not included in this report. Our historical results for any prior period are not necessarily indicative of the results to be expected for any future period. You should read the notes to our financial statements for an explanation of the method used to determine the number of shares used in computing basic and diluted net loss per share.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except share data)				
Statement of Operations:					
Grant revenues	$ 388	$ 282	$ 1,780	$ 1,941	$ 1,470
Operating expenses:					
Research and development	51,263	33,561	12,071	7,899	6,156
License fees	580	3,184	—	—	—
ARIAD restructuring costs	—	—	43,212	—	—
General and administrative	16,925	12,672	4,335	1,964	1,583
Total operating expenses	68,768	49,417	59,618	9,863	7,739
Loss from operations	(68,380)	(49,135)	(57,838)	(7,922)	(6,269)
Interest income	909	641	35	4	7
Interest expense	(1,760)	(12)	(1,791)	(51)	(1)
Loss on disposal of assets	(10)	(42)	—	—	—
Change in fair value of warrant liability	—	—	(24,371)	—	—
Net loss	$ (69,241)	$ (48,548)	$ (83,965)	$ (7,969)	$ (6,263)
Preferred stock dividends	—	—	(1,432)	(1,093)	(757)
Net loss attributable to common stockholders	$ (69,241)	$ (48,548)	$ (85,397)	$ (9,062)	$ (7,020)
Basic and diluted net loss per share	$ (2.57)	$ (1.84)	$ (34.04)	$ (5.05)	$ (4.26)
Weighted average common shares outstanding— basic and diluted	26,950,906	26,346,603	2,508,960	1,795,992	1,648,198

	As of December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Balance Sheet Data:					
Cash, cash equivalents, restricted cash and investment securities	$ 113,412	$ 150,365	$ 191,602	$ 11,168	$ 1,632
Working capital	90,497	89,445	189,586	9,963	256
Total assets	132,037	160,406	195,794	14,942	5,186
Capital lease obligation, net of current portion	141	118	—	—	—
Long-term debt, net of current portion	18,436	—	—	400	—
Convertible preferred stock	—	—	—	39,926	21,658
Accumulated deficit	(230,733)	(161,492)	(112,944)	(28,979)	(21,010)
Total stockholders' equity (deficit)	96,574	152,017	191,636	(28,152)	(19,473)

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis together with "Item 6. Selected Financial Data" and our financial statements and related notes included in "Item 8 - Financial Statements and Supplementary Data" in this Annual Report. The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those expressed or implied in any forward-looking statements as a result of various factors, including those set forth under the caption "Item 1A. Risk Factors."

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 CID technology platform to engineer our product candidates with switch technologies that can 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. For additional information about our business, and candidate development programs, see the discussions contained within Item 1. Business in this Annual Report.

Recent Developments

On January 30, 2017, Thomas J. Farrell resigned from his position as a director and our President and Chief Executive Officer. In connection with Mr. Farrell's resignation, effective January 30, 2017, our board of directors appointed Richard A. Fair, 48, to serve as our President and Chief Executive Officer and, upon recommendation of the Nominating and Governance Committee of our Board, appointed Mr. Fair to our Board as a Class III director to hold office until the 2017 Annual Meeting of Stockholders.

Prior to joining Bellicum, Mr. Fair served as Senior Vice President, Therapeutic Head Oncology Global Product Strategy at Genentech, Inc., a private biotechnology company and subsidiary of Roche Holding AG. From April 2006 to January 2014, Mr. Fair held other positions at Genentech, including Vice President, Global Product Strategy Hematology & Signaling, from November 2012 through December 2013, and Vice President, Sales & Marketing, Oral Oncolytics, from May 2010 to November 2012. Prior to Genentech, Mr. Fair held positions at Johnson & Johnson, a public pharmaceutical and medical device company. Mr. Fair received his B.S. in computer science from the University of Michigan and his MBA, with a dual concentration in finance and management, from Columbia University.

On March 8, 2017, we borrowed an additional $10.0 million under our existing debt facility with Hercules Capital, Inc., Hercules Technology II, L.P., and Hercules Technology III, L.P., or collectively, Hercules. We now have total outstanding principal under the loan agreement of approximately $30.0 million and an aggregate end-of term charge of $2.085 million. In addition, the interest only period was extended for another six months. See Notes 7 and 15 to the audited financial statements included herein.

In February 2017, we began the manufacturing of BPX-501 in our new manufacturing facility in Houston, Texas. We intend to manufacture for U.S. clinical trials of BPX-501 and our other product candidates and for initial commercial supply requirements for BPX-501 from our facility.

Also, in February 2017, we enrolled our first patient in the clinical trial of BPX-601, a GoCAR-T product candidate containing our proprietary iMC, inducible MyD88/CD40 activation switch, designed to treat solid tumors expressing PSCA.

On December 16, 2016, we entered into a Co-Development and Co-Commercialisation Agreement with Adaptimmune, or Adaptimmune, to evaluate, develop, and commercialize next-generation T-cell therapies. Under the Adaptimmune Agreement, the parties will evaluate our GoTCR technology (inducible MyD88/CD40 co-stimulation, or iMC) with Adaptimmune's affinity-optimized SPEAR® T-cells for the potential to create enhanced TCR product candidates. Depending on results from the preclinical proof-of-concept phase, the parties expect to progress to a two-target co-development and co-commercialization phase.

On November 16, 2016, we received notice of a Product Development award totaling approximately $16.9 million from CPRIT to support clinical studies of its lead product candidate BPX-501. Assuming successful contract negotiations and execution, the CPRIT award would fund a portion of a three-year global clinical program comprising clinical trials for adult and pediatric patients with high-risk and intermediate-risk acute myeloid leukemia. The proposed studies are designed to evaluate the benefit of BPX-501 and rimiducid in the context of in vivo and ex vivo T cell depleted haploidentical hematopoietic stem cell transplantation. The CPRIT oversight committee met in February 2017 and agreed to move forward with the proposed terms of the grant agreement.

On October 28, 2016, we entered into a collaboration agreement with OPBG, pursuant to which we and OPBG agreed to collaborate on research projects and early stage clinical trials for the design and development of various T cell immunotherapies. As consideration for OPBG's performance of the research under the agreement and grant of certain licenses to us, we agreed to fund an aggregate of up to $4.7 million in project costs payable to OPBG or certain third party service providers, as applicable, over the term of the research, estimated to be four years. With respect to any inventions arising from the research, OPBG agreed to grant us an exclusive license to any such inventions, the terms of which will be set forth in a separate agreement. In addition, OPBG granted us paid-up, worldwide co-exclusive licenses for non-commercial development of OPBG's CD19 and CAR.GD2 CAR T technologies, as well as paid-up, worldwide exclusive licenses to commercialize its CD19 and CAR.GD2 CAR T technologies, each to be governed by a separate agreement.

Financial Operations Overview

Grant Revenue

To date, we have only recognized revenue from government grants and we have not generated any product revenue. We have received funds from CPRIT, and the NIH, which are awarded based on the progress of the program being funded. In cases when the 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.

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 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. Our policy is to recognize revenue in accordance with ASC 605. See the discussion of "Collaboration Agreements" contained within Note 2 to the audited financial statements contained within Item 8 of this Annual Report.

Cancer Research Institute of Texas (CPRIT)

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 initially allowed us to receive funds in advance of costs and allowable expenses being incurred. On a quarterly basis, we were 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 resulted in a deferred liability or grant receivable. The CPRIT grant expired as of June 30, 2014. As discussed above, we have received notice of an additional $16.9 million grant from CPRIT, the terms of which are in negotiation, to support additional studies of BPX-501.

NIH Grant

During 2013, we entered into a grant agreement with the NIH. The grant is a modular five year grant with funds being awarded each year based on the progress of the program being funded. Grant money is not received until expenses for the program are incurred. We have been awarded approximately $1.4 million to date, of which $1.2 million has been received. 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, share-based compensation expense 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 events are achieved. See the discussion of "Research and Development" expenses contained within Note 2 to the audited financial statements contained within Item 8 of this Annual Report.

We utilize our research and development personnel and infrastructure resources across several programs, and many of our costs are not specifically attributable to a single program. Accordingly, we cannot state precisely our total costs incurred on a program-by-program basis.

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. 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 outcomes of our clinical trials;
- 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 ongoing scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential.

We expect our research and development expenses to increase over the next several years as we progress our business plan which includes conducting ongoing and new clinical trials for BPX-501, BPX-601 and BPX-701 and advancing additional product candidates into clinical development, manufacturing clinical trial and preclinical study materials, expanding our research and development and process development and optimization efforts, seeking regulatory approvals for our product candidates that successfully complete clinical trials, and hiring additional personnel to support our research and development efforts.

The following table indicates our research and development expense by project/category for the periods indicated:

Program	2016	2015	2014	2013	Total Inception Through December 31, 2016
			(in thousands)		
BPX-501	$ 26,140	$ 13,602	$ 6,041	$ 3,062	$ 51,771
BPX-601	3,602	940	—	—	4,542
BPX-701	1,899	1,093	—	—	2,992
General	19,622	17,926	6,030	4,837	61,251
Total	$ 51,263	$ 33,561	$ 12,071	$ 7,899	$ 120,556

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including share-based compensation, for personnel in executive, finance, accounting, business development, legal 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, insurance costs and professional fees for consultancy, accounting, audit and investor relations.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities, and the potential commercialization of our product candidates. Additionally, if and when we believe a regulatory approval for the first product candidate appears likely, we anticipate an increase in payroll and related expenses as a result of our preparation for commercial operations, especially as it relates to the sales and marketing of our product candidates.

Income Taxes

We did not recognize any income tax expense for the years ended December 31, 2016, 2015 and 2014.

Other Income (Expense)

Other income (expense), net consists of interest income, interest expense, loss on the disposition of fixed assets and the change in the fair value of a warrant liability.

Results of Operations

Comparison of the Years Ended December 31, 2016 and 2015

The following table sets forth our results of operations for the years ended December 31, 2016 and 2015:

	Year ended December 31,		
	2016	**2015**	**Change**
	(in thousands)		
Grant revenues	$ 388	$ 282	$ 106
Operating expenses:			
Research and development	51,263	33,561	17,702
License fees	580	3,184	(2,604)
General and administrative	16,925	12,672	4,253
Total operating expenses	68,768	49,417	19,351
Loss from operations	(68,380)	(49,135)	(19,245)
Other income (expense):			
Interest income	909	641	268
Interest expense	(1,760)	(12)	(1,748)
Loss on disposition of fixed assets	(10)	(42)	32
Total other income (expense)	(861)	587	(1,448)
Net loss	$ (69,241)	$ (48,548)	$ (20,693)

Grant Revenues

Grant revenues were comparable in the years ended December 31, 2016 and 2015, and were comprised of our grant from the NIH.

Research and Development Expenses

Research and development expenses were $51.3 million and $33.6 million for the years ended December 31, 2016 and 2015, respectively. During 2016, enrollment in our clinical trials for BPX-501 increased, compared with the previous year, resulting in additional clinical trials and manufacturing expenses. In addition, we conducted process development and optimization work on BPX-501 in preparation of manufacturing start-up activities in our U.S. facility.

The $17.7 million increase in research and development expenses for the twelve months ended December 31, 2016, was primarily due to an increase in costs related to BPX-501 of approximately $12.5 million. The increased costs related to BPX-501 include increases of, approximately $1.3 million in clinical development activities, due to increased patient enrollment in our clinical trials, increases of

approximately $7.5 million in manufacturing costs as a result of increased patient enrollment in our clinical trials and process development and optimization costs related to the startup of manufacturing in our internal manufacturing facility, approximately $2.3 million in regulatory and product characterization related studies of rimiducid and approximately $1.4 million in other costs, primarily salaries and wages, related to the BPX-501 program. The increase in research and development expenses also included an increase of $3.5 million in regulatory and other costs related to our preclinical product candidates, BPX-701 and BPX-601, primarily related to IND enabling activities; and an increase of approximately $1.7 million in general research and development costs.

License fees

License fees were $0.6 million and $3.2 million for the years ended December 31, 2016 and 2015, respectively. The 2015 license fees included the license agreement with Agensys, as consideration for the rights granted to us under the agreement, whereby we paid Agensys a non-refundable upfront fee of $3.0 million. For more information, see Notes 11 and 12 to the financial statements included herein for additional information about ARIAD and our license fees. If we are successful in our development activities under our existing and future licenses, we expect that our license fee expenses will increase in future years.

General and Administrative Expenses

General and administrative expenses were $16.9 million and $12.7 million for the years ended December 31, 2016 and 2015, respectively. The increase of $4.2 million in 2016 was due to our overall growth and public company related costs. Share-based compensation expense increased approximately $1.8 million, and other personnel-related expenses increased approximately $1.0 million due to increases in personnel. Other costs, including legal and accounting expenses and costs related to facilities, insurance and travel increased approximately $1.4 million.

Other Income (Expense)

Other income (expense) was $(0.9) million and $0.6 million for the years ended December 31, 2016 and 2015, respectively. The $1.5 million of additional expense in 2016 was primarily due to $1.8 million of interest expense related to the debt financing.

Comparison of the Years Ended December 31, 2015 and 2014

The following table sets forth our results of operations for the years ended December 31, 2015 and 2014:

	Year ended December 31,		
	2015	2014	Change
	(in thousands)		
Grant revenues	$ 282	$ 1,780	$ (1,498)
Operating expenses:			
Research and development	33,561	12,071	21,490
License fees	3,184	—	3,184
ARIAD license restructuring	—	43,212	(43,212)
General and administrative	12,672	4,335	8,337
Total operating expenses	49,417	59,618	(10,201)
Loss from operations	(49,135)	(57,838)	8,703
Other income (expense):			
Interest income	641	35	606
Interest expense	(12)	(1,791)	1,779
Change in fair value of warrant liability	—	(24,371)	24,371
Loss on disposition of fixed assets	(42)	—	(42)
Total other income (expense)	587	(26,127)	26,714
Net loss	$ (48,548)	$ (83,965)	$ 35,417

Grant Revenues

Grant revenues were $0.3 million and $1.8 million for the years ended December 31, 2015 and 2014, respectively. The decrease in grant revenues in 2014 was primarily due to the expiration of our grant award from CPRIT in June 2014.

Research and Development Expenses

Research and development expenses were $33.6 million and $12.1 million for the years ended December 31, 2015 and 2014, respectively. The $21.5 million increase in research and development expenses for the twelve months ended December 31, 2015, was due to an increase in costs related to BPX-501 of $7.6 million, primarily due to the increase in clinical and manufacturing costs as a result of increased patient enrollment in our clinical trials. The increase in research and development expenses was also due to an increase of $2.0 million in costs related to our product candidates, BPX-701 and BPX-601, primarily related to IND enabling activities; and an increase of $11.9 million in general research and development costs comprised of $6.3 million in personnel costs, $2.7 million in allocated overhead costs and $2.9 million in other costs.

Reclassifications

Certain research and development indirect costs, including facilities and overhead, were previously included in general and administrative costs. These research and development indirect costs are included in research and development expense in the year ended December 31, 2015. The amounts for the year ended December 31, 2014 have been reclassified to conform to the current year presentation. The effect of the reclassification of the results for the twelve months ended December 31, 2014 was to increase research and development expense and reduce general and administrative expense by $1.1 million with no change in total operating expense or net loss.

License fees

License fees were $3.2 million for the year ended December 31, 2015, compared to no license fees in 2014. The increase in license fees was primarily due to our new license agreement with Agensys, as consideration for the rights granted to us under the agreement, whereby we paid Agensys a non-refundable upfront fee of $3.0 million. For more information, see Note 12 to the financial statements included herein.

ARIAD License Restructuring

On October 3, 2014, we entered into an omnibus amendment agreement with ARIAD, under which we agreed to make payments of $50.0 million in exchange for an expansion of the license field, the termination of all obligations to make milestone and royalty payments to ARIAD in the future and the return of 677,463 shares of our common stock that ARIAD held. In connection with the amendment, we made an initial payment of $15.0 million and issued a promissory note to ARIAD for a principal amount of $35.0 million. In December 2014 following our IPO, we paid the remaining $35.0 million and ARIAD returned all 677,463 shares of our common stock that ARIAD held. The license transaction was valued on the date of the transaction and the note was discounted to fair market value at a 10% rate. This resulted in license expense of $43.2 million, repurchase of our common stock for $5.1 million, and interest expense of $1.7 million. We have recorded the returned shares of common stock as treasury stock. For more information, see Note 11 to the financial statements included herein.

General and Administrative Expenses

General and administrative expenses were $12.7 million and $4.3 million for the years ended December 31, 2015 and 2014, respectively. The increase of $8.4 million in 2015 was due to our overall growth and public company related costs, including an increase in personnel, legal and accounting expenses and costs related to facilities, insurance and travel.

Other Income (Expense)

Other income (expense) was $0.6 million and $(26.1) million for the years ended December 31, 2015 and 2014, respectively. The $26.7 million decrease in other expense in 2015 was primarily due to the change in fair value of a warrant liability of $24.4 million and imputed interest expense from the ARIAD license restructuring of $1.7 million. In connection with our August 2014 issuance of Series C convertible preferred stock, we issued warrants to purchase 6,559,598 shares of Series C convertible preferred stock with an exercise price of $6.00 per share, which were convertible into 3,858,549 common shares. The fair value of the warrants on the date of issuance of $9.4 million, as determined using the Black-Scholes option-pricing model, was recorded as a warrant liability. The Series C warrants were revalued at the time of exercise in December 2014 to $33.8 million. The increase in the calculated fair value from the issuance date to the remeasurement dates resulted in non-cash expense of $24.4 million in 2014. As all the warrants were either exercised or expired in December 2014, there were no future charges in connection with the warrants in 2015. Interest income in 2015 was a result of substantially higher levels of cash and investments.

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 equity and debt financings and grants. We have not generated any revenue from the sale of any products. As of December 31, 2016, we had cash, cash equivalents, restricted cash and investment securities of $113.4 million. Cash in excess of

immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

On January 15, 2016, we filed a shelf Registration Statement on Form S-3 (File No. 333-209012), or the Shelf Registration Statement, to enable us to sell securities from time to time as described in the prospectus in one or more offerings up to a total aggregate offering price of $150,000,000. The SEC declared the Shelf Registration Statement effective on February 1, 2016.

On March 10, 2016, we entered into a term loan arrangement with Hercules, as agent and lender and borrowed $15.0 million on the closing date. We borrowed an additional $5.0 million on September 15, 2016 and the remaining $10.0 million on March 8, 2017. We intend to use the proceeds to complete the build-out of our manufacturing facilities, and for general corporate purposes. We are required to make monthly interest only payments through March 2018. Thereafter, we are required to repay the loan over the remaining term, through its final maturity date of March 1, 2020. We incurred issuance costs of $0.2 million and facility charges of $2.1 million, which are payable at the earlier of the repayment of the loan in full or the final maturity date. The $2.3 million debt issuance costs are being recognized over the term of the loan as additional interest expense. We will pay interest on the loan at the greater of either (i) 9.35% plus the prime rate as reported in the Wall Street Journal minus 3.5% and (ii) 9.35%. For additional information about the loan, see Note 7 to the audited financial statements included herein.

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, facility costs and general overhead costs. In addition, we expect to use capital to expand our manufacturing capabilities.

The successful development of any of our product candidates 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, but not limited to, the uncertainty of:

- successful enrollment in, and successful 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;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others; and
- market acceptance of our products, if and when approved;
- successfully negotiating reimbursement for our products from various third-party payors.

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, that we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity or debt financings and collaboration arrangements.

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 our cash and cash equivalents as of December 31, 2016 will enable us to fund our operating expenses and capital expenditure requirements through at least the first quarter of 2018. 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, BPX-701 and BPX-601 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 if they successfully complete clinical trials;
- establish sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any product candidates that may receive regulatory approval;
- build out European operations to support our product development and commercialization plans for BPX-501 and potentially other product candidates;
- 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 being a public company.

Cash Flows

The following table sets forth a summary of our cash flows for the years ended December 31, 2016, 2015 and 2014:

	Year ended December 31,		
	2016	**2015**	**2014**
	(in thousands)		
Net cash used in operating activities	$ (50,441)	$ (35,726)	$ (57,308)
Net cash provided by (used in) investing activities	2,052	(86,453)	(804)
Net cash provided by financing activities	20,928	818	238,546
Net cash inflow (outflow)	$ (27,461)	$ (121,361)	$ 180,434

Operating Activities

Net cash used in operating activities of $50.4 million for the year ended December 31, 2016, was comprised of a net loss of $69.2 million, which included non-cash depreciation expense of $2.3 million, amortization of deferred financing costs of $0.4 million, amortization of premium on investment securities of $0.5 million and share-based compensation expense of $12.3 million. Reported net loss also includes approximately $1.0 million excess of reported rent expense over cash rent paid to our landlord, included on our Balance Sheet as deferred rent. Net cash used in operating activities also included the effect of changes in asset and liability accounts, including a decrease in interest and other receivables of $0.1 million, a decrease in prepaid and other current assets of $0.9 million, an increase in accounts payable of $0.9 million and an increase in accrued liabilities of $1.3 million.

Net cash used in operating activities of $35.7 million for the year ended December 31, 2015, was comprised of a net loss of $48.5 million, which included depreciation expense of $1.2 million and share-based compensation expense of $8.4 million. Net cash used in operating activities was also comprised of the following primary components: a decrease in interest and other receivables of $0.1 million, an increase in prepaid expenses and other current assets of $1.1 million, a decrease in other assets of $0.2 million, an increase in accounts payable of $0.9 million, an increase in accrued liabilities $2.8 million, and an increase in deferred costs of $0.4 million.

Net cash used in operating activities of $57.3 million for the year ended December 31, 2014 was comprised of a net loss of $84.0 million, which included depreciation expense of $0.7 million, share-based compensation expense of $0.9 million and a $24.4 million non-cash charge for the revaluation of the Series C Warrants. Net cash used in operating activities was also comprised of the following primary components: a decrease in grant receivables of $0.4 million, an increase in prepaid expenses and other current assets of $1.1

million, a decrease in other assets of $0.3 million, an increase in accounts payable of $0.7 million, an increase in accrued payroll of $0.3 million, and an increase in deferred manufacturing costs of $0.2 million.

Investing Activities

Net cash used in investing activities for the year ended December 31, 2016 was $2.1 million, which was derived from proceeds from the sale of investment securities of $42.5 million, offset by the purchases of investment securities of $33.3 million, and purchases of property and equipment of $7.2 million.

Net cash used in investing activities for the year ended December 31, 2015 was $86.5 million, which was derived from the purchases of property and equipment of $5.4 million and the purchase of investment securities of $101.6 million, offset by proceeds from the sale of securities of $20.6 million.

Net cash used in investing activities for the year ended December 31, 2014 was $0.8 million, which was derived solely from the purchase of property and equipment.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2016 was $20.9 million, which was primarily derived from proceeds of $20.0 million received from borrowings on long-term debt, $0.8 million from the proceeds of the exercise of stock options and $0.3 million from the proceeds from employee purchases of common stock under the ESPP offset by $0.2 million in debt issuance costs.

Net cash provided by financing activities for the year ended December 31, 2015 was $0.8 million, which was derived from proceeds of $0.5 million from the exercise of stock options and $0.3 million proceeds from employee purchases of common stock under the ESPP.

Net cash provided by financing activities for the year ended December 31, 2014 was $238.5 million, which was derived from approximately $146.3 million in net proceeds from our December 2014 initial public offering, $101.5 million from the issuance of convertible preferred stock and the exercise of warrants, offset by $3.5 million of issuance costs, proceeds from the exercise of common warrants other than in our initial public offering of $0.3 million, payment of $5.1 million for repurchase of stock held by ARIAD, payments totaling $0.2 million for series B dividends, and proceeds from the line of credit of $0.4 million, which were offset by payments on the line of credit of $1.2 million. See Note 8 to the audited Financial Statements included herein.

Contractual Obligations

Our contractual obligations as of December 31, 2016 were as follows:

	(in thousands)				
	Total Commitment	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
License agreements (1)	$ 65,652	$ 1,158	$ 7,703	$ 15,656	$ 41,135
Long-term debt obligations (2)	21,390	1,787	15,953	3,650	—
Operating lease agreements (3)	13,753	1,982	4,120	2,202	5,449
Manufacturing build-out obligation (4)	10,079	10,079	—	—	—
Research collaborations (5)	4,375	1,094	2,187	1,094	—
Manufacturing arrangements (6)	2,993	2,214	779	—	—
Sponsored research agreements (7)	2,342	1,000	1,342	—	—
Equipment capital lease agreements (8)	273	59	118	96	—
Total contractual obligations	$ 120,857	$ 19,373	$ 32,202	$ 22,698	$ 46,584

(1) License agreements - We have entered into several license agreements under which we obtained rights to certain intellectual property. Under the agreements, we could be obligated for payments upon successful completion of clinical and regulatory milestones regarding the products covered by the licenses. The obligations listed in the table above represent estimates of when the milestones will be achieved. The milestones may not be completed when estimated or at all. See Note 12 to the financial statements included herein.

(2) Long-term debt obligations - Obligations under our debt facility. See Note 7 to the financial statements included herein.

(3) Operating lease agreements - The amounts above are comprised of one five-year lease agreement and one 11-year lease agreement. The first lease expires on January 31, 2020 and the second lease expires on August 31, 2026. See Note 12 to the financial statements included herein.

(4) Manufacturing build-out obligation - We entered into a construction contract to build-out our manufacturing facilities. The obligation listed in the table above represents the remaining agreed upon costs.

(5) Research collaborations - We entered into a research collaboration with OPBG with commitments over 4 years. See Note 12 to the financial statements included herein.

(6) Manufacturing arrangements - We have entered into a number of manufacturing service arrangements with various terms. The obligations listed in the table above represent estimates of when certain services will be performed.

(7) Sponsored research agreements - We have entered into two sponsored research agreements to undertake research which is of mutual interest to all parties. The commitments range from one to three years.

(8) Equipment capital lease agreements - We have entered into a number of office equipment lease agreements with various terms. The commitments include equipment, maintenance and supplies. See Note 12 to the financial statements included herein.

We have entered and will enter into other contracts in the normal course of business with third-party manufacturers, contract research organizations for clinical trials and other vendors for other services and products for operating purposes. These agreements generally provide for termination or cancellation, and, other than for costs already incurred, are not included in the table above.

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

To date, we have only recognized revenue from government grants and we have not generated any product revenue. We have received funds from the CPRIT, and the NIH, which are awarded based on the progress of the program being funded. In cases when the 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.

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. See discussion of "Collaboration Agreements" in Note 2 to the audited financial statements included in this Annual Report.

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 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 events are achieved.

Contract Manufacturing Services

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

Share-Based Compensation

We account for share-based compensation by calculating the fair value of equity awards on the date of grant. We calculate the fair value of stock options using the Black-Scholes pricing model, which requires a number of estimates, including the expected lives of awards, interest rates, stock volatility and other assumptions. Restricted stock is measured based on the fair market value of the underlying stock on the date of grant. If the awards are classified as liability awards, the fair value is remeasured at each reporting date and the compensation expense is adjusted accordingly. Additionally, we apply a forfeiture rate to estimate the number of grants that will ultimately vest, as applicable, and adjust the expense as these awards vest. All of our current equity awards are service based awards and the share-based compensation cost is being recognized over the requisite service period of the awards on a straight-line basis. Our share-based compensation expense has increased due to the growth in the number of our employees and also due to the increase in the valuation of equity awards as a result of becoming a public company in December of 2014.

The following table sets forth the share-based compensation expense included in our results of operations for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
General and administrative	$ 6,681	$ 4,832	$ 386
Research and development	5,656	3,577	525
Total	$ 12,337	$ 8,409	$ 911

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 the Accounting Standards Codification (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, 2016, 2015 and 2014, we had no uncertain tax positions and no interest or penalties have been charged to us for the years ended December 31, 2016, 2015 and 2014. 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 2005 through 2016 remain open to examination by the U.S. Internal Revenue Service.

Recently Issued Accounting Pronouncements

See Note 2 to the Notes to Consolidated Financial Statements in "Item 8 - Financial Statements and Supplementary Data" in this Annual Report for discussion regarding recent accounting pronouncements.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements (as defined by applicable regulations of the SEC) that are reasonably likely to have a current or future material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

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.

Subject to certain conditions set forth in the JOBS Act, as an "emerging growth company," we intend to rely on certain of these exemptions including without limitation with respect to, (1) providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (2) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an "emerging growth company" until the earliest of (a) the last day of the fiscal year in which we have total annual gross revenues of $1 billion or more, (b) the last day of our fiscal year following the fifth anniversary of the date of the completion of our initial public offering, (c) the date on which we have issued more than $1 billion in non-convertible debt during the previous three years or (d) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

ITEM 7A. 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 realize income from our investments without assuming significant risk. To achieve our objectives, we invest our cash allocated to fund our short-term liquidity requirements with prominent financial institutions in bank depository accounts and institutional money market funds. We invest the remainder of our cash in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds and U.S. and state government agency-backed securities. As of December 31, 2016, we had cash, cash equivalents, restricted cash and investment in marketable securities of $113.4 million.

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.

ITEM 8. Financial Statements and Supplementary Data

Index to Financial Statements

The financial statements of Bellicum Pharmaceuticals, Inc. listed below are set forth in Item 8 of this Annual Report for the year ended December 31, 2016:

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Bellicum Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of Bellicum Pharmaceuticals, Inc. as of December 31, 2016 and 2015, and the related statements of operations and comprehensive loss, redeemable and convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2016. 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, 2016 and 2015, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Houston, Texas
March 13, 2017

Bellicum Pharmaceuticals, Inc.
Balance Sheets
(in thousands, except for par value and share data)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 33,140	$ 70,241
Investment securities, available for sale	70,632	23,820
Accounts receivable, interest and other receivables	334	440
Prepaid expenses and other current assets	1,504	2,389
Total current assets	105,610	96,890
Investment securities, available for sale - long-term	—	56,304
Property and equipment, net	16,504	6,882
Restricted cash	9,640	—
Other assets	283	330
TOTAL ASSETS	$ 132,037	$ 160,406
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,623	$ 2,106
Accrued expenses and other current liabilities	9,363	5,080
Current maturity of long-term debt	1,787	—
Current portion of capital lease obligations	21	13
Current portion of deferred rent	319	246
Total current liabilities	15,113	7,445
Long-term liabilities:		
Long-term debt	18,436	—
Capital lease obligations	141	118
Deferred rent	1,773	826
TOTAL LIABILITIES	35,463	8,389
Commitments and contingencies: (Note 12)		
Stockholders' Equity:		
Preferred stock: $0.01 par value; 10,000,000 shares authorized: no shares issued and outstanding	—	—
Common stock: $0.01 par value; 200,000,000 shares authorized at December 31, 2016 and 2015; 27,833,028 shares issued and 27,155,565 shares outstanding at December 31, 2016; 27,609,344 shares issued and 26,931,881 shares outstanding at December 31, 2015	278	276
Treasury stock: 677,463 shares held at December 31, 2016 and 2015	(5,056)	(5,056)
Additional paid-in capital	332,068	318,591
Accumulated other comprehensive income (loss)	17	(302)
Accumulated deficit	(230,733)	(161,492)
Total stockholders' equity	96,574	152,017
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 132,037	$ 160,406

The accompanying notes are an integral part of these financial statements.

Bellicum Pharmaceuticals, Inc.
Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2016	**2015**	**2014**
REVENUES			
Grants	$ 388	$ 282	$ 1,780
Total revenues	388	282	1,780
OPERATING EXPENSES			
Research and development	51,263	33,561	12,071
License fees	580	3,184	—
ARIAD restructuring costs	—	—	43,212
General and administrative	16,925	12,672	4,335
Total operating expenses	68,768	49,417	59,618
LOSS FROM OPERATIONS	(68,380)	(49,135)	(57,838)
OTHER INCOME (EXPENSE)			
Interest income	909	641	35
Interest expense	(1,760)	(12)	(1,791)
Loss on disposal of assets	(10)	(42)	—
Change in fair value of warrant liability	—	—	(24,371)
Total other income (expense)	(861)	587	(26,127)
NET LOSS	$ (69,241)	$ (48,548)	$ (83,965)
Preferred stock dividends	—	—	(1,432)
Net loss attributable to common stockholders	**$ (69,241)**	**$ (48,548)**	**$ (85,397)**
Net loss per common share attributable to common shareholders, basic and diluted	**$ (2.57)**	**$ (1.84)**	**$ (34.04)**
Weighted-average shares outstanding-basic and diluted	**26,950,906**	**26,346,603**	**2,508,960**
Net Loss	**$ (69,241)**	**$ (48,548)**	**$ (83,965)**
Other comprehensive loss:			
Unrealized gain (loss) on securities, net	**319**	**(302)**	**—**
Comprehensive loss	**$ (68,922)**	**$ (48,850)**	**$ (83,965)**

The accompanying notes are an integral part of these financial statements.

Bellicum Pharmaceuticals, Inc.
Statements of Redeemable and Convertible Preferred Stock and Stockholders' Equity (Deficit)
Years Ended December 31, 2016, 2015 and 2014
(amounts in thousands, except share data)

	Series A		Series B		Series C		Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Deficit	Other Comprehensive Income (Loss)	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance, January 1, 2014	2,544,539	$ 7,634	6,563,283	$ 32,292	—	$ —	1,725,992	$ 17	—	$ —	$ 810	$ (28,979)	$ —	$ (28,152)
Share-based compensation											911			911
Issuance of restricted stock grant							117,647	1			(1)			—
Exercise of stock options							12,615				11			11
Issuance of common stock in an IPO, net of issuance costs							8,452,500	85			146,218			146,303
Issue Series B preferred stock, net of issuance costs			1,582,706	7,320										—
Issue Series C preferred stock, net of issuance costs					10,091,743	42,074								—
Exercise of Series C warrants, net of issuance costs					6,524,195	72,187								—
Exercise of common warrants							510,524	5			245			250
Accretion of Series B dividend				1,432							(1,432)			(1,432)
Payment of Series B dividend				(173)										—
Repurchase of common stock held by ARIAD									(677,463)	(5,056)				(5,056)
Conversion of preferred stock	(2,544,539)	(7,634)	(8,145,989)	(40,871)	(16,615,938)	(114,261)	16,230,777	163			162,603			162,766
Net loss												(83,965)		(83,965)
Balance, December 31, 2014	—	$ —	—	$ —	—	$ —	27,050,055	$ 271	(677,463)	$ (5,056)	$ 309,365	$ (112,944)	$ —	$ 191,636
Share-based compensation											8,409			8,409
Exercise of stock options							182,238	1			481			482
Issuance of common stock - Employee Stock Purchase Plan							21,690				347			347
Exercise of common warrants							355,361	4			(4)			—
Other											(7)			(7)
Comprehensive loss												(48,548)	(302)	(48,850)
Balance, December 31, 2015	—	$ —	—	$ —	—	$ —	27,609,344	$ 276	(677,463)	$ (5,056)	$ 318,591	$ (161,492)	$ (302)	$ 152,017
Share-based compensation											12,337			12,337
Exercise of stock options							190,055	2			771			773
Issuance of common stock - Employee Stock Purchase Plan							33,629				369			369
Comprehensive income (loss)												(69,241)	319	(68,922)
Balance, December 31, 2016	—	$ —	—	$ —	—	$ —	27,833,028	$ 278	(677,463)	$ (5,056)	$ 332,068	$ (230,733)	$ 17	$ 96,574

The accompanying notes are an integral part of these financial statements.

Bellicum Pharmaceuticals Inc.
Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
CASH FLOWS FROM OPERATING ACTIVITIES:	**2016**	**2015**	**2014**
Net loss	$ (69,241)	$ (48,548)	$ (83,965)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	12,337	8,409	911
Depreciation expense	2,306	1,199	667
Amortization of premium on investment securities, net	539	573	—
Amortization of lease liability	(119)	(94)	(89)
Amortization of deferred financing costs	422	—	—
Loss on disposal of property and equipment	10	42	—
Loss on disposition of investment securities	—	33	—
Change in fair value of warrant liability	—	—	24,371
Changes in operating assets and liabilities:			
Accounts receivable	106	(142)	448
Prepaid expenses and other current assets	885	(1,067)	(1,068)
Other assets	47	(185)	339
Accounts payable	931	897	659
Accrued liabilities and other	1,336	2,778	225
Deferred revenue – grants	—	(13)	13
Deferred rent	—	859	5
Deferred manufacturing costs	—	(467)	176
NET CASH USED IN OPERATING ACTIVITIES	(50,441)	(35,726)	(57,308)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Proceeds from sale of investment securities	42,548	20,617	—
Purchases of investment securities	(33,276)	(101,649)	—
Purchases of property and equipment	(7,220)	(5,421)	(804)
CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	2,052	(86,453)	(804)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from debt	20,000	—	386
Payments on debt	—	—	(1,187)
Payment of debt issuance costs	(199)	—	—
Payment on capital lease obligations	(15)	(4)	—
Proceeds from issuance of common stock	—	—	160,609
Proceeds from exercise of stock options	773	482	—
Proceeds from issuance of common stock - ESPP	369	347	—
Payment of issuance costs on common stock	—	(7)	(14,242)
Proceeds from issuance of preferred stock	—	—	62,320
Payment of issuance costs on preferred stock	—	—	(3,524)
Proceeds from exercise of preferred warrants	—	—	39,145
Proceeds from exercise of common warrants	—	—	250
Payment for repurchase of common stock	—	—	(5,056)
Payment of preferred dividends	—	—	(155)
NET CASH PROVIDED BY FINANCING ACTIVITIES	20,928	818	238,546
NET CHANGE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(27,461)	(121,361)	180,434
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT BEGINNING OF YEAR	70,241	191,602	11,168
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF YEAR	$ 42,780	$ 70,241	$ 191,602
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid during the period for interest	$ 1,136	$ —	$ 1,767
NON-CASH INVESTING AND FINANCING ACTIVITIES			
Purchases of property and equipment in accounts payables and accrued liabilities	$ 3,533	$ 139	$ —
Leasehold improvements paid by landlord	$ 1,139	$ —	$ —
Accrued debt issuance costs	$ 1,390	$ —	$ —
Capital lease obligations incurred for equipment	$ 46	$ 135	$ —
Preferred stock dividends paid in common stock	$ —	$ —	$ 3,196
Dividends accreted on preferred stock	$ —	$ —	$ 1,432

The accompanying notes are an integral part of these financial statements.

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 and TCR cell therapy. The Company has not generated any revenue from product sales to date and if the Company does not successfully commercialize any of the Company's product candidates, the Company will not be able to generate product revenue or achieve profitability. As of December 31, 2016, the Company had an accumulated deficit of $230.7 million.

The Company is subject to risks common to companies in the biotechnology industry and the future success of the Company is dependent on its ability to successfully complete the development of and obtain regulatory approval for its product candidates, manage the growth of the organization, obtain additional financing necessary in order to develop, launch and commercialize its product candidates, and compete successfully with other companies in its industry.

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).

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.

Revenue Recognition

The Company has not yet generated any revenue from product sales. The Company’s sole source of revenue has been 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, 2017, and a $1.3 million research grant from the National Institutes of Health (NIH) covering the period from April 2013 to March 2017. 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 from the date of purchase to be cash equivalents.

Investment Securities

Consistent with its investment policy, the Company invests its cash allocated to fund its short-term liquidity requirements with prominent financial institutions in bank depository accounts and institutional money market funds. The Company invests the remainder of its cash in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds and U.S. and state government agency-backed securities.

The Company determines the appropriate classification of investment securities based on whether they represent the investment of funds available for current operations, as defined in ASC 210-10-45-1 and ASC 210-10-45-2. The Company reevaluates its classification as of each balance sheet date. All investment securities owned are classified as available-for-sale. The cost of securities

sold is based on the specific identification method. Investment securities are recorded as of each balance sheet date at fair value, with unrealized gains and, to the extent deemed temporary, unrealized losses reported as accumulated other comprehensive gain (loss), a separate component of stockholders' equity. Interest and dividend income on investment securities, accretion of discounts and amortization of premiums and realized gains and losses are included in interest income in the statements of operations and comprehensive income (loss).

An investment security is considered to be impaired when a decline in fair value below its cost basis is determined to be other than temporary. The Company evaluates whether a decline in fair value of an investment security is below its cost basis is other than temporary using available evidence. In the event that the cost basis of the investment security exceeds its fair value, the Company evaluates, among other factors, the amount and duration of the period that the fair value is less than the cost basis, the financial health of and business outlook for the issuer, including industry and sector performance, and operational and financing cash flow factors, overall market conditions and trends, the Company's intent to sell the investment security and whether it is more likely than not the Company would be required to sell the investment security before its anticipated recovery. If a decline in fair value is determined to be other than temporary, the Company records an impairment charge in the statement of operations and comprehensive loss and establishes a new cost basis in the investment.

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. Leasehold improvements are amortized over the shorter of the estimated useful life or the remaining lease term.

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, 2016, 2015 and 2014.

Debt Issuance Costs

Costs related to debt issuance are presented in the balance sheet as a direct deduction from the carrying amount of the debt liability, consistent with debt discounts and are amortized using the effective interest method. Amortization of debt issuance costs are included in interest expense.

Deferred Rent and 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.

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, as described further in Note 4.

The Company believes the recorded values of its financial instruments, including cash and cash equivalents, accounts payable and accrued liabilities approximate their fair values due to the short-term nature of these instruments.

Financial Instruments and Credit Risks

Financial instruments that potentially subject the Company to credit risk include cash and cash equivalents, investment securities, 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.

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 for technologies that are utilized in research and development and have no alternative future use 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.

Clinical Trials

The Company estimates its clinical trial expense accrual for a given period based on the number of patients enrolled at each site, estimated cost per patient, and the length of time each patient has been in the trial, less amounts previously billed. These accruals are recorded in accrued expenses and other current liabilities, and the related expense is recorded in research and development expense.

Research and Development

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. The Company accrues for costs incurred as the services are being provided by monitoring the status of the clinical trial or project and the invoices received from its external service providers. The Company estimates depend on the timeliness and accuracy of the data provided by the vendors regarding the status of each project and total project spending. The Company adjusts its 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 events are achieved.

Collaboration Agreements

The Company enters into collaboration agreements that include varying arrangements regarding which parties perform and bear the costs of research and development activities. The Company may share the costs of research and development activities with a collaborator, or the Company may be reimbursed for all or a significant portion of the costs of the Company's research and development activities. The Company records its internal and third-party development costs associated with these collaborations as research and development expenses. When the Company is entitled to reimbursement of all or a portion of the research and development expenses that it incurs under a collaboration, the Company records those reimbursable amounts as a deduction to the research and development expenses. If the collaboration is a cost-sharing arrangement in which both the Company and its collaborator perform development work and share costs, the Company also recognizes, as research and development expenses in the period when its collaborator incurs development expenses, the portion of the collaborator's development expenses that the Company is obligated to reimburse.

Reclassifications

Certain research and development indirect costs, including facilities and overhead, were previously included in general and administrative costs. These research and development indirect costs are included in research and development expense for the year ended December 31, 2016 and 2015. The results for the year ended December 31, 2014 have been reclassified to conform to the current year presentation. The effect of the reclassification of the results for the year ended December 31, 2014 was to increase research and development expense and reduce general and administrative expense by $1.1 million with no change in total operating expense or net loss.

Contract Manufacturing Services

Contract manufacturing services are expensed as incurred. Prepaid expenses are capitalized and amortized as services are performed.

Share-Based Compensation

The Company accounts for its share-based compensation in accordance with ASC 718, *Compensation — Stock Compensation*, which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors to be recognized in the financial statements, based on their fair value. The Company measures share-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.

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. Prior to the Company's IPO on December 23, 2014, the determination of the grant date fair value of options using the Black-Scholes option-pricing model was 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, 2016, 2015 and 2014, the Company had no uncertain tax positions and no interest or penalties have been charged to the Company for the years ended December 31, 2016, 2015 and 2014. 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 2005 through 2016 remain open to examination by the Internal Revenue Service.

Comprehensive 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. Components of comprehensive income (loss) includes, among other items, unrealized gains and losses on the changes in fair value of investments. These components are added, net of their related tax effect, to the reported net income (loss) to arrive at comprehensive income (loss). The components of accumulated other comprehensive loss at December 31, 2016 and 2015, on the Company's balance sheet was comprised of the net unrealized holding losses on the Company's investment securities. See Note 4 for further detail of the unrealized holding gains and losses on the Company's investment securities.

Net Loss and 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 share 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 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.

	Number of shares		
	December 31, 2016	December 31, 2015	December 31, 2014
Options to purchase common stock	4,532,120	3,628,973	2,733,793
Unvested shares of restricted stock	58,825	88,236	117,647
Total common stock equivalents	4,590,945	3,717,209	2,851,440

Application of New Accounting Standards

ASU No. 2014-15, *"Disclosures of Uncertainties about an Entity's Ability to Continue as a Going Concern,"* became effective for the Company in 2016. ASU No. 2014-15 requires management to evaluate the Company's ability to meet its obligations as they become due within one year after the date that financial statements are issued. Accordingly, management has assessed the Company's ability to continue as a going concern through March 31, 2018. In making its assessment, management evaluated the Company's liquid assets, the Company's obligations expected to become payable within the period, and the probability of other conditions and events, and concluded that the Company's ability to continue as a going concern is not in substantial doubt.

ASU No. 2016-18, *"Statement of Cash Flows (Topic 230): Restricted Cash,"* requires restricted cash to be included with cash and cash equivalents when reconciling the beginning and ending amounts on the statement of cash flows, and requires additional disclosures in the notes to the financial statements. The Company adopted this standard during 2016. See Note 3 to the financial statements included herein.

ASU No. 2015-03, *"Simplifying the Presentation of Debt Issuance Costs,"* requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. See Note 7 to the financial statements included herein.

ASU No. 2015-17, "*Balance Sheet Classification of Deferred Taxes,*" requires that deferred income tax liabilities and assets be classified as noncurrent in a classified statement of financial position. The Company adopted this standard as of December 31, 2015, prospectively. See Note 13 to the financial statements included herein.

New Accounting Requirements and Disclosures

In January 2016, the FASB issued ASU No. 2016-01, "*Recognition and Measurement of Financial Assets and Financial Liabilities*." ASU 2016-01 requires that most equity investments be measured at fair value, with subsequent changes in fair value recognized in net income. The pronouncement also impacts financial liabilities under the fair value option and the presentation and disclosure requirements for financial instruments. This pronouncement is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is not permitted. The Company does not believe that the adoption of this pronouncement will have a material impact on the Company's financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *"Leases,"* which requires companies that lease assets to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet. The pronouncement will also require additional disclosures about the amount, timing and uncertainty of cash flows arising from leases. This pronouncement is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018, and early adoption is permitted. The Company is currently evaluating the impact of this pronouncement on the Company's financial statements.

In March 2016, the FASB issued ASU No. 2016-09, *"Compensation-Stock Compensation,"* which simplifies accounting for share-based compensation arrangements, primarily as it relates to accounting for the income tax effects of share-based compensation. Under the pronouncement, an entity can make an entity-wide accounting policy decision to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures as they occur. The pronouncement is effective for annual periods beginning after December 31, 2016, with earlier adoption permitted. The Company does not believe the adoption of this standard will have a material impact on the Company's financial statements.

In August 2016, the FASB issued ASU 2016-15, "*Classification of Certain Cash Receipts and Cash Payments,*" which provides guidance on the classification of certain cash receipts and payments in the statement of cash flows. The pronouncement is effective for

annual periods beginning after December 15, 2017, and interim periods within those annual periods. Earlier application is permitted in any interim or annual period. The Company does not believe the adoption of this standard will have a material impact on the Company's financial statements.

NOTE 3 - CASH, CASH EQUIVALENTS AND RESTRICTED CASH

As of December 31, 2016, the Company maintained $9.6 million as restricted cash. The funds are being held with an escrow agent to cover the construction of certain manufacturing costs related to the facility lease. This amount is subject to the terms of the escrow agreement in the lease and the requirements specified therein. This amount may decrease as the Company and landlord authorize completion of certain aspects of the building improvements. See Note 12 to the financial statements included herein.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same such amounts shown in the statements of cash flows.

	December 31, 2016	December 31, 2015
	(in thousands)	
Cash and cash equivalents (1)	$ 33,140	$ 70,241
Restricted cash, noncurrent	9,640	—
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	$ 42,780	$ 70,241

(1) As of December 31, 2016 and 2015, the Company invested approximately $23.5 million and $62.2 million, respectively, in cash equivalent instruments.

NOTE 4 - FAIR VALUE OF MEASUREMENTS AND INVESTMENT SECURITIES

The Company follows ASC, Topic 820, *Fair Value Measurements and Disclosures*, or ASC 820, for application to financial assets. ASC 820 defines fair value, provides a consistent framework for measuring fair value under GAAP and requires fair value financial statement disclosures. ASC 820 applies only to the measurement and disclosure of financial assets that are required or permitted to be measured and reported at fair value under other ASC topics (except for standards that relate to share-based payments such as ASC Topic 718, *Compensation – Stock Compensation*).

The valuation techniques required by ASC 820 may be based on either observable or unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, and unobservable inputs reflect the Company’s market assumptions.

These inputs are classified into the following hierarchy:

Level 1 Inputs – quoted prices (unadjusted) in active markets for identical assets that the reporting entity has the ability to access at the measurement date;

Level 2 Inputs – inputs other than quoted prices included within Level 1 that are observable for the asset, either directly or indirectly; and

Level 3 Inputs – unobservable inputs for the assets.

The following tables present the Company’s investment securities (including, if applicable, those classified on the Company’s balance sheet as cash equivalents) that are measured at fair value on a recurring basis as of December 31, 2016 and 2015:

	Balance at December 31, 2016	Fair Value Measurements at Reporting Date Using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
	(in thousands)			
Cash Equivalents:				
Money market funds	23,459	23,459	—	—
U.S. government agency-backed securities	—	—	—	—
Total Cash Equivalents	$ 23,459	$ 23,459	$ —	$ —
Investment Securities:				
U.S. government agency-backed securities	$ 25,908	$ —	$ 25,908	$ —
Corporate debt securities	42,053	—	42,053	—
Municipal bonds	2,671	—	2,671	—
Total Investment Securities	$ 70,632	$ —	$ 70,632	$ —

	Balance at December 31, 2015	Fair Value Measurements at Reporting Date Using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
	(in thousands)			
Cash Equivalents:				
Money market funds	$ 52,714	$ 52,714	$ —	$ —
U.S. government agency-backed securities	9,500	—	9,500	—
Total Cash Equivalents	$ 62,214	$ 52,714	$ 9,500	$ —
Investment Securities:				
U.S. government agency-backed securities	$ 22,388	$ —	$ 22,388	$ —
Corporate debt securities	51,547	—	51,547	—
Municipal bonds	6,189	—	6,189	—
Total Investment Securities	$ 80,124	$ —	$ 80,124	$ —

U.S. Treasury, U.S. government agency-backed securities, corporate debt securities and municipal bonds are valued based on various observable inputs such as benchmark yields, reported trades, broker/dealer quotes, benchmark securities and bids.

Management believes that the carrying value of the debt facility approximates its fair value, as the Company's debt facility bears interest at a rate that approximates prevailing market rates for instruments with similar characteristics. The fair value of the Company's debt facility is determined under Level 2 in the fair value hierarchy.

Investment securities, all classified as available-for-sale, consisted of the following as of December 31, 2016 and 2015:

Description	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Aggregate Estimated Fair Value
December 31, 2016		(in thousands)		
U.S. government agency-backed securities	$ 25,906	$ 7	$ (5)	$ 25,908
Corporate debt securities	42,040	41	(28)	42,053
Municipal bonds	2,669	2	—	2,671
Total	$ 70,615	$ 50	$ (33)	$ 70,632
December 31, 2015				
U.S. government agency-backed securities	$ 22,417	$ 1	$ (30)	$ 22,388
Corporate debt securities	51,807	1	(261)	51,547
Municipal bonds	6,200	—	(11)	6,189
Total	$ 80,424	$ 2	$ (302)	$ 80,124

During the year ended December 31, 2016, the Company realized approximately $6,700 of the unrealized loss at December 31, 2015. The Company's investment securities as of December 31, 2016, will reach maturity between January 2017 and January 2019, with a weighted-average maturity date in August 2017.

The Company has classified all of its available -for-sale investment securities, including those with maturities beyond one year, as current assets on the accompanying balance sheets based on the highly liquid nature of the investment securities and because these investment securities are considered available for use in current operations.

NOTE 5 - PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

	Estimated Useful Lives	December 31, 2016	December 31, 2015
		(in thousands)	
Leasehold improvements	5 years	$ 12,131	$ 4,092
Lab equipment	5 years	5,397	3,741
Office furniture	5 years	1,560	931
Manufacturing equipment	5 years	1,275	0
Computer and office equipment	3 to 5 years	623	401
Equipment held under capital leases	5 years	181	135
Software	3 years	85	109
Total		21,252	9,409
Less: accumulated depreciation		(4,748)	(2,527)
Property and equipment, net		$ 16,504	$ 6,882

During the years ended December 31, 2016, 2015, and 2014, the Company recorded $2.3 million, $1.2 million and $0.7 million of depreciation expense, respectively. Leasehold improvements at December 31, 2016 includes $2.5 million related to costs incurred by the landlord. Please refer to Note 12, “Commitments and contingencies,” for further information.

NOTE 6 - ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other liabilities consist of the following:

	December 31,	
	2016	2015
	(in thousands)	
Accrued construction costs	$ 3,120	$ —
Accrued manufacturing costs	1,704	2,412
Accrued payroll	$ 1,568	$ 1,332
Accrued patient treatment costs	1,006	333
Accrued other	1,965	1,003
Total accrued expenses and other current liabilities	$ 9,363	$ 5,080

NOTE 7 - DEBT

On March 10, 2016 (the Closing Date), the Company entered into a Loan and Security Agreement (the Loan Agreement) with Hercules Capital, Inc., Hercules Technology II, L.P., and Hercules Technology III, L.P., or collectively, Hercules, as a lender, under which the Company borrowed $15.0 million. The Company borrowed an additional $5.0 million and $10.0 million on September 15, 2016 and March 8, 2017, respectively. The total debt is secured by a lien covering substantially all of our assets, excluding intellectual property, but including proceeds from the sale, license, or disposition of our intellectual property. The Company intends to use the proceeds received under the Loan Agreement for funding the build-out of our manufacturing facilities and general corporate purposes. Please refer to Note 15, “Subsequent events” for further information.

The interest rate will be calculated at a rate equal to the greater of either (i) 9.35% plus the prime rate as reported in The Wall Street Journal minus 3.50%, or (ii) 9.35%. The interest rate on amounts borrowed under the Loan Agreement was 9.6% at December 31, 2016. Payments under the Loan Agreement are interest only for 18 months from the Closing Date, extendable to 24 months upon the Company achieving the Milestones. The interest only period will be followed by equal monthly payments of principal and interest amortized over a 30 months schedule through the maturity date of March 1, 2020 (the Loan Maturity Date); provided that if the Milestones are achieved, the Company will make equal monthly payments of principal and interest amortized over a 24 months schedule through the Loan Maturity Date. The remaining principal balance will be due and payable on the Loan Maturity Date. In addition, upon the Loan Maturity date or such earlier date specified in the Loan Agreement, a final payment equal to $1,390,000 (the Final Facility Charge), plus, an additional facility charge of $695,000, for an aggregate end-of-term charge of $2,085,000. The Company’s obligations under the Loan Agreement are secured by a security interest in substantially all of its assets, other than its intellectual property.

If the Company prepays the loan, including interest, prior to the date that is 24 months following March 10, 2016, it will pay Hercules a prepayment charge based on a prepayment fee equal to 2.00% of the amount prepaid; if the prepayment occurs thereafter, it will pay Hercules a prepayment charge based on a prepayment fee equal to 1.00% of the amount prepaid. The prepayment charge is also applicable upon the occurrence of a change of control of the Company. In addition to a prepayment charge, if any, the Company will pay Hercules the Final Facility Charge.

The Loan Agreement includes customary affirmative and restrictive covenants, but does not include any financial maintenance covenants, and also includes standard events of default, including payment defaults. Upon the occurrence of an event of default, a default interest rate of an additional 5% may be applied to the outstanding loan balance and Hercules may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement. The Company paid expenses related to the Loan Agreement of $199,000, which, along with the Final Facility Charge of $1,390,000, have been recorded as deferred financing costs, which offset long-term debt on the Company's balance sheet. Deferred financing costs of $1,589,000 are being amortized over the term of the loan, and are included in interest expenses. During the year ended December 31, 2016, interest expense included $422,000 of amortized deferred financing costs.

The total gross payments due under our debt arrangements are as follows:

Year	As of December 31, 2016 (in thousands)
2017	$ 1,787
2018	7,590
2019	8,363
2020	3,650
Total	$ 21,390

NOTE 8 - COMMON STOCK, PREFERRED STOCK AND WARRANTS

Common Stock

During the year ended December 31, 2014, the Company issued 8,452,500 shares of its common stock upon closing of its IPO for net proceeds of $146.3 million and 510,524 shares of its common stock for an aggregate of $249,701 in connection with the exercise of warrants.

Exercise of Common Warrants

During the year ended December 31, 2015, the Company issued 355,361 shares of its common stock to the Texas Treasury Safekeeping Trust Company (a transferee of the Office of the Governor - Economic Development and Tourism), pursuant to the cashless exercise provision of a warrant to purchase shares of the Company's common stock issued to the State of Texas on September 27, 2007. The Company did not receive any cash or other consideration.

Initial Public Offering

On December 17, 2014, the Company commenced its initial public offering (IPO) pursuant to a registration statement on Form S-1 (File No. 333- 200328) that was declared effective by the SEC on December 17, 2014 and that registered an aggregate of 7,350,000 shares of the Company's common stock for sale to the public at a price of $19.00 per share. In addition, at the closing of the IPO on December 23, 2014, the underwriters exercised their over-allotment option to purchase 1,102,500 additional shares of the Company's common stock at a price to the public of $19.00 per share, for an aggregate offering price of $160.6 million. The net offering proceeds to the Company, after deducting underwriting discounts, commissions and offering costs, were approximately $146.3 million.

Treasury Stock

In December 2014, in connection with the restructuring of the license agreement with ARIAD Pharmaceuticals, Inc. (ARIAD), the Company repurchased from ARIAD 677,463 shares of its common stock valued at approximately $5.1 million. See Note 11 to the financial statements included herein.

Preferred Stock

Upon the closing of the IPO on December 17, 2014, all outstanding convertible preferred stock was converted into 16,230,777 shares of common stock on a one-to-one basis. No convertible preferred stock was outstanding as of December 31, 2016 and 2015.

NOTE 9 - SHARE-BASED COMPENSATION PLANS

The Company has four share-based compensation plans, which authorize the granting of shares of common stock and options to purchase 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.

2006 Stock Option Plan

The 2006 Stock Option Plan (the 2006 Plan) provided for the issuance of non-qualified stock options to employees, including officers, non-employee directors and consultants to the Company. A total of 146,210 and 151,410 options were outstanding under this plan as of December 31, 2016 and 2015. As of December 31, 2016, there were no additional shares available for grant under the 2006 Plan. During 2016 and 2015, a total of 5,200 and 15,646 options, respectively, were exercised for cash proceeds to the company of $2,652 and $6,980, respectively.

2011 Stock Option Plan

The 2011 Stock Option Plan (the 2011 Plan) provided for the issuance of incentive and non-qualified stock options to employees, including officers, non-employee directors and consultants to the Company. The 2011 Plan replaced the 2006 Plan. There were 2,051,413 and 2,256,120 outstanding options under this plan at December 31, 2016 and 2015, respectively. As of December 31, 2016, there were no additional shares available for grant under this plan. During 2016 and 2015, a total of 179,002 and 166,592 options, respectively, were exercised for cash proceeds to the company of $0.7 million and $0.5 million, respectively.

2014 Equity Incentive Plan

The 2014 Equity Incentive Plan (the 2014 Plan) became effective in December 2014, upon the closing of the IPO. The 2014 Plan provides for the issuance of equity awards, including incentive and non-qualified stock options and restricted stock awards to employees, including officers, non-employee directors and consultants to the Company or its affiliates. The 2014 Plan also provides for the grant of performance cash awards and performance-based stock awards. The aggregate number of shares of common stock that are authorized for issuance under the 2014 Plan is 2,990,354 shares, plus any shares subject to outstanding options that were granted under the 2011 Plan or 2006 Plan that are forfeited, terminated, expired or are otherwise not issued. There were 2,334,497 and 1,221,443 outstanding options under this plan at December 31, 2016 and 2015, respectively. During 2016, a total of 5,853 options were exercised for cash proceeds to the company of $0.1 million. No shares were exercised for cash proceeds in 2015. There were 58,825 and 88,236 shares of restricted stock outstanding under the Plan at December 31, 2016 and 2015, respectively. As of December 31, 2016, there were 560,911 shares remaining to be issued.

2014 Employee Stock Purchase Plan

The 2014 Employee Stock Purchase Plan (the ESPP) provides for eligible Company employees, as defined by the ESPP, to be given an opportunity to purchase the Company's common stock at a discount, through payroll deductions, with stock purchases being made upon defined purchase dates. The ESPP authorizes the issuance of up to 550,000 shares of the Company's common stock to participating employees, and allows eligible employees to purchase shares of common stock at a 15% discount from the grant date fair market value. As of December 31, 2016, there were 494,681 shares remaining to be issued.

A summary of activity within the ESPP follows:

	Year Ended December 31,	
	2016	2015
	(amounts in thousands)	
Deductions from employees	$ 375	$ 381
Share-based compensation expense recognized	$ 244	$ 242
Remaining share-based compensation expense	$ 406	$ 267
Proceeds received by the Company for ESPP	$ 369	$ 347
Weighted-average purchase price per common share	$ 10.97	$ 16.01
Number of shares purchased by employees under ESPP	33,629	21,690

Share-Based Compensation Expense

The valuation of the share-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 fair value of the option grants have been estimated, with the following weighted-average assumptions:

	Year Ended December 31,		
	2016	2015	2014
Risk-free interest rate	1.77%	1.71%	1.86%
Volatility	72%	74%	95%
Expected life (years)	6.08	6.08	6.09
Expected dividend yield	0%	0%	0%

Share-based compensation for the years ended December 31, 2016, 2015 and 2014, are as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
General and administrative	$ 6,681	$ 4,832	$ 386
Research and development	$ 5,656	3,577	525
Total	$ 12,337	$ 8,409	$ 911

Stock option activity for the years ended December 31, 2016 and 2015 is as follows:

Options	Outstanding Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	(in thousands) Aggregate Intrinsic Value
Balance at December 31, 2014	2,733,793	$ 5.09	8.39	$ 49,076
Granted	1,089,767	$ 22.23		
Exercised	(182,238)	$ 2.64		
Forfeited	(12,349)	$ 14.99		
Balance at December 31, 2015	3,628,973	$ 10.32	8.03	$ 39,021
Granted	1,159,957	$ 17.43		
Exercised	(190,055)	$ 4.07		$ 2,448
Forfeited	(66,755)	$ 12.46		
Balance at December 31, 2016	4,532,120	$ 12.37	7.58	$ 20,453
Exercisable as of December 31, 2016	2,302,155	$ 8.22	6.59	$ 17,095

Restricted stock share activity for the year ended December 31, 2016 and 2015 is as follows:

Restricted Stock Shares	Outstanding Restricted Shares	Weighted-Average Fair Value at Date of Grant Per Share
Balance at December 31, 2014	—	
Granted	117,647	$ 19.00
Vested	(29,411)	$ 19.00
Forfeited	—	
Balance at December 31, 2015	88,236	$ 19.00
Granted	—	—
Vested	(29,411)	$ 19.00
Forfeited	—	—
Balance at December 31, 2016	58,825	$ 19.00

The following table includes share-based payment activity for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands, except per share)		
Weighted-average grant date fair value of options granted	$ 11.24	$ 16.09	$ 13.30
Weighted-average grant date fair value of restricted shares granted	$ —	$ —	$ 19.00
Aggregate intrinsic value of options exercised	$ 2,448	$ 3,236	$ 59
Total fair value of restricted shares vested	$ 607	$ 656	$ —
Cash received by Company upon option exercises	$ 774	$ 482	$ 11

The following table summarizes the options outstanding and exercisable at December 31, 2016:

	Options Outstanding			Options Exercisable		
Exercise Price	Total Shares	Weighted- Average Remaining Contractual Term (in years)	Weighted-Average Exercise Price	Total Shares	Weighted- Average Remaining Contractual Term (in years)	Weighted-Average Exercise Price
$ .51 to $2.55	1,268,465	5.34	$ 2.31	1,252,742	5.32	$ 2.31
$ 7.47 to $19.85	2,337,638	8.54	$ 13.46	616,076	8.02	$ 9.60
$ 20.09 to $24.48	926,017	8.23	$ 23.42	433,337	8.24	$ 23.36
Total	4,532,120	7.58	Total	2,302,155	6.59	

At December 31, 2016, total compensation cost not yet recognized was $27.4 million and the weighted average period over which this amount is expected to be recognized is 2.37 years. The aggregate fair value of options and restricted shares vesting in the years ended December 31, 2016, 2015 and 2014 was $12.2 million, $5.5 million and $0.3 million, respectively.

NOTE 10 - GRANT REVENUE

CPRIT Grant

On July 27, 2011, the Company entered into a Cancer Research Grant Contract (Grant Contract) with the Cancer Prevention and Research Institute of Texas (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. 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 2014, the Company incurred $1.4 million of expenses under the Grant Contract. There were no expenses under the Grant Contract in 2015 and 2016.

On November 16, 2016, the Company received notice of a Product Development award totaling approximately $16.9 million from the Cancer Prevention and Research Institute of Texas, CPRIT. Assuming successful contract negotiations and execution, the CPRIT award would fund a portion of a three-year global clinical program comprising clinical trials for adult and pediatric patients with high-risk and intermediate-risk acute myeloid leukemia. The proposed studies are designed to evaluate the benefit of BPX-501 and rimiducid in the context of in vivo and ex vivo T cell depleted haploidentical hematopoietic stem cell transplantation. The CPRIT oversight committee met in February 2017 and agreed to move forward with the proposed terms of the grant agreement. The Company is currently in the process of completing a new contract with CPRIT and expects to begin a clinical development program supported by the CPRIT funding in the second half of 2017.

NIH Grant

During 2016, 2015 and 2014, the Company was awarded $0.3 million, $0.3 million and $0.3 million, respectively, under a grant from the National Institutes of Health (NIH). The awards cover the period from April 2013 through March 2017. The awards were made pursuant to the authority of 42 USC 241 42 CFR 52, and are subject to the requirements of the statute. Funds spent on the grant are reimbursed through monthly reimbursement requests.

As of December 31, 2016, 2015 and 2014, funds spent under the grant were $0.4 million, $0.3 million and $0.3 million, respectively. As of December 31, 2016 and 2015, the Company had an outstanding grant receivable of $30,000 and $57,000, respectively for grant expenditures that were paid and not yet been reimbursed.

NOTE 11 - ARIAD RESTRUCTURING COSTS

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 121,241 shares of its common stock to ARIAD which were subject to antidilution protection that ultimately resulted in additional issuances to ARIAD by the Company of 556,222 shares of the Company's common stock, such that ARIAD received a total of 677,463 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.

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.

On October 3, 2014, the Company entered into an omnibus amendment agreement with ARIAD, under which the Company agreed to make payments of $50.0 million in exchange for an expansion of the license field, the termination of all obligations to make milestone and royalty payments to ARIAD in the future and the return of 677,463 shares of common stock held by ARIAD.

In connection with the amendment, the Company made an initial payment of $15.0 million and issued a promissory note to ARIAD for a principal amount of $35.0 million. Per the promissory note terms, the principal would not accrue interest unless the Company was in default, in which case it would accrue at a rate of 10% per annum. In December 2014, following the Company's IPO, the Company paid the remaining $35.0 million and ARIAD returned all 677,463 shares of common stock of the Company that ARIAD held. The license transaction was valued on the date of the transaction and the note was discounted to fair market value at a 10% rate. This resulted in the ARIAD license expense of $43.2 million, repurchase of common stock for $5.1 million and interest expense of $1.7 million. The Company has recorded the returned shares of common stock as treasury stock.

NOTE 12 - COMMITMENTS AND CONTINGENCIES

Operating Lease Agreements

The Company leases its office and manufacturing facilities under non-cancelable operating leases that expire January 31, 2020 and August 31, 2026, respectively. Rent expense for non-cancelable operating leases with scheduled rent increases is recognized on a straight-line basis over the terms of the leases. Improvement reimbursements from the landlord of $2.5 million are being amortized on a straight-line basis into rent expense over the terms of the leases. The difference between required lease payments and rent expense has been recorded as deferred rent. Rent expense was $1.8 million in 2016, $1.2 million in 2015, and $0.4 million in 2014. Deferred rent was $2.1 million as of December 31, 2016 and $ 1.1 million as of December 31, 2015.

Escrow agreement related to the operating lease dated May 2015

According to the escrow agreements in the operating leases, the Company agreed to deposit into escrow a total of approximately $9.6 million, which represents 110% of the Company's remaining share of the estimated build-out costs. The funds were deposited into an escrow account in December 2016 and reported as restricted cash as of December 31, 2016.

Escrow agreement related to the First Amendment of the operating lease dated July 2016

The Company agreed to deposit into escrow a total of approximately $1.4 million, which represents 110% of the Company's remaining share of the estimated build-out costs. The $1.4 million was deposited into an escrow account in January 2017.

Capital Lease Agreements - Equipment

The Company entered into multiple office equipment leases during both 2016 and 2015, which expire in 2021. The office equipment leases are being accounted for as capital leases under FASB Topic ASC 840 - Leases. The present value of the minimum lease payments are greater than 90% or more than the fair market value of the leased equipment and the lease terms are 6 years or the remaining term of the lease.

Aggregate future minimum annual payments under operating and capital leases at December 31, 2016, are as follows:

Year	Operating Leases	Capital Leases
	(in thousands)	
2017	$ 1,982	$ 59
2018	2,033	59
2019	2,087	59
2020	1,124	59
2021	1,079	37
Thereafter	5,448	0
Total minimum rentals	$ 13,753	$ 273

Co-Development and Co-Commercialization Agreement - Adaptimmune Therapeutics plc

On December 16, 2016, the Company entered into a Co-Development and Co-Commercialization Agreement with and Adaptimmune Therapeutics plc (Adaptimmune) in order to facilitate a staged collaboration to evaluate, develop and commercialize next generation T cell therapies. Under the Agreement, the parties agreed to evaluate the Company's GoTCR technology (inducible MyD88/CD40 co-stimulation, or iMC) with Adaptimmune's affinity-optimized SPEAR® T cells for the potential to create enhanced TCR product candidates. Depending on results of the preclinical proof-of-concept phase, the parties expect to progress to a two-target co-development and co-commercialization phase. To the extent necessary, and in furtherance of the parties' proof-of-concept and co-development efforts, the parties granted each other a royalty-free, non-transferable, non-exclusive license covering their respective technologies for purposes of facilitating such proof-of-concept and co-development efforts. In addition, as to covered therapies developed under the agreement, the parties granted each other a reciprocal exclusive license for the commercialization of such therapies. With respect to any joint commercialization of a covered therapy, the parties agreed to negotiate in good faith the commercially reasonable terms of a co-commercialization agreement. The parties also agreed that any such agreement shall provide for, among other things, equal sharing of the costs of any such joint commercialization and the calculation of profit shares as set forth in the Agreement. The Agreement will expire on a country-by-country basis once the parties cease commercialization of the T cell therapies covered by the Agreement, unless earlier terminated by either party for material breach, non-performance or cessation of development, bankruptcy/insolvency, or failure to progress to co-development phase. There were no expenses recognized under the Adaptimmune agreement for the year ended December 31, 2016.

Collaboration Agreement - OPBG

In October 2016, the Company entered into a collaboration agreement with and Ospedale Pediatrico Bambino Gesú (OPBG), pursuant to which the Company and OPBG agreed to collaborate on research projects and early stage clinical trials for the design and development of various T cell immunotherapies. As consideration for OPBG's performance of the research under the agreement and grant of certain licenses to the Company, the Company agreed to fund an aggregate of up to $4.7 million in project costs payable to OPBG or certain third party service providers, as applicable, over the term of the research, estimated to be 4 years. With respect to any inventions arising from the research, OPBG agreed to grant the Company an exclusive license to any such inventions, the terms of which will be set forth in a separate agreement. In addition, OPBG granted the Company paid-up, worldwide co-exclusive licenses for non-commercial development of OPBG's CD19 and GD2 CAR-T technologies, as well as paid-up, worldwide exclusive licenses to commercialize its CD19 and GD2 CAR-T technologies, each to be governed by a separate agreement. The expenses recognized under the OPBG Collaboration Agreement was $0.6 million for the year ended December 31, 2016.

Collaboration Agreement - Leiden

In May 2016, the Company and Academisch Ziekenhuis Leiden (Leiden) entered into a research collaboration agreement pursuant to which the Company will provide Leiden with financial support for research to discover and validate high-affinity TCR product candidates targeting several cancer-associated antigens. The Company agreed to pay Leiden an aggregate of EURO 2,547,415 in quarterly installments during the three-year term of the research, which will be recognized as services are incurred. During the year ended December 31, 2016, $0.1 million of research services were recognized. With respect to any inventions arising from the research that are relevant to or useful for any high affinity TCR that is studied in the research, Leiden granted the Company an exclusive option to obtain an exclusive, worldwide license to practice and exploit such inventions. The parties agreed to negotiate in good faith the commercially reasonable terms of each such license agreement entered into between the parties, based on terms similar to those set forth in the previously executed license agreement between the parties and those specified in the agreement. The expenses recognized under the Leiden license agreement were $0.9 million and $0.2 million for the years ended December 31, 2016 and 2015, respectively.

License Agreement - Baylor

In March 2016, the Company and Baylor College of Medicine (BCM) entered into two additional license agreements pursuant to
which the Company obtained exclusive rights to technologies and patent rights owned by BCM. The Company paid BCM a nonrefundable license fee of $0.1 million, and could incur additional payments upon the achievement of certain milestone events as set forth in the agreement. If the Company is successful in developing any of the licensed technologies, resulting sales would be
subject to a royalty payment in the low single digits. The expenses recognized under the Baylor License Agreement was $0.1 million for the year ended December 31, 2016.

License Agreement - Agensys, Inc.

On December 10, 2015, the Company and Agensys, Inc. (Agensys), entered into a license agreement (the Agreement), pursuant to which (i) Agensys granted the Company, within the field of cell and gene therapy of diseases in humans, an exclusive, worldwide license and sublicense to its patent rights directed to prostate stem cell antigen 1 ("PSCA") and related antibodies, and (ii) the Company granted Agensys a non-exclusive, fully paid license to the Company's patents directed to inventions that were made by the Company in the course of developing the Company's licensed products, solely for use with Agensys therapeutic products containing a soluble antibody that binds to PSCA or, to the extent not based upon Bellicum's other proprietary technology, to non-therapeutic applications of antibodies not used within the field. As consideration for the rights granted to the Company under the Agreement, the Company agreed to pay to Agensys a non-refundable upfront fee of $3,000,000, which is included in license fee expense. The Company is also required to make aggregate milestone payments to Agensys of up to (i) $5,000,000 upon the first achievement of certain specified clinical milestones for its licensed products, (ii) $50,000,000 upon the achievement of certain specified clinical milestones for each licensed product, and (iii) $75,000,000 upon the achievement of certain sales milestones for each licensed product. The Agreement additionally provides that the Company will pay to Agensys a royalty that ranges from the mid to high single digits based on the level of annual net sales of licensed products by the Company, its affiliates or permitted sublicensees. The royalty payments are subject to reduction under specified circumstances. These milestone and royalty payments will be expensed as incurred. Under the Agreement, Agensys also was granted the option to obtain an exclusive license, on a product-by-product basis, from the Company to commercialize in Japan each licensed product developed under the Agreement that has completed a phase 2 clinical trial. As to each such licensed product, if Agensys or its affiliate, Astellas Pharma, Inc., exercises the option, the Agreement provides that the Company will be paid an option exercise fee of $5,000,000. In addition, the Agreement provides that the Company will be paid a royalty that ranges from the mid to high single digits based on the level of annual net sales in Japan of each such licensed product. If the option is exercised, the aggregate milestone payments payable by the Company to Agensys, described above with respect to each licensed product, would be reduced by up to an aggregate of $65,000,000 upon the achievement of certain specified clinical and sales milestones. The Agreement will terminate upon the expiration of the last royalty term for the products covered by the Agreement, which is the earlier of (i) the date of expiration or abandonment of the last valid claim within the licensed patent rights covering any licensed products under the Agreement, (ii) the expiration of regulatory exclusivity as to a licensed product, and (iii) 10 years after the first commercial sale of a licensed product. Either party may terminate the Agreement upon a material breach by the other party that remains uncured following 60 days after the date of written notice of such breach (or 30 days if such material breach is related to failure to make payment of amounts due under the Agreement) or upon certain insolvency events. In addition, Agensys may terminate the Agreement immediately upon written notice to the Company if the Company or any of its affiliates or permitted sublicensees commences an interference proceeding or challenges the validity or enforceability of any of Agensys' patent rights. There were no expenses recognized under the Agensys License Agreement for the year ended December 31, 2016. For the year ended December 31, 2015, $3.0 million of license expenses were recognized.

License Agreement - BioVec

On June 10, 2015, the Company and BioVec Pharma, Inc. (BioVec) entered into a license agreement (the BioVec Agreement) pursuant to which BioVec agreed to supply the Company with certain proprietary cell lines and granted to the Company a non-exclusive, worldwide license to certain of its patent rights and related know-how related to such proprietary cell lines. As consideration for the products supplied and rights granted to the Company under the BioVec Agreement, the Company agreed to pay to BioVec an upfront fee of $100,000 within ten business days of the effective date of the BioVec Agreement and a fee of $300,000 within ten business days of its receipt of the first release of GMP lot of the products licensed under the BioVec Agreement. In addition, the Company agreed to pay to BioVec an annual fee of $150,000, commencing 30 days following the first filing of an Investigational New Drug Application (an IND filing), or its foreign equivalent, for a product covered by the license; with such annual fees being creditable against any royalties payable by the Company to BioVec under the BioVec Agreement. The Company also is required to make a $250,000 milestone payment to BioVec for each of the first three licensed products to enter into a clinical phase trial and one-time milestone payments of $2,000,000 upon receipt of a registration granted by the Federal Drug Administration or European Medicines Agency on each of the Company's first three licensed products. The BioVec Agreement additionally provides that the Company will pay to BioVec a royalty in the low single digits on net sales of products covered by the BioVec Agreement. The Company may also grant sublicenses under the licensed patent rights and know-how to third parties for limited purposes related to the use, sale and other exploitation of the products licensed under the BioVec Agreement. The BioVec Agreement will continue until terminated. The BioVec Agreement may be terminated by the Company, in its sole discretion, at any time upon 90 days written notice to BioVec. Either party may terminate the BioVec Agreement in the event of a breach by the other party of any material provision of the BioVec Agreement that remains uncured on the date that is 60 days after written notice of such failure or upon certain insolvency events that remain uncured following the date that is 30 days after the date of written notice to a party regarding such insolvency event. The Company recognized expenses of $0.1 million and $0.5 million, respectively, in connection with the BioVec License Agreement for the year ended December 31, 2015 and 2016, respectively.

License Agreement - Leiden

On April 23, 2015, the Company and Academisch Ziekenhuis Leiden, also acting under the name Leiden University Medical Centre (Leiden), entered into a license agreement (the Leiden Agreement), pursuant to which Leiden granted to the Company an exclusive, worldwide license to its patent rights covering high affinity T-cell receptors targeting preferentially-expressed antigen in melanoma, (PRAME) and POU2AF1 epitopes. The license granted under the Leiden Agreement is subject to certain restrictions and to Leiden's retained right to use the licensed patents solely for academic research and teaching purposes, including research collaborations by Leiden with academic, non-profit research third parties; provided that Leiden provides 30 days advance written notice to the Company of such academic research collaborations. As consideration for the rights granted to the Company under the Leiden Agreement, the Company agreed to pay to Leiden an aggregate of EUR 75,000 in upfront fees within 30 days of the effective date of the Leiden Agreement. In addition, the Company agreed to pay to Leiden, beginning on the eighth anniversary of the effective date of the Leiden Agreement, annual minimum royalty payments of EUR 30,000. The Company also is required to make milestone payments to Leiden of up to an aggregate of EUR 1,025,000 for each of the first licensed product that is specific to PRAME and to POU2AF1. The Leiden Agreement additionally provides that the Company will pay to Leiden a royalty in the low single digits on net sales of products covered by the Leiden Agreement. If the Company enters into a sublicensing agreement with a third party related to a product covered by the Leiden Agreement, the Company agreed to pay Leiden a percentage ranging in the low double digits on all non-royalty income received from sublicensing revenue directly attributable to the sublicense, dependent on whether the Company is in phase 1/2, phase 2 or phase 3 at the time that the Company enters into any such sublicensing agreement. Under the Leiden Agreement, the Company and Leiden entered into a sponsored research agreement, pursuant to which the Company is required to pay Leiden up to EUR 300,000 over a three years period during the term of the sponsored research agreement. The Leiden Agreement will expire upon the expiration of the last patent included in the licensed patent rights. The Leiden Agreement may be terminated earlier upon mutual written agreement between the Company and Leiden, and at any time by the Company upon six months written notice to Leiden. Leiden may terminate the Leiden Agreement in the event of a failure by the Company to pay any amounts due under the Leiden Agreement that remains uncured on the date that is 30 days after written notice of such failure. Either party may terminate the Leiden Agreement upon a material breach by the other party that remains uncured following 30 days after the date of written notice of such breach or upon certain insolvency events that remain uncured following the date that is 45 days after the date of written notice to a party of such insolvency event. The Company recognized $84,000 of expenses in connection with the Leiden License Agreement for the year ended December 31, 2015. The Company was not required to make any milestone payments for the year ended December 31, 2015.

Employment agreements

The Company has signed agreements with thirteen of its officers and key employees to provide certain benefits in the event of a "change of control" as defined in these agreements and the occurrence of certain other events. The agreements provide for a lump-sum payment in cash equal to 6 to 18 months of annual base salary and annual cash bonus, if any. The annual base salary and annual cash bonus portion of the agreements would aggregate approximately $4.9 million at the rate of compensation in effect at December 31, 2016. In addition, the agreements provide for continuation of certain insurance and other benefits for periods of 6 to 18 months.

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.

NOTE 13 - INCOME TAXES

The Company did not recognize tax expense during 2016, 2015 or 2014.

The reconciliation between federal income taxes at the statutory rate and the Company's income tax expense for the year is as follows:

	December 31,		
	2016	2015	2014
	(in thousands)		
U.S. tax benefit at statutory rate	$ (23,542)	$ (16,506)	$ (28,548)
Meals and entertainment	22	24	10
Stock options	394	12	98
Warrant expense	—	—	8,286
Federal deferred tax true-up	32	(187)	—
Return to provision	—	(2)	—
Deferred tax valuation allowances	24,872	17,920	20,586
Research and development credit	(1,778)	(1,261)	(432)
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 December 31, 2016 and 2015 are as follows:

	December 31,	
	2016	2015
	(in thousands)	
Deferred tax liabilities:		
Unrealized gain on investment securities	$ (6)	$ —
Depreciation	(4)	(933)
Total deferred tax liabilities	(10)	(933)
Deferred tax assets:		
Net operating loss carryforward	48,152	28,229
Nonqualified stock options	5,126	2,248
Restricted stock expense	20	20
Employee stock purchase plan	—	82
Tenant improvement liability	645	341
Intangible assets	14,920	15,716
Unrealized loss on investment securities	—	103
Research and development credit	4,296	2,519
Other	67	23
Total deferred tax assets	73,226	49,281
Valuation allowance	(73,216)	(48,348)
Total deferred tax	$ —	$ —
Net current deferred tax liability	$ —	$ —
Net non-current deferred tax asset	—	—
Total deferred tax	$ —	$ —

As of December 31, 2016 and 2015, the Company had gross federal income tax net operating loss (NOL) carryforwards of $142.2 million and $83.0 million, respectively, and federal research tax credits of $4.3 million and $2.5 million, respectively. The NOL carryforwards will expire beginning in 2025, 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 asset 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 NOL carryforwards, the Company has provided a 100% valuation allowance on its deferred tax assets at December 31, 2016 and 2015. The increases in the valuation allowance were $24.9 million and $18.0 million for the years ended December 31, 2016 and 2015, respectively.

The Internal Revenue Code Section 382 limits NOL 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 NOL and tax credit carryforwards may be significantly restricted.

NOTE 14 - SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

Selected quarterly financial data (unaudited) for the year ended December 31, 2016 and 2015 is presented below:

	(in thousands except per share data)			
2016	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
Total revenues	$ 92	$ 101	$ 114	$ 81
Loss from operations	$ (15,180)	$ (16,259)	$ (17,428)	$ (19,513)
Net loss	$ (15,075)	$ (16,509)	$ (17,719)	$ (19,938)
Net loss per share attributable to common shareholders - basic and diluted	$ (0.56)	$ (0.61)	$ (0.66)	$ (0.74)

2015	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter (1)**
Total revenues	$ 107	$ 84	$ 57	$ 34
Loss from operations	$ (7,808)	$ (10,705)	$ (13,617)	$ (17,005)
Net loss	$ (7,758)	$ (10,534)	$ (13,408)	$ (16,848)
Net loss per share attributable to common shareholders - basic and diluted	$ (0.30)	$ (0.40)	$ (0.51)	$ (0.63)

(1) The 2015 fourth quarter results include a non-refundable upfront fee to Agensys of $3.0 million under the license agreement. See Note 12 to the financial statements included herein.

NOTE 15 - SUBSEQUENT EVENTS

Effective January 30, 2017, Thomas J. Farrell, resigned from his position as the President and Chief Executive Officer of the Company. In connection with Mr. Farrell's resignation, effective January 30, 2017 the Board of Directors of the Company, appointed Richard A. Fair to serve as the Company's President and Chief Executive Officer.

On March 8, 2017, the Company borrowed an additional $10.0 million under its Loan Agreement with Hercules. The Company now has total outstanding principal under the Loan Agreement of approximately $30.0 million and an additional end of term commitment of $695,000 and a facility charge of $75,000. In addition, the interest only period was extended for another six months.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial and Accounting Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures, as

defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2016. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2016, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Controls over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our internal control over financial reporting is designed under the supervision of our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with United States generally accepted accounting principles.

Management, including our Chief Executive Officer and Chief Financial and Accounting Officer, has assessed the effectiveness of our internal control over financial reporting based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework. Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2016.

This Annual Report does not include an attestation report of our registered public accounting firm due to a transition period established by the JOBS Act applicable to emerging growth companies.

Inherent Limitations of Internal Controls

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during our latest fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. Other Information

On March 8, 2017, we borrowed an additional $10.0 million under our loan and security agreement with Hercules.

As previously reported, we entered into the loan agreement and initially borrowed $15.0 million on March 10, 2016 and we subsequently borrowed an additional $5.0 million on September 15, 2016, as described in our Current Reports on Form 8-K filed with the SEC on March 11, 2016, or the Prior 8-K, and September 20, 2016, respectively. We now have total outstanding principal under the loan agreement of approximately $30.0 million.

Additional detail regarding the loan agreement is contained in Item 1.01 of the Prior 8-K and is incorporated herein by reference. The descriptions of the loan agreement contained in the Prior 8-K and herein are qualified in their entirety by reference to the complete text of the loan agreement, including the exhibits thereto, a copy of which is filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q filed with the SEC on May 9, 2016 and included on the Exhibit Index to this Annual Report.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by this item and not set forth below will be set forth in the sections headed “Election of Directors,” “Executive Officers” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive proxy statement for our 2017 Annual Meeting of Stockholders, or our Proxy Statement, to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016, and is incorporated herein by reference.

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial and accounting officer or controller, or persons performing similar functions, known as the Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics is available on our website at www.bellicum.com under the Corporate Governance section of our Investors & Media page. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

ITEM 11. Executive Compensation

The information required by this item will be set forth in the section headed “Executive and Director Compensation” in our Proxy Statement and is incorporated herein by reference.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be set forth in the section headed “Equity Benefit Plans” and “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement and is incorporated herein by reference.

The information required by Item 201(d) of Regulation S-K will be set forth in the section headed “Executive and Director Compensation” in our Proxy Statement and is incorporated herein by reference.

ITEM 13. Certain Relationships and Related Party Transactions, and Director Independence

The information required by this item will be set forth in the sections headed “Certain Relationships and Related Party Transactions” and “Election of Directors” in our Proxy Statement and is incorporated herein by reference.

ITEM 14. Principal Accounting Fees and Services

The information required by this item will be set forth in the section headed “Principal Accounting Fees and Services” in our Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. Exhibits, Financial Statements and Schedules

(a)(1) Financial Statements.

The response to this portion of Item 15 is set forth under Part II, Item 8 above.

(a)(2) Financial Statement Schedules.

None.

(a)(3) Exhibits.

See the Exhibit Index immediately following the signature page of this Annual Report. The exhibits listed in the Exhibit Index below are filed or incorporated by reference as part of this Annual Report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Bellicum Pharmaceuticals, Inc.

Date: March 13, 2017

By: /s/ Richard A. Fair
Richard A. Fair
President and Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Richard A. Fair as his true and lawful attorney-in-fact, with the power of substitution, for him in any and all capacities, to sign any amendments to this report, and to file the same, with exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorney-in-fact, or his substitute or substitutes may do or cause to be done by virtue hereof. Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Richard A. Fair Richard A. Fair	President, Chief Executive Officer and Member of the Board of Directors *(Principal Executive Officer)*	March 13, 2017
/s/ Alan A. Musso Alan A. Musso	Chief Financial Officer and Treasurer *(Principal Financial and Accounting Officer)*	March 13, 2017
/s/ James Brown James Brown	Chairman of the Board of Directors	March 13, 2017
/s/ James M. Daly James M. Daly	Member of the Board of Directors	March 13, 2017
/s/ Stephen R. Davis Stephen R. Davis	Member of the Board of Directors	March 13, 2017
/s/ Reid M. Huber, Ph.D. Reid M. Huber, Ph.D.	Member of the Board of Directors	March 13, 2017
/s/ Frank B. McGuyer Frank B. McGuyer	Member of the Board of Directors	March 13, 2017
/s/ Kevin M. Slawin, M.D. Kevin M. Slawin, M.D.	Member of the Board of Directors	March 13, 2017
/s/ Jon P. Stonehouse Jon P. Stonehouse	Member of the Board of Directors	March 13, 2017

INDEX TO EXHIBITS

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 23, 2014).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 23, 2014).
4.1	Reference is made to Exhibits 3.1 and 3.2.
4.2	Form of Common Stock Certificate of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
4.3	Second Amended and Restated Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated August 22, 2014 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
4.4	Registration Rights Agreement by and among the Registrant and Baker Brothers Life Sciences, LP, and two of its affiliated funds, dated January 15, 2016.
10.1+	Form of Indemnification Agreement by and between the Registrant and its directors and officers (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.2+	Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan and Form of Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.3+	Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan and Forms of Incentive Stock Option Grant Agreement and Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.4+	Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan and Forms of Stock Option Grant Notices, Stock Option Agreements and Notices of Exercise, Form of Restricted Stock Award Notice and Restricted Stock Award Agreement, Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement thereunder.
10.5+	Bellicum Pharmaceuticals, Inc. Non-Employee Director Compensation Policy.
10.6+	Third Amended and Restated Employment Agreement by and between the Registrant and Thomas J. Farrell, dated November 17, 2014 (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.7+	Amended and Restated Employment Agreement by and between the Registrant and David M. Spencer, Ph.D., dated November 17, 2014 (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.8+	Employment Agreement by and between the Registrant and Joseph H. Senesac, dated November 16, 2014 (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.9+	Employment Agreement by and between the Registrant and Peter L. Hoang, dated November 17, 2014 (incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.10	Notice of Expansion of Licensed Field to Obtain Additional Exclusive Rights (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.11*	Amended and Restated License Agreement by and between the Registrant and ARIAD Pharmaceuticals, Inc., dated March 7, 2011 (incorporated by reference to Exhibit 10.15 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.12*	Omnibus Amendment Agreement by and between Registrant and ARIAD Pharmaceuticals, Inc., dated October 3, 2014 (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).

Exhibit Number	Description
10.13*	Exclusive License Agreement by and between the Registrant and Baylor College of Medicine, dated March 20, 2008 (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.14*	Exclusive License Agreement by and between the Registrant and Baylor College of Medicine, dated June 27, 2010 (incorporated by reference to Exhibit 10.18 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.15*	Cancer Research Grant Contract by and between the Registrant and the Cancer Prevention and Research Institute of Texas, dated July 27, 2011 (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.16*	Exclusive License Agreement by and between the Registrant and Baylor College of Medicine, effective November 1, 2014 (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.17	Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated June 1, 2012 (incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.18	First Amendment to Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated September 13, 2013 (incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.19	Second Amendment to Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated June 20, 2014 (incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.20	Third Amendment to Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated July 21, 2014 (incorporated by reference to Exhibit 10.24 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.21	Fourth Amendment to Lease Agreement by and between Registrant and Sheridan Hills Developments L.P., dated November 12, 2014 (incorporated by reference to Exhibit 10.25 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.22	Loan and Security Agreement by and between the Registrant and Comerica Bank, dated December 13, 2012 (incorporated by reference to Exhibit 10.27 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.23	First Amendment to Loan and Security Agreement by and between the Registrant and Comerica Bank, dated March 1, 2014 (incorporated by reference to Exhibit 10.28 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.24	Second Amendment to Loan and Security Agreement by and between the Registrant and Comerica Bank, dated July 3, 2014 (incorporated by reference to Exhibit 10.29 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.25+	Employment Agreement by and between the Registrant and Alan A. Musso, dated December 4, 2014 (incorporated by reference to Exhibit 10.30 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
10.26+	Incentive Award Program (incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 8-K filed with the SEC on February 27, 2015.
10.27+	Amended and Restated Employment Agreement by and between the Registrant and Annemarie Moseley, Ph.D., dated April 1, 2015(incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 8-K filed with the SEC on April 7, 2015).
10.28+	Employment Agreement by and between the Registrant and Kevin M. Slawin, M.D., Dated April 6, 2015 (incorporated by reference to Exhibit 10.2 to the Registrant's Registration report on Form 8-K filed with the SEC on April 7, 2015.
10.29+	Employment Agreement by and between the Registrant and Ken Moseley, dated April 1, 2015 (incorporated by reference to Exhibit 10.3 to the Registrant's report on Form 10-Q filed with the SEC on May 12, 2015).
10.30*	License Agreement by and between the Registrant and Academish Ziekenhuis Leiden, also acting under the name Leiden University Medical Centre, effective as of April 20, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 10-Q filed with the SEC on August 13, 2015).

Exhibit Number	Description
10.31*	License Agreement by and between the Registrant and BioVec Pharma, Inc., dated as of June 4, 2015 (incorporated by reference to Exhibit 10.2 to the Registrant's report on Form 10-Q filed with the SEC on August 13, 2015).
10.32	Lease Agreement by and between the Registrant and Sheridan Hills Developments L.P., dated as of May 6, 2015.
10.33#	Exclusive License Agreement by and between the Registrant and Agensys, Inc., effective as of December 10, 2015.
10.34+	Consulting Agreement by and between the Registrant and Kevin M. Slawin, M.D., effective as of May 18, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 10-Q filed with the SEC on August 8, 2016).
10.35	Loan and Security Agreement by and between the Registrant and Hercules Capital, Inc., dated as of March 10, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 10-Q filed with the SEC on May 9, 2016).
10.36*	Sponsored Research Agreement No. 2 by and between the Registrant and Academish Ziekenhuis Leiden, also acting under the name Leiden University Medical Centre, effective as of May 20, 2016 (incorporated by reference to Exhibit 10.2 to the Registrant's report on Form 10-Q filed with the SEC on August 8, 2016).
10.37	First Amendment to Lease Agreement by and between the Registrant and Life Science Plaza Investment Group, LP, effective as of July 11, 2016 (incorporated by reference to Exhibit 10.3 to the Registrant's report on Form 10-Q filed with the SEC on August 8, 2016).
10.38	Fifth Amendment to Lease Agreement by and between the Registrant and Sheridan Hills Developments L.P., effective as of September 24, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's report on Form 10-Q filed with the SEC on November 9, 2016).
10.39	Second Amendment to Lease Agreement by and between the Registrant and Life Science Plaza Investment Group, LP, effective as of September 26, 2016 (incorporated by reference to Exhibit 10.3 to the Registrant's report on Form 10-Q filed with the SEC on November 9, 2016).
10.40#	Research Collaboration Agreement by and between the Registrant and Ospedale Pediatrico Bambino Gesú, effective as of October 28, 2016.
10.41#	Co-Development and Co-Commercialisation Agreement by and between the Registrant and Adaptimmune Limited, effective as of December 16, 2016.
10.42+	Letter Agreement by and between the Registrant and Thomas J. Farrell, dated January 25, 2017.
10.43+	Letter Agreement by and between the Registrant and Richard A. Fair, dated January 25, 2017.
23.1	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
24.1	Power of Attorney. Reference is made to the signature page hereto.
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.
32.1	Certification of the Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of the Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

+ Indicates management contract or compensatory plan.

* Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

Certain provisions of this exhibit have been omitted pursuant to a request for confidential treatment.

BELLICUM PHARMACEUTICALS, INC.

2014 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: DECEMBER 4, 2014
APPROVED BY THE STOCKHOLDERS: DECEMBER 5, 2014
AMENDED AND APPROVED BY THE BOARD: JANUARY 24, 2017
IPO DATE: DECEMBER 17, 2014

1. **GENERAL.**

(a) Successor to and Continuation of Prior Plan. The Plan is intended as the successor to and continuation of the Bellicum Pharmaceuticals, Inc. 2011 Stock Option Plan, as amended (the "***2011 Plan***"). From and after 12:01 a.m. Pacific time on the IPO Date, no additional stock awards will be granted under the 2011 Plan. All Awards granted on or after 12:01 a.m. Pacific Time on the IPO Date will be granted under this Plan. All stock awards granted under the 2011 Plan or under the Bellicum Pharmaceuticals, Inc. 2006 Stock Option Plan, as amended (together with the 2011 Plan, the "***Prior Plans***"), will remain subject to the terms of the Prior Plans.

(i) Any shares that would otherwise remain available for future grants under the 2011 Plan as of 12:01 a.m. Pacific Time on the IPO Date (the "***2011 Plan's Available Reserve***") will cease to be available under the 2011 Plan at such time. Instead, that number of shares of Common Stock equal to the 2011 Plan's Available Reserve will be added to the Share Reserve (as further described in Section 3(a) below) and will be immediately available for grants and issuance pursuant to Stock Awards hereunder, up to the maximum number set forth in Section 3(a) below.

(ii) In addition, from and after 12:01 a.m. Pacific time on the IPO Date, any shares subject, at such time, to outstanding stock awards granted under the Prior Plans that (i) expire or terminate for any reason prior to exercise or settlement; (ii) are forfeited because of the failure to meet a contingency or condition required to vest such shares or otherwise return to the Company; or (iii) are reacquired, withheld (or not issued) to satisfy a tax withholding obligation in connection with an award or to satisfy the purchase price or exercise price of a stock award (such shares the "***Returning Shares***") will immediately be added to the Share Reserve (as further described in Section 3(a) below) as and when such shares become Returning Shares, up to the maximum number set forth in Section 3(a) below.

(iii) All share numbers set forth in the Plan give effect to the 1-for-1.7 reverse stock split of the Company's Common Stock effected prior to the IPO Date.

Eligible Award Recipients. Employees, Directors and Consultants are eligible to receive Awards.

(b) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options, (ii) Nonstatutory Stock Options, (iii) Stock Appreciation Rights, (iv) Restricted Stock Awards, (v) Restricted Stock Unit Awards, (vi) Performance Stock Awards, (vii) Performance Cash Awards, and (viii) Other Stock Awards.

(c) Purpose. The Plan, through the grant of Awards, is intended to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate, and provide a means by which the eligible recipients may benefit from increases in value of the Common Stock.

2. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan. The Board may delegate administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine: (A) who will be granted Awards; (B) when and how each Award will be granted; (C) what type of Award will be granted; (D) the provisions of each Award (which need not be identical), including when a person will be permitted to exercise or otherwise receive cash or Common Stock under the Award; (E) the number of shares of Common Stock subject to, or the cash value of, an Award; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for administration of the Plan and Awards. The Board, in the exercise of these powers, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement or in the written terms of a Performance Cash Award, in a manner and to the extent it will deem necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate, in whole or in part, the time at which an Award may be exercised or vest (or the time at which cash or shares of Common Stock may be issued in settlement thereof).

(v) To suspend or terminate the Plan at any time. Except as otherwise provided in the Plan or an Award Agreement, suspension or termination of the Plan will not materially impair a Participant's rights under the Participant's then-outstanding Award without the Participant's written consent, except as provided in subsection (viii) below.

(vi) To amend the Plan in any respect the Board deems necessary or advisable, including, without limitation, by adopting amendments relating to Incentive Stock Options and certain nonqualified deferred compensation under Section 409A of the Code and/or bringing the Plan or Awards granted under the Plan into compliance with the requirements for Incentive Stock Options or ensuring that they are exempt from, or compliant with, the requirements for nonqualified deferred compensation under Section 409A of the Code, subject to the limitations, if any, of applicable law. If required by applicable law or listing requirements, and except as provided in Section 9(a) relating to Capitalization Adjustments, the Company will seek stockholder approval of any amendment of the Plan that (A) materially increases the number of shares of Common Stock available for issuance under the Plan, (B) materially expands the class of individuals eligible to receive Awards under the Plan, (C) materially increases the benefits

accruing to Participants under the Plan, (D) materially reduces the price at which shares of Common Stock may be issued or purchased under the Plan, (E) materially extends the term of the Plan, or (F) materially expands the types of Awards available for issuance under the Plan. Except as otherwise provided in the Plan or an Award Agreement, no amendment of the Plan will materially impair a Participant's rights under an outstanding Award without the Participant's written consent.

(vii) To submit any amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of (A) Section 162(m) of the Code regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to Covered Employees, (B) Section 422 of the Code regarding "incentive stock options" or (C) Rule 16b-3.

(viii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided, however,* that a Participant's rights under any Award will not be impaired by any such amendment unless (A) the Company requests the consent of the affected Participant, and (B) such Participant consents in writing. Notwithstanding the foregoing, (1) a Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights, and (2) subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent (A) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (B) to change the terms of an Incentive Stock Option, if such change results in impairment of the Award solely because it impairs the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (C) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A of the Code; or (D) to comply with other applicable laws or listing requirements.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement that are required for compliance with the laws of the relevant foreign jurisdiction).

(xi) To effect, with the consent of any adversely affected Participant, (A) the reduction of the exercise, purchase or strike price of any outstanding Stock Award; (B) the cancellation of any outstanding Stock Award and the grant in substitution therefor of a new (1) Option or SAR, (2) Restricted Stock Award, (3) Restricted Stock Unit Award, (4) Other Stock Award, (5) cash and/or (6) other valuable consideration determined by the Board, in its sole discretion, with any such substituted award (x) covering the same or a different number of shares of Common Stock as the cancelled Stock Award and (y) granted under the Plan or another equity

or compensatory plan of the Company; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee, as applicable). Any delegation of administrative powers will be reflected in resolutions, not inconsistent with the provisions of the Plan, adopted from time to time by the Board or Committee (as applicable). The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Section 162(m) and Rule 16b-3 Compliance. The Committee may consist solely of two or more Outside Directors, in accordance with Section 162(m) of the Code, or solely of two or more Non-Employee Directors, in accordance with Rule 16b-3.

(d) Delegation to an Officer. The Board may delegate to one (1) or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by applicable law, other Stock Awards) and, to the extent permitted by applicable law, the terms of such Awards, and (ii) determine the number of shares of Common Stock to be subject to such Stock Awards granted to such Employees; *provided, however*, that the Board resolutions regarding such delegation will specify the total number of shares of Common Stock that may be subject to the Stock Awards granted by such Officer and that such Officer may not grant a Stock Award to himself or herself. Any such Stock Awards will be granted on the form of Stock Award Agreement most recently approved for use by the Committee or the Board, unless otherwise provided in the resolutions approving the delegation authority. The Board may not delegate authority to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) to determine the Fair Market Value pursuant to Section 13(w)(iii) below.

(e) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to Section 9(a) relating to Capitalization Adjustments, and the following sentence regarding the annual increase, the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards will not exceed 5,816,795 shares (the "***Share Reserve***"), which number is the sum of (i) 2,600,000 new shares, *plus* (ii) the number of shares subject to the 2011 Plan's Available Reserve, *plus* (iii) the number of shares that are Returning Shares, as such shares become available from time to time.

For clarity, the Share Reserve in this Section 3(a) is a limitation on the number of shares of Common Stock that may be issued pursuant to the Plan. Accordingly, this Section 3(a) does not limit the granting of Stock Awards except as provided in Section 7(a). Shares may be issued in connection with a merger or acquisition as permitted by NASDAQ Listing Rule 5635(c) or, if applicable, NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(b) Reversion of Shares to the Share Reserve. If a Stock Award or any portion thereof (i) expires or otherwise terminates without all of the shares covered by such Stock Award having been issued or (ii) is settled in cash (*i.e.*, the Participant receives cash rather than stock), such expiration, termination or settlement will not reduce (or otherwise offset) the number of shares of Common Stock that may be available for issuance under the Plan. If any shares of Common Stock issued pursuant to a Stock Award are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares that are forfeited or repurchased will revert to and again become available for issuance under the Plan. Any shares reacquired by the Company in satisfaction of tax withholding obligations on a Stock Award or as consideration for the exercise or purchase price of a Stock Award will again become available for issuance under the Plan.

(c) Incentive Stock Option Limit. Subject to the provisions of Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options will be 5,200,000 shares of Common Stock.

(d) Section 162(m) Limitations. Subject to the provisions of Section 9(a) relating to Capitalization Adjustments, at such time as the Company may be subject to the applicable provisions of Section 162(m) of the Code, the following limitations shall apply.

(i) A maximum of 1,000,000 shares of Common Stock subject to Options, SARs 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 may be granted to any one Participant during any one calendar year. Notwithstanding the foregoing, if any additional Options, SARs or 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 are granted to any Participant during any calendar year, compensation attributable to the exercise of such additional Stock Awards will not satisfy the requirements to be considered "qualified performance-based compensation" under Section 162(m) of the Code unless such additional Stock Award is approved by the Company's stockholders.

(ii) A maximum of 1,000,000 shares of Common Stock subject to Performance Stock Awards may be granted to any one Participant during any one calendar year (whether the grant, vesting or exercise is contingent upon the attainment during the Performance Period of the Performance Goals).

(iii) A maximum of $3,000,000 may be granted as a Performance Cash Award to any one Participant during any one calendar year.

(e) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

(f) Inducement Share Pool and Inducement Award Rules. This Section 3(f) will apply with respect to an additional 500,000 shares of Common Stock reserved under this Plan by action of the Board (or a committee thereof) to be used exclusively for the grant of Inducement Awards in compliance with NASDAQ Listing Rule 5635(c)(4) (the "***Inducement Shares***"). The Inducement Shares that may be awarded under this Section 3(f) shall be in addition to and shall not reduce the Share Reserve.

In addition, the following rules and restrictions shall apply to any Inducement Award granted pursuant to the Plan:

(i) Eligible Inducement Award Recipients. An Inducement Award may be granted only to an Employee who has not previously been an Employee or a Non-Employee Director of the Company or an Affiliate, or following a bona fide period of non-employment, as an inducement material to the individual's entering into employment with the Company within the meaning of Rule 5635(c)(4) of the NASDAQ Listing Rules.

(ii) No Incentive Stock Options. No Inducement Award may be designated as an Incentive Stock Option.

(iii) Approval of Inducement Awards. All Inducement Awards must be granted by a Committee consisting of the majority of the Company's independent directors or the Company's independent compensation committee, in each case in accordance with NASDAQ Listing Rule 5635(c)(4).

(iv) Limitation on Share Recycling. The shares of Common Stock underlying any Inducement Awards that are forfeited, canceled, held back upon exercise of an Inducement Award or settlement of an Inducement Award to cover the exercise price or tax withholding, reacquired or repurchased by the Company, satisfied without the issuance of Common Stock or otherwise terminated (other than by exercise) shall be added back to the Inducement Shares available for grant under this Section 3(f), but shall not be added back to the Share Reserve.

(v) The limits in Section 3(d) will not apply to Inducement Awards.

4. ELIGIBILITY.

(a) Eligibility for Specific Stock Awards. Incentive Stock Options may be granted only to employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and 424(f) of the Code). Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants; *provided, however*, that Stock Awards may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company, as such term is defined in Rule 405 of the Securities Act, unless (i) the stock underlying such Stock Awards is treated as "service recipient stock" under Section 409A of the Code (for example, because the Stock Awards are granted pursuant to a corporate transaction such as a spin off transaction), (ii) the Company, in

consultation with its legal counsel, has determined that such Stock Awards are otherwise exempt from Section 409A of the Code, or (iii) the Company, in consultation with its legal counsel, has determined that such Stock Awards comply with the distribution requirements of Section 409A of the Code.

(b) Ten Percent Stockholders. A Ten Percent Stockholder will not be granted an Incentive Stock Option unless the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant and the Option is not exercisable after the expiration of five years from the date of grant.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates will be issued for shares of Common Stock purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, or if an Option is designated as an Incentive Stock Option but some portion or all of the Option fails to qualify as an Incentive Stock Option under the applicable rules, then the Option (or portion thereof) will be a Nonstatutory Stock Option. The provisions of separate Options or SARs need not be identical; *provided, however*, that each Award Agreement will conform to (through incorporation of provisions hereof by reference in the applicable Award Agreement or otherwise) the substance of each of the following provisions:

(a) Term. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of its grant or such shorter period specified in the Award Agreement.

(b) Exercise Price. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will be not less than 100% of the Fair Market Value of the Common Stock subject to the Option or SAR on the date the Award is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value of the Common Stock subject to the Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Section 409A and, if applicable, Section 424(a) of the Code. Each SAR will be denominated in shares of Common Stock equivalents.

(c) Purchase Price for Options. The purchase price of Common Stock acquired pursuant to the exercise of an Option may be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board will have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to use a particular method of payment. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) if an Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; *provided, however*, that the Company will accept a cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued. Shares of Common Stock will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) shares issuable upon exercise are used to pay the exercise price pursuant to the "net exercise," (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations; or

(v) in any other form of legal consideration that may be acceptable to the Board and specified in the applicable Award Agreement.

(d) Exercise and Payment of a SAR. To exercise any outstanding SAR, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Agreement evidencing such SAR. The appreciation distribution payable on the exercise of a SAR will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the SAR) of a number of shares of Common Stock equal to the number of Common Stock equivalents in which the Participant is vested under such SAR, and with respect to which the Participant is exercising the SAR on such date, over (B) the aggregate strike price of the number of Common Stock equivalents with respect to which the Participant is exercising the SAR on such date. The appreciation distribution may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Award Agreement evidencing such SAR.

(e) Transferability of Options and SARs. The Board may, in its sole discretion, impose such limitations on the transferability of Options and SARs as the Board will determine. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options and SARs will apply:

(i) Restrictions on Transfer. An Option or SAR will not be transferable except by will or by the laws of descent and distribution (or pursuant to subsections (ii) and (iii) below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of the Option or SAR in a manner that is not prohibited by applicable tax and securities laws. Except as explicitly provided in the Plan, neither an Option nor a SAR may be transferred for consideration.

(ii) Domestic Relations Orders. Subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulations Section 1.421-1(b)(2). If an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Subject to the approval of the Board or a duly authorized Officer, a Participant may, by delivering written notice to the Company, in a form approved by the Company (or the designated broker), designate a third party who, on the death of the Participant, will thereafter be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, upon the death of the Participant, the executor or administrator of the Participant's estate will be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. However, the Company may prohibit designation of a beneficiary at any time, including due to any conclusion by the Company that such designation would be inconsistent with the provisions of applicable laws.

(f) Vesting Generally. The total number of shares of Common Stock subject to an Option or SAR may vest and become exercisable in periodic installments that may or may not be equal. The Option or SAR may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of Performance Goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options or SARs may vary. The provisions of this Section 5(f) are subject to any Option or SAR provisions governing the minimum number of shares of Common Stock as to which an Option or SAR may be exercised.

(g) Termination of Continuous Service. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date three months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the applicable Award Agreement), and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR (as applicable) within the applicable time frame, the Option or SAR will terminate.

(h) Extension of Termination Date. If the exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option or SAR will terminate on the earlier of (i) the expiration of a total period of time (that need not be consecutive) equal to the applicable post termination exercise period after the termination of the Participant's Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement. In addition, unless otherwise

provided in a Participant's Award Agreement, if the sale of any Common Stock received on exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading policy, then the Option or SAR will terminate on the earlier of (i) the expiration of a period of months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option or SAR would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement.

(i) Disability of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Option or SAR as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date 12 months following such termination of Continuous Service (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR (as applicable) will terminate.

(j) Death of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in the Award Agreement for exercisability after the termination of the Participant's Continuous Service for a reason other than death, then the Option or SAR may be exercised (to the extent the Participant was entitled to exercise such Option or SAR as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Option or SAR by bequest or inheritance or by a person designated to exercise the Option or SAR upon the Participant's death, but only within the period ending on the earlier of (i) the date 18 months following the date of death (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of such Option or SAR as set forth in the Award Agreement. If, after the Participant's death, the Option or SAR is not exercised within the applicable time frame, the Option or SAR (as applicable) will terminate.

(k) Termination for Cause. Except as explicitly provided otherwise in a Participant's Award Agreement or other individual written agreement between the Company or any Affiliate and the Participant, if a Participant's Continuous Service is terminated for Cause, the Option or SAR will terminate immediately upon such Participant's termination of Continuous Service, and the Participant will be prohibited from exercising his or her Option or SAR from and after the time of such termination of Continuous Service.

(l) Non-Exempt Employees. If an Option or SAR is granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, the Option or SAR will not be first exercisable for any shares of Common Stock until at least six months following the date of grant of the Option or SAR (although the Award may vest prior to such date). Consistent with the provisions of the Worker Economic Opportunity Act, (i) if such

non-exempt Employee dies or suffers a Disability, (ii) upon a Corporate Transaction in which such Option or SAR is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant's retirement (as such term may be defined in the Participant's Award Agreement in another agreement between the Participant and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options and SARs may be exercised earlier than six months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay. To the extent permitted and/or required for compliance with the Worker Economic Opportunity Act to ensure that any income derived by a non-exempt employee in connection with the exercise, vesting or issuance of any shares under any other Stock Award will be exempt from the employee's regular rate of pay, the provisions of this Section 5(l) will apply to all Stock Awards and are hereby incorporated by reference into such Stock Award Agreements.

6. PROVISIONS OF STOCK AWARDS OTHER THAN OPTIONS AND SARS.

(a) Restricted Stock Awards. Each Restricted Stock Award Agreement will be in such form and will contain such terms and conditions as the Board will deem appropriate. To the extent consistent with the Company's bylaws, at the Board's election, shares of Common Stock may be (x) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse; or (y) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Award Agreements need not be identical. Each Restricted Stock Award Agreement will conform to (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. Shares of Common Stock awarded under the Restricted Stock Award Agreement may be subject to forfeiture to the Company in accordance with a vesting schedule to be determined by the Board.

(iii) Termination of Participant's Continuous Service. If a Participant's Continuous Service terminates, the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant that have not vested as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Agreement.

(iv) Transferability. Rights to acquire shares of Common Stock under the Restricted Stock Award Agreement will be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board will

determine in its sole discretion, so long as Common Stock awarded under the Restricted Stock Award Agreement remains subject to the terms of the Restricted Stock Award Agreement.

(v) Dividends. A Restricted Stock Award Agreement may provide that any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to the Restricted Stock Award to which they relate.

(b) Restricted Stock Unit Awards. Each Restricted Stock Unit Award Agreement will be in such form and will contain such terms and conditions as the Board will deem appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical. Each Restricted Stock Unit Award Agreement will conform to (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions on or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) Payment. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Agreement.

(iv) Additional Restrictions. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) Dividend Equivalents. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Agreement. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted

Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(c) Performance Awards.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award (covering a number of shares not in excess of that set forth in Section 3(d) above) that is payable (including that may be granted, may vest or may be exercised) contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Stock Award may, but need not, require the Participant's completion of a specified period of Continuous Service. The length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. In addition, to the extent permitted by applicable law and the applicable Award Agreement, the Board may determine that cash may be used in payment of Performance Stock Awards.

(ii) Performance Cash Awards. A Performance Cash Award is a cash award (for a dollar value not in excess of that set forth in Section 3(d) above) that is payable contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Cash Award may also require the completion of a specified period of Continuous Service. At the time of grant of a Performance Cash Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. The Board may specify the form of payment of Performance Cash Awards, which may be cash or other property, or may provide for a Participant to have the option for his or her Performance Cash Award, or such portion thereof as the Board may specify, to be paid in whole or in part in cash or other property.

(iii) Board Discretion. The Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for a Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Stock Award Agreement or the written terms of a Performance Cash Award.

(iv) Section 162(m) Compliance. Unless otherwise permitted in compliance with the requirements of Section 162(m) of the Code with respect to an Award intended to qualify as "performance-based compensation" thereunder, the Committee will establish the Performance Goals applicable to, and the formula for calculating the amount payable under, the Award no later than the earlier of (a) the date 90 days after the commencement of the applicable Performance Period, and (b) the date on which 25% of the Performance Period has elapsed, and in any event at a time when the achievement of the applicable Performance Goals remains substantially uncertain. Prior to the payment of any compensation under an Award intended to qualify as "performance-based compensation" under Section 162(m) of the Code, the Committee will certify the extent to which any Performance Goals and any other material terms under such Award have been satisfied

(other than in cases where such Performance Goals relate solely to the increase in the value of the Common Stock). Notwithstanding satisfaction of, or completion of any Performance Goals, the number of shares of Common Stock, Options, cash or other benefits granted, issued, retainable and/or vested under an Award on account of satisfaction of such Performance Goals may be reduced by the Committee on the basis of such further considerations as the Committee, in its sole discretion, will determine.

(d) Other Stock Awards. Other forms of Stock Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value of the Common Stock at the time of grant) may be granted either alone or in addition to Stock Awards provided for under Section 5 and the preceding provisions of this Section 6. Subject to the provisions of the Plan, the Board will have sole and complete authority to determine the persons to whom and the time or times at which such Other Stock Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Stock Awards and all other terms and conditions of such Other Stock Awards.

7. COVENANTS OF THE COMPANY.

(a) Availability of Shares. The Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy then-outstanding Awards.

(b) Securities Law Compliance. The Company will seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; *provided, however*, that this undertaking will not require the Company to register under the Securities Act the Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Stock Awards unless and until such authority is obtained. A Participant will not be eligible for the grant of an Award or the subsequent issuance of cash or Common Stock pursuant to the Award if such grant or issuance would be in violation of any applicable securities law.

(c) No Obligation to Notify or Minimize Taxes. The Company will have no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company will have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award.

8. MISCELLANEOUS.

(a) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(b) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action constituting the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the papering of the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(c) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to an Award unless and until (i) such Participant has satisfied all requirements for exercise of, or the issuance of shares of Common Stock under, the Award pursuant to its terms, and (ii) the issuance of the Common Stock subject to such Award has been entered into the books and records of the Company.

(d) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or will affect the right of the Company or an Affiliate to terminate (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.

(e) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board has the right in its sole discretion to (x) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (y) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(f) Incentive Stock Option Limitations. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or

otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(g) Investment Assurances. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that such Participant is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Award; and (ii) to give written assurances satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, will be inoperative if (A) the issuance of the shares upon the exercise or acquisition of Common Stock under the Award has been registered under a then currently effective registration statement under the Securities Act, or (B) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(h) Withholding Obligations. Unless prohibited by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any federal, state or local tax withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; *provided, however,* that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law (or such lesser amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; or (v) by such other method as may be set forth in the Award Agreement.

(i) Electronic Delivery. Any reference herein to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access).

(j) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code. Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments,

including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(k) Compliance with Section 409A of the Code. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A of the Code, and, to the extent not so exempt, in compliance with Section 409A of the Code. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A of the Code, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A of the Code is a "specified employee" for purposes of Section 409A of the Code, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) will be issued or paid before the date that is six months following the date of such Participant's "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A of the Code, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

(l) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of an event constituting Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company.

9. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a) and Section 3(f), (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c), (iii) the class(es) and maximum number of securities that may be awarded to any person pursuant to Sections 3(d), and (iv) the class(es) and number of securities

and price per share of stock subject to outstanding Stock Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) Dissolution or Liquidation. Except as otherwise provided in the Stock Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service; *provided, however*, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions shall apply to Stock Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Stock Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of a Stock Award. In the event of a Corporate Transaction, then, notwithstanding any other provision of the Plan, the Board shall take one or more of the following actions with respect to Stock Awards, contingent upon the closing or completion of the Corporate Transaction:

(i) arrange for the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the Stock Award or to substitute a similar stock award for the Stock Award (including, but not limited to, an award to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction);

(ii) arrange for the assignment of any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to the Stock Award to the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company);

(iii) accelerate the vesting, in whole or in part, of the Stock Award (and, if applicable, the time at which the Stock Award may be exercised) to a date prior to the effective time of such Corporate Transaction as the Board shall determine (or, if the Board shall not determine such a date, to the date that is five days prior to the effective date of the Corporate Transaction), with such Stock Award terminating if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction;

(iv) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by the Company with respect to the Stock Award;

(v) cancel or arrange for the cancellation of the Stock Award, to the extent not vested or not exercised prior to the effective time of the Corporate Transaction, in exchange for such cash consideration, if any, as the Board, in its sole discretion, may consider appropriate; and

(vi) make a payment, in such form as may be determined by the Board equal to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Stock Award immediately prior to the effective time of the Corporate Transaction, over (B) any exercise price payable by such holder in connection with such exercise.

The Board need not take the same action or actions with respect to all Stock Awards or portions thereof or with respect to all Participants. The Board may take different actions with respect to the vested and unvested portions of a Stock Award.

(d) Change in Control. A Stock Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Stock Award Agreement for such Stock Award or as may be provided in any other written agreement between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration will occur.

10. PLAN TERM; EARLIER TERMINATION OR SUSPENSION OF THE PLAN.

The Board may suspend or terminate the Plan at any time. No Incentive Stock Options may be granted after the tenth anniversary of the earlier of (i) the date the Plan is adopted by the Board (the "***Adoption Date***"), or (ii) the date the Plan is approved by the stockholders of the Company. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

11. EXISTENCE OF THE PLAN; TIMING OF FIRST GRANT OR EXERCISE.

The Plan will come into existence on the Adoption Date; *provided, however*, that no Award may be granted prior to the IPO Date. In addition, no Stock Award will be exercised (or, in the case of a Restricted Stock Award, Restricted Stock Unit Award, Performance Stock Award, or Other Stock Award, no Stock Award will be granted) and no Performance Cash Award will be settled unless and until the Plan has been approved by the stockholders of the Company, which approval will be within 12 months after the date the Plan is adopted by the Board.

12. CHOICE OF LAW.

The law of the State of Delaware will govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. DEFINITIONS. As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 of the Securities Act. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(b) "***Award***" means a Stock Award or a Performance Cash Award.

(c) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award.

(d) "***Board***" means the Board of Directors of the Company.

(e) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(f) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Stock Award after the Adoption Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(g) "***Cause***" shall have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company; (iii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or of any statutory duty owed to the Company; (iv) such Participant's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) such Participant's gross misconduct. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause shall be made by the Company, in its sole discretion. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant shall have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(h) "***Change in Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, (C) on account of the acquisition of securities of the Company by

any individual who is, on the IPO Date, either an executive officer or a Director (either, an "***IPO Investor***") and/or any entity in which an IPO Investor has a direct or indirect interest (whether in the form of voting rights or participation in profits or capital contributions) of more than 50% (collectively, the "***IPO Entities***") or on account of the IPO Entities continuing to hold shares that come to represent more than 50% of the combined voting power of the Company's then outstanding securities as a result of the conversion of any class of the Company's securities into another class of the Company's securities having a different number of votes per share pursuant to the conversion provisions set forth in the Company's Amended and Restated Certificate of Incorporation; or (D) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction; *provided, however*, that a merger, consolidation or similar transaction will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the surviving Entity or its parent are owned by the IPO Entities;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; *provided, however*, that a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the acquiring Entity or its parent are owned by the IPO Entities;

(iv) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company will otherwise occur, except for a liquidation into a parent corporation; or

(v) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; *provided, however,* that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing definition or any other provision of the Plan, the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company and the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; *provided, however*, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition will apply.

(i) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(j) "***Committee***" means a committee of one or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(k) "***Common Stock***" means, as of the IPO Date, the common stock of the Company, having one vote per share.

(l) "***Company***" means Bellicum Pharmaceuticals, Inc., a Delaware corporation.

(m) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(n) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; *provided, however*, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, in its sole discretion, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick

leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law.

(o) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 90% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(p) "***Covered Employee***" will have the meaning provided in Section 162(m)(3) of the Code.

(q) "***Director***" means a member of the Board.

(r) "***Disability***" means, with respect to a Participant, the inability of such Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Sections 22(e)(3) and 409A(a)(2)(c)(i) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(s) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(t) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(u) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(v) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of

the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the IPO Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(w) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(x) "***Incentive Stock Option***" means an option granted pursuant to Section 5 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(y) "***Inducement Award***" means a Stock Award, other than an Incentive Stock Option, that is granted pursuant to Section 3(f) of the Plan.

(z) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(aa) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(bb) "***Nonstatutory Stock Option***" means any Option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(cc) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(dd) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(ee) "***Option Agreement***" means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an Option grant. Each Option Agreement will be subject to the terms and conditions of the Plan.

(ff) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(gg) "***Other Stock Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 6(d).

(hh) "***Other Stock Award Agreement***" means a written agreement between the Company and a holder of an Other Stock Award evidencing the terms and conditions of an Other Stock Award grant. Each Other Stock Award Agreement will be subject to the terms and conditions of the Plan.

(ii) "***Outside Director***" means a Director who either (i) is not a current employee of the Company or an "affiliated corporation" (within the meaning of Treasury Regulations promulgated under Section 162(m) of the Code), is not a former employee of the Company or an "affiliated corporation" who receives compensation for prior services (other than benefits under a tax-qualified retirement plan) during the taxable year, has not been an officer of the Company or an "affiliated corporation," and does not receive remuneration from the Company or an "affiliated corporation," either directly or indirectly, in any capacity other than as a Director, or (ii) is otherwise considered an "outside director" for purposes of Section 162(m) of the Code.

(jj) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(kk) "***Participant***" means a person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.

(ll) "***Performance Cash Award***" means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

(mm) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or

combination of, the following as determined by the Board: (i) earnings (including earnings per share and net earnings); (ii) earnings before interest, taxes and depreciation; (iii) earnings before interest, taxes, depreciation and amortization; (iv) earnings before interest, taxes, depreciation, amortization and legal settlements; (v) earnings before interest, taxes, depreciation, amortization, legal settlements and other income (expense); (vi) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense) and stock-based compensation; (vii) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation and changes in deferred revenue; (viii) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation, other non-cash expenses and changes in deferred revenue; (ix) total stockholder return; (x) return on equity or average stockholder's equity; (xi) return on assets, investment, or capital employed; (xii) stock price; (xiii) margin (including gross margin); (xiv) income (before or after taxes); (xv) operating income; (xvi) operating income after taxes; (xvii) pre-tax profit; (xviii) operating cash flow; (xix) sales or revenue targets; (xx) increases in revenue or product revenue; (xxi) expenses and cost reduction goals; (xxii) improvement in or attainment of working capital levels; (xxiii) economic value added (or an equivalent metric); (xxiv) market share; (xxv) cash flow; (xxvi) cash flow per share; (xxvii) cash balance; (xxviii) cash burn; (xxix) cash collections; (xxx) share price performance; (xxxi) debt reduction; (xxxii) implementation or completion of projects or processes (including, without limitation, clinical trial initiation, clinical trial enrollment and dates, clinical trial results, regulatory filing submissions, regulatory filing acceptances, regulatory or advisory committee interactions, regulatory approvals, and product supply); (xxxiii) stockholders' equity; (xxxiv) capital expenditures; (xxxv) debt levels; (xxxvi) operating profit or net operating profit; (xxxvii) workforce diversity; (xxxviii) growth of net income or operating income; (xxxix) billings; (xl) bookings; (xli) employee retention; (xlii) initiation of studies by specific dates; (xliii) budget management; (xliv) 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; (xlv) regulatory milestones; (xlvi) progress of internal research or development programs; (xlvii) acquisition of new customers; (xlviii) customer retention and/or repeat order rate; (xlix) improvements in sample and test processing times; (l) progress of partnered programs; (li) partner satisfaction; (lii) timely completion of clinical trials; (liii) submission of 510(k)s or pre-market approvals and other regulatory achievements; (liv) milestones related to samples received and/or tests or panels run; (lv) expansion of sales in additional geographies or markets; (lvi) research progress, including the development of programs; (lvii) strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; and (lviii) and to the extent that an Award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by the Board.

(nn) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. 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 by the Board (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 Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period 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 the Company 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 common stock of the Company 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 the Company's 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 U.S. Food and Drug Administration or any other regulatory body. In addition, the Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for such Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Stock Award Agreement or the written terms of a Performance Cash Award.

(oo) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to and the payment of a Stock Award or a Performance Cash Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(pp) "***Performance Stock Award***" means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(qq) "***Plan***" means this Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan.

(rr) "***Restricted Stock Award***" means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

(ss) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(tt) "***Restricted Stock Unit Award***" means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(uu) "***Restricted Stock Unit Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Unit Award evidencing the terms and conditions of a

Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Agreement will be subject to the terms and conditions of the Plan.

(vv) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(ww) "***Securities Act***" means the Securities Act of 1933, as amended.

(xx) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 5.

(yy) "***Stock Appreciation Right Agreement***" means a written agreement between the Company and a holder of a Stock Appreciation Right evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Agreement will be subject to the terms and conditions of the Plan.

(zz) "***Stock Award***" means any right to receive Common Stock granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, a Performance Stock Award or any Other Stock Award.

(aaa) "***Stock Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement will be subject to the terms and conditions of the Plan.

(bbb) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(ccc) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

BELLICUM PHARMACEUTICALS, INC.
STOCK OPTION GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to its 2014 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this notice and the Plan, the terms of the Plan will control.

Optionholder:	
Date of Grant:	
Vesting Commencement Date:	
Number of Shares Subject to Option:	
Exercise Price (Per Share):	
Total Exercise Price:	
Expiration Date:	

Type of Grant: ☐ Incentive Stock Option ☐ Nonstatutory Stock Option

Exercise Schedule: ☒ Same as Vesting Schedule ☐ Early Exercise Permitted

Vesting Schedule: **[**One-fourth **(**1/4th**)** of the shares vest one year after the Vesting Commencement Date; the balance of the shares vest in a series of thirty-six (36) successive equal monthly installments measured from the first anniversary of the Vesting Commencement Date, subject to Optionholder's Continuous Service as of each such date **]**

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company

☒ Pursuant to a Regulation T Program if the shares are publicly traded

☒ By delivery of already-owned shares if the shares are publicly traded

☒ If and only to the extent this option is a Nonstatutory Stock Option, and subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

[1] If this is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calender year. An excess over $100,000 is a Nonstatutory Stock Option.

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) options previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this option upon the terms and conditions set forth therein. By accepting this option, Optionholder consents to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC.

By:_____
Signature

Title:_____

Date:_____

OPTIONHOLDER:

_____
Signature

Date:_____

ATTACHMENTS: Option Agreement, 2014 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

BELLICUM PHARMACEUTICALS, INC.
2014 EQUITY INCENTIVE PLAN

OPTION AGREEMENT
(INCENTIVE STOCK OPTION OR NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Bellicum Pharmaceuticals, Inc.(the "***Company***") has granted you an option under its 2014 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. EXERCISE PRIOR TO VESTING ("EARLY EXERCISE"). If permitted in your Grant Notice (*i.e.*, the "Exercise Schedule" indicates "Early Exercise Permitted") and subject to the provisions of your option, you may elect at any time that is both (i) during the period of your Continuous Service and (ii) during the term of your option, to exercise all or part of your option, including the unvested portion of your option; *provided, however,* that:

a. a partial exercise of your option will be deemed to cover first vested shares of Common Stock and then the earliest vesting installment of unvested shares of Common Stock;

b. any shares of Common Stock so purchased from installments that have not vested as of the date of exercise will be subject to the purchase option in favor of the Company as described in the Company's form of Early Exercise Stock Purchase Agreement;

c. you will enter into the Company's form of Early Exercise Stock Purchase Agreement with a vesting schedule that will result in the same vesting as if no early exercise had occurred; and

d. if your option is an Incentive Stock Option, then, to the extent that the aggregate Fair Market Value (determined at the Date of Grant) of the shares of Common Stock with respect to which your option plus all other Incentive Stock Options you hold are exercisable for the first time by you during any calendar year (under all plans of the Company and its Affiliates) exceeds one hundred thousand dollars ($100,000), your option(s) or portions thereof that exceed such limit (according to the order in which they were granted) will be treated as Nonstatutory Stock Options.

5. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

a. Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

b. Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

c. If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

6. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

7. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

8. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 8(d) below); *provided, however,* that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above relating to "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy. Notwithstanding the foregoing, if (i) you are a Non-Exempt Employee, (ii) your Continuous Service terminates within six (6) months after the Date of Grant, and (iii) you have vested in a portion of your option at the time of your termination of Continuous Service, your option will not expire until the earlier of (x) the later of (A) the date that is seven (7) months after the Date of Grant, and (B) the date that is three (3) months after the termination of your Continuous Service, and (y) the Expiration Date;

c. twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 8(d)) below;

d. eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

e. the Expiration Date indicated in your Grant Notice; or

f. the day before the tenth (10th) anniversary of the Date of Grant.

If your option is an Incentive Stock Option, note that to obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the Date of Grant and ending on the day three (3) months before the date of your option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

9. EXERCISE.

a. You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

b. By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

c. If your option is an Incentive Stock Option, by exercising your option you agree that you will notify the Company in writing within fifteen (15) days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your option that occurs within two (2) years after the Date of Grant or within one (1) year after such shares of Common Stock are transferred upon exercise of your option.

d. By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2711 or NYSE Member Rule 472 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period.

You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 9(d). The underwriters of the Company's stock are intended third party beneficiaries of this Section 9(d) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

10. TRANSFERABILITY. Except as otherwise provided in this Section 10, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

a. Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

b. Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement. If this option is an Incentive Stock Option, this option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

c. Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

11. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

12. WITHHOLDING OBLIGATIONS.

a. At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

b. If this option is a Nonstatutory Stock Option, then upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). If the date of determination of any tax withholding obligation is deferred to a date later than the date of exercise of your option, share withholding pursuant to the preceding sentence shall not be permitted unless you make a proper and timely election under Section 83(b) of the Code, covering the aggregate number of shares of Common Stock acquired upon such exercise with respect to which such determination is otherwise deferred, to accelerate the determination of such tax withholding obligation to the date of exercise of your option. Notwithstanding the filing of such election, shares of Common Stock shall be withheld solely from fully vested shares of Common Stock determined as of the date of exercise of your option that are otherwise issuable to you upon such exercise. Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

c. You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

13. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

14. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The

Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

15. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

16. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

17. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

18. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

19. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

20. MISCELLANEOUS.

a. The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

c. You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

d. This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

e. All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

2014 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030 Date of Exercise: _____

This constitutes notice to Bellicum Pharmaceuticals, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option (check one):	Incentive ☐	Nonstatutory ☐
Stock option dated:	_____	_____
Number of Shares as to which option is exercised:	_____	_____
Certificates to be issued in name of:	_____	_____
Total exercise price:	$_____	$_____
Cash payment delivered herewith:	$_____	$_____
[Value of _____ Shares delivered herewith:	$_____	$_____]
[Value of _____ Shares pursuant to net exercise:	$_____	$_____]
[Regulation T Program (cashless exercise):	$_____	$_____]

[1] Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.
[2] The option must be a Nonstatutory Stock Option, and Bellicum Pharmaceuticals, Inc. must have established net exercise procedures at the time of exercise, in order to utilize this payment method.
[3] Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan, (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option, and (iii) if this exercise relates to an incentive stock option, to notify you in writing within fifteen (15) days after the date of any disposition of any of the Shares issued upon exercise of this option that occurs within two (2) years after the date of grant of this option or within one (1) year after such Shares are issued upon exercise of this option.

Very truly yours,

BELLICUM PHARMACEUTICALS, INC.
STOCK OPTION GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to its 2014 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this notice and the Plan, the terms of the Plan will control.

Optionholder:	
Date of Grant:	
Vesting Commencement Date:	
Number of Shares Subject to Option:	
Exercise Price (Per Share):	
Total Exercise Price:	
Expiration Date:	

Type of Grant: ☐ Incentive Stock Option ☐ Nonstatutory Stock Option

Exercise Schedule: ☒ Same as Vesting Schedule ☐ Early Exercise Permitted

Vesting Schedule: **[**One-fourth **(**1/4th) of the shares vest one year after the Vesting Commencement Date; the balance of the shares vest in a series of thirty-six (36) successive equal monthly installments measured from the first anniversary of the Vesting Commencement Date, subject to Optionholder's Continuous Service as of each such date and the potential acceleration provisions set forth in Section 11 of the Option Agreement**]**

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company

☒ Pursuant to a Regulation T Program if the shares are publicly traded

☒ By delivery of already-owned shares if the shares are publicly traded

☒ If and only to the extent this option is a Nonstatutory Stock Option, and subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

[1] If this is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calender year. An excess over $100,000 is a Nonstatutory Stock Option.

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) options previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this option upon the terms and conditions set forth therein. By accepting this option, Optionholder consents to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC.

By:_____
Signature

Title:_____

Date:_____

OPTIONHOLDER:

_____
Signature

Date:_____

ATTACHMENTS: Option Agreement, 2014 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

BELLICUM PHARMACEUTICALS, INC.
2014 EQUITY INCENTIVE PLAN

OPTION AGREEMENT
(INCENTIVE STOCK OPTION OR NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Bellicum Pharmaceuticals, Inc.(the "***Company***") has granted you an option under its 2014 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. EXERCISE PRIOR TO VESTING ("EARLY EXERCISE"). If permitted in your Grant Notice (*i.e.*, the "Exercise Schedule" indicates "Early Exercise Permitted") and subject to the provisions of your option, you may elect at any time that is both (i) during the period of your Continuous Service and (ii) during the term of your option, to exercise all or part of your option, including the unvested portion of your option; *provided, however,* that:

a. a partial exercise of your option will be deemed to cover first vested shares of Common Stock and then the earliest vesting installment of unvested shares of Common Stock;

b. any shares of Common Stock so purchased from installments that have not vested as of the date of exercise will be subject to the purchase option in favor of the Company as described in the Company's form of Early Exercise Stock Purchase Agreement;

c. you will enter into the Company's form of Early Exercise Stock Purchase Agreement with a vesting schedule that will result in the same vesting as if no early exercise had occurred; and

d. if your option is an Incentive Stock Option, then, to the extent that the aggregate Fair Market Value (determined at the Date of Grant) of the shares of Common Stock with respect to which your option plus all other Incentive Stock Options you hold are exercisable for the first time by you during any calendar year (under all plans of the Company and its Affiliates) exceeds one hundred thousand dollars ($100,000), your option(s) or portions thereof that exceed such limit (according to the order in which they were granted) will be treated as Nonstatutory Stock Options.

5. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

a. Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

b. Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

c. If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

6. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

7. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

8. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 8(d) below); *provided, however,* that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above relating to "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy. Notwithstanding the foregoing, if (i) you are a Non-Exempt Employee, (ii) your Continuous Service terminates within six (6) months after the Date of Grant, and (iii) you have vested in a portion of your option at the time of your termination of Continuous Service, your option will not expire until the earlier of (x) the later of (A) the date that is seven (7) months after the Date of Grant, and (B) the date that is three (3) months after the termination of your Continuous Service, and (y) the Expiration Date;

c. twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 8(d)) below;

d. eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

e. the Expiration Date indicated in your Grant Notice; or

f. the day before the tenth (10th) anniversary of the Date of Grant.

If your option is an Incentive Stock Option, note that to obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the Date of Grant and ending on the day three (3) months before the date of your option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

9. EXERCISE.

a. You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

b. By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

c. If your option is an Incentive Stock Option, by exercising your option you agree that you will notify the Company in writing within fifteen (15) days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your option that occurs within two (2) years after the Date of Grant or within one (1) year after such shares of Common Stock are transferred upon exercise of your option.

d. By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2711 or NYSE Member Rule 472 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period.

You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 9(d). The underwriters of the Company's stock are intended third party beneficiaries of this Section 9(d) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

10. TRANSFERABILITY. Except as otherwise provided in this Section 10, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

a. Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

b. Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement. If this option is an Incentive Stock Option, this option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

c. Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

11. CHANGE IN CONTROL.

a. If a Change in Control occurs and immediately prior to or within twelve (12) months after, the effective time of such Change in Control your Continuous Service terminates due to an involuntary termination (not including death or Disability) without Cause or due to a voluntary termination with Good Reason, then, as of the date of termination of Continuous Service, the vesting and exercisability of your option will be accelerated in full.

b. "***Good Reason***" means that one or more of the following are undertaken by the Company (or successor to the Company, if applicable) without your express written consent: (i) a material reduction in your annual base salary; *provided, however*, that Good Reason will not

be deemed to have occurred in the event of a reduction in your annual base salary that is pursuant to a salary reduction program affecting substantially all of the employees of the Company and that does not adversely affect you to a greater extent than other similarly situated employees; (ii) a material reduction in your authority, duties or responsibilities; (iii) any failure by the Company to continue in effect any material benefit plan or program, including incentive plans or plans with respect to the receipt of securities of the Company, in which you were participating immediately prior to the effective date of the Change in Control (hereinafter referred to as "***Benefit Plans***"), or the taking of any action by the Company that would adversely affect your participation in or reduce your benefits under the Benefit Plans or deprive you of any fringe benefit that you enjoyed immediately prior to the effective date of the Change in Control; *provided, however*, that Good Reason will not be deemed to have occurred if the Company provides for your participation in benefit plans and programs that, taken as a whole, are comparable to the Benefit Plans; (iv) a relocation of your principal place of employment with the Company (or successor to the Company, if applicable) to a place that increases your one-way commute by more than fifty (50) miles as compared to your then-current principal place of employment immediately prior to such relocation, except for required travel by you on the Company's business to an extent substantially consistent with your business travel obligations prior to the effective date of the Change in Control; or (v) a material breach by the Company of any provision of the Plan or the Option Agreement or any other material agreement between you and the Company concerning the terms and conditions of your employment or service with the Company.

c. If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated)

before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 11(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 11(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 11(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

12. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

13. WITHHOLDING OBLIGATIONS.

a. At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sumsrequired to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

b. If this option is a Nonstatutory Stock Option, then upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). If the date of determination of any tax withholding obligation is deferred to a date later than the date of exercise of your option, share withholding pursuant to the preceding sentence shall not be permitted unless you make a proper and timely election under Section 83(b) of the Code, covering the aggregate number of shares of Common Stock acquired upon such exercise with respect to which such determination is otherwise deferred, to accelerate the determination of such tax withholding obligation to the date of exercise of your option. Notwithstanding the filing of such election, shares of Common Stock shall be withheld solely from fully vested shares of Common Stock determined as of the date of exercise of your option that are otherwise issuable to you upon such exercise. Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

c. You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

14. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

15. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

16. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option

and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

17. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

18. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

19. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

20. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

21. MISCELLANEOUS.

a. The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

c. You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

d. This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

e. All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

2014 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030 Date of Exercise: _____

This constitutes notice to Bellicum Pharmaceuticals, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option (check one):	Incentive ☐	Nonstatutory ☐
Stock option dated:	_____	_____
Number of Shares as to which option is exercised:	_____	_____
Certificates to be issued in name of:	_____	_____
Total exercise price:	$_____	$_____
Cash payment delivered herewith:	$_____	$_____
[Value of _____ Shares delivered herewith:	$_____	$_____]
[Value of _____ Shares pursuant to net exercise[2]:	$_____	$_____]
[Regulation T Program (cashless exercise[3]):	$_____	$_____]

[1] Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.
[2] The option must be a Nonstatutory Stock Option, and Bellicum Pharmaceuticals, Inc. must have established net exercise procedures at the time of exercise, in order to utilize this payment method.
[3] Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan, (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option, and (iii) if this exercise relates to an incentive stock option, to notify you in writing within fifteen (15) days after the date of any disposition of any of the Shares issued upon exercise of this option that occurs within two (2) years after the date of grant of this option or within one (1) year after such Shares are issued upon exercise of this option.

Very truly yours,

BELLICUM PHARMACEUTICALS, INC.
RESTRICTED STOCK AWARD GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to its 2014 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant, in consideration of Participant's services to the Company, a restricted stock award covering the number of shares of the Company's Common Stock set forth below. The restricted stock award is subject to all of the terms and conditions as set forth herein, in the Restricted Stock Award Agreement, the Plan, the Assignment Separate from Certificate and the Joint Escrow Instructions, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Restricted Stock Award Agreement will have the same definitions as in the Plan or the Restricted Stock Award Agreement, as applicable. If there is any conflict between the terms herein and the Plan, the terms of the Plan will control.

Participant: __
Date of Grant: __
Vesting Commencement Date: __
Number of Shares Subject to Award: __
Consideration: Participant's services

Vesting Schedule: **[**_____, subject to Participant's Continuous Service as of each such date **[**and the potential acceleration provisions set forth in Section 6 of the Restricted Stock Award Agreement]**]**

Additional Terms/Acknowledgements: The undersigned Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Award Grant Notice, the Restricted Stock Award Agreement and the Plan. Participant acknowledges and agrees that this Restricted Stock Award Grant Notice and the Restricted Stock Award Agreement may not be modified, amended or revised except as provided therein or in the Plan. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Award Grant Notice, the Restricted Stock Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of stock in the Company and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) equity awards previously granted and delivered to Participant, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this restricted stock award upon the terms and conditions set forth therein. By accepting this restricted stock award, Participant consents to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC.

By:_____
Signature

Title:_____

Date:_____

PARTICIPANT:

_____
Signature

Date:_____

ATTACHMENTS:

Attachment I: Restricted Stock Award Agreement
Attachment II: 2014 Equity Incentive Plan
Attachment III: Assignment Separate from Certificate
Attachment IV: Joint Escrow Instructions

ATTACHMENT I

BELLICUM PHARMACEUTICALS, INC.

RESTRICTED STOCK AWARD AGREEMENT

(2014 EQUITY INCENTIVE PLAN)

Pursuant to the Restricted Stock Award Grant Notice (the "***Grant Notice***") and this Restricted Stock Award Agreement (the "***Agreement***" and together with the Grant Notice, the "***Award***") and its 2014 Equity Incentive Plan (the "***Plan***"), Bellicum Pharmaceuticals, Inc. (the "***Company***") has awarded you, in exchange for your services to the Company, the number of shares of the Company's Common Stock subject to the Award as indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement but defined in the Plan will have the same definitions as in the Plan. If there is any conflict between the terms in this Agreement and the Plan, the terms of the Plan will control.

The details of your Award, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the limitations contained herein, your Award will vest pursuant to the Vesting Schedule in the Grant Notice, provided that vesting will cease upon the termination of your Continuous Service. "***Vested Shares***" will mean shares subject to your Award that have vested in accordance with the Vesting Schedule, and "***Unvested Shares***" will mean shares subject to your Award that have not vested in accordance with the Vesting Schedule.

2. NUMBER OF SHARES. The number of shares subject to your Award may be adjusted from time to time for Capitalization Adjustments.

3. SECURITIES LAW COMPLIANCE. In no event may you be issued any shares of Common Stock under your Award unless the shares are either then registered under the Securities Act or, if not registered, the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award and the issuance of shares of Common Stock under your Award also must comply with all other applicable laws and regulations, and you will not receive any shares of Common Stock under your Award if the Company determines that such receipt would not be in material compliance with such laws and regulations.

4. REACQUISITION RIGHT.

a. Reacquisition Right. In the event your Continuous Service terminates, the Company will automatically reacquire (the "***Reacquisition Right***") on the date that is ninety (90) days after the termination of your Continuous Service (the "***Reacquisition Date***") all Unvested Shares as of the date of your termination of Continuous Service without any payment to you (that is, for zero dollars ($0)) and without any required action or notice to you. You hereby agree to take whatever action the Company deems necessary to effectuate the Company's reacquisition of the Unvested Shares. Following such reacquisition, the Company will become the legal and beneficial owner of the Unvested Shares being reacquired and all rights and interests in and related to such shares, and the Company will have the right to transfer to its own name the Unvested Shares being

reacquired by the Company without further action by you. Notwithstanding anything to the contrary in this Section 4(a) or in this Agreement, the Company may elect to waive, in its sole discretion, its Reacquisition Right in whole or in part by providing written notice to you (with a copy to the Escrow Agent, as defined in Section 7), at any time prior to or on the Reacquisition Date, and the Escrow Agent may then release to you the number of shares of Common Stock not being reacquired by the Company.

b. Capitalization Adjustments. In the event of a Capitalization Adjustment, then any and all new, substituted or additional securities or other property to which you are entitled by reason of your ownership of the Unvested Shares will be immediately subject to the Reacquisition Right with the same force and effect as the Unvested Shares subject to the Reacquisition Right immediately before such event, but only to the extent the Unvested Shares were at the time covered by the Reacquisition Right.

c. Corporate Transactions. To the extent the Reacquisition Right remains in effect following a Corporate Transaction or Change in Control, unless otherwise provided by the Board pursuant to the terms of the Plan, it will apply to the new capital stock, cash or other property received in exchange for the Unvested Shares in consummation of the Corporate Transaction or Change in Control, as applicable, but only to the extent the Unvested Shares were at the time covered by such right.

d. Termination of Reacquisition Right. The Company's Reacquisition Right will terminate upon the earlier of (i) the Company's reacquisition in full of the Unvested Shares (or waiver of the Reacquisition Right) and (ii) the expiration of the Company's Reacquisition Right.

5. TRANSFER RESTRICTIONS. In addition to any other limitation on transfer created by applicable securities laws, you will not sell, assign, hypothecate, donate, encumber or otherwise dispose of all or any part of the Unvested Shares or any interest in the Unvested Shares while such shares are subject to the Company's Reacquisition Right; *provided, however*, that an interest in the Unvested Shares may be transferred pursuant to a qualified domestic relations order as defined in the Code or Title I of the Employee Retirement Income Security Act of 1974. In the case of Vested Shares, you will not sell, assign, hypothecate, donate, encumber or otherwise dispose of all or any part of the Vested Shares or any interest in the Vested Shares except in compliance with this Agreement (including without limitation Sections 6 and 7), the Company's bylaws and applicable securities laws.

6. [CHANGE IN CONTROL.

a. If a Change in Control occurs and immediately prior to or within twelve (12) months after, the effective time of such Change in Control your Continuous Service terminates due to an involuntary termination (not including death or Disability) without Cause or due to a voluntary termination with Good Reason, then, as of the date of termination of Continuous Service, the Unvested Shares will become vested in full and the Reacquisition Right will lapse in full.

b. "***Good Reason***" means that one or more of the following are undertaken by the Company (or successor to the Company, if applicable) without your express written consent:

(i) a material reduction in your annual base salary; *provided, however*, that Good Reason will not be deemed to have occurred in the event of a reduction in your annual base salary that is pursuant to a salary reduction program affecting substantially all of the employees of the Company and that does not adversely affect you to a greater extent than other similarly situated employees; (ii) a material reduction in your authority, duties or responsibilities; (iii) any failure by the Company to continue in effect any material benefit plan or program, including incentive plans or plans with respect to the receipt of securities of the Company, in which you were participating immediately prior to the effective date of the Change in Control (hereinafter referred to as "***Benefit Plans***"), or the taking of any action by the Company that would adversely affect your participation in or reduce your benefits under the Benefit Plans or deprive you of any fringe benefit that you enjoyed immediately prior to the effective date of the Change in Control; *provided, however*, that Good Reason will not be deemed to have occurred if the Company provides for your participation in benefit plans and programs that, taken as a whole, are comparable to the Benefit Plans; (iv) a relocation of your principal place of employment with the Company (or successor to the Company, if applicable) to a place that increases your one-way commute by more than fifty (50) miles as compared to your then-current principal place of employment immediately prior to such relocation, except for required travel by you on the Company's business to an extent substantially consistent with your business travel obligations prior to the effective date of the Change in Control; or (v) a material breach by the Company of any provision of the Plan or this Agreement or any other material agreement between you and the Company concerning the terms and conditions of your employment or service with the Company.

c. If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are

contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 6(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 6(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 6(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.]

7. ESCROW OF COMMON STOCK. As security for your faithful performance of the terms of this Agreement and to ensure the availability for delivery of the Unvested Shares upon exercise of the Company's Reacquisition Right, you agree that the shares issued under your Award may be held in escrow pursuant to the terms of the Joint Escrow Instructions attached to the Grant Notice as **ATTACHMENT IV**. You agree to execute and deliver to the individual designated as the escrow agent in the Joint Escrow Instructions or person's designee (the "***Escrow Agent***"), (i) the Joint Escrow Instructions and (ii) two (2) Assignment Separate From Certificate forms duly endorsed (with date and number of shares blank) substantially in the form attached to the Grant Notice as **ATTACHMENT III** and deliver the same, along with the certificate or certificates evidencing the Unvested Shares, which will be held and used by the Escrow Agent pursuant to the terms of the Joint Escrow Instructions.

8. RIGHTS AS STOCKHOLDER. Subject to the provisions of this Award, you will exercise all rights and privileges of a stockholder of the Company with respect to the shares of Common Stock deposited in escrow. You will be deemed to be the holder of the shares for purposes of receiving any dividends that may be paid with respect to such shares (which will be subject to the same vesting and forfeiture restrictions as apply to the shares to which they relate) and for

purposes of exercising any voting rights relating to such shares, even if some or all of such shares have not yet vested and been released from the Company's Reacquisition Right.

9. RESTRICTIVE LEGENDS. All certificates representing the Common Stock issued under your Award will be endorsed with appropriate legends determined by the Company (in addition to any other legend that may be required by other agreements between you and the Company).

10. AWARD NOT A SERVICE CONTRACT. Your Award is not an employment or service contract, and nothing in your Award will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or on the part of the Company or an Affiliate to continue your employment. In addition, nothing in your Award will obligate the Company or an Affiliate, their respective stockholders, boards of directors, Officers or Employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

11. WITHHOLDING OBLIGATIONS.

a. At the time your Award is made, or at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with your Award (the "***Withholding Taxes***"). The Company may, in its sole discretion, satisfy all or any portion of the Withholding Taxes obligation relating to your Award by any of the following means or by a combination of such means: (i) withholding from any amounts otherwise payable to you by the Company; (ii) causing you to tender a cash payment; or (iii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award with a Fair Market Value equal to the amount of such Withholding Taxes; *provided, however*, that the number of such shares of Common Stock withheld may not exceed the amount necessary to satisfy the Company's required tax withholding obligations using the minimum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income.

b. Unless the tax withholding obligations of the Company and any Affiliate are satisfied, the Company will have no obligation to issue a certificate for such shares or release such shares from any escrow provided for in this Agreement.

12. MARKET STAND-OFF AGREEMENT. By acquiring shares of Common Stock under your Award, you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company request or as necessary to permit compliance with FINRA Rule 2711 or NYSE Member Rule 472 and similar or successor regulatory rules and regulations (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this Section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute

and deliver such other agreements as may be reasonably requested by the Company and the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. You also agree that any transferee of any shares of Common Stock (or other securities of the Company held by you will be bound by this Section. To enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. The underwriters of the Company's stock are intended third party beneficiaries of this Section and will have the right, power and authority to enforce the provisions of this Section as though they were a party to this Agreement.

13. TAX CONSEQUENCES. You agree to review with your own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. You will rely solely on such advisors and not on any statements or representations of the Company or any of its agents. You understand that you (and not the Company) will be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement. You understand that Section 83 of the Code taxes as ordinary income to you the fair market value of the shares of Common Stock issued to you pursuant to the Award as of the date any restrictions on such shares lapse (that is, as of the date on which part or all of such shares vest). In this context, "restriction" includes the right of the Company to reacquire the Common Stock pursuant to the Reacquisition Right set forth above. You understand that you may elect to be taxed at the time the Common Stock is issued to you pursuant to your Award, rather than when and as the Reacquisition Right expires, by filing an election under Section 83(b) of the Code (an "***83(b) Election***") with the Internal Revenue Service within thirty (30) days after the date your acquire shares of Common Stock pursuant to your Award. Even if the fair market value of the Common Stock at the time of grant of your Award equals the amount paid for the Common Stock, the 83(b) Election must be made to avoid income under Section 83(a) in the future. You understand that failure to file such an 83(b) Election in a timely manner may result in adverse tax consequences for you. You further understand that you must file an additional copy of such 83(b) Election with your federal income tax return for the calendar year in which you make such 83(b) Election. You acknowledge that the foregoing is only a summary of the effect of U.S. federal income taxation with respect to issuance of the Common Stock pursuant to your Award, and does not purport to be complete. You further acknowledge that the Company has directed you to seek independent advice regarding the applicable provisions of the Code, the income tax laws of any municipality, state or foreign country in which you may reside, and the tax consequences of your death. You assume all responsibility for filing an 83(b) Election and paying all taxes resulting from such election or the lapse of the restrictions on the Common Stock. YOU ACKNOWLEDGE THAT IT IS YOUR OWN RESPONSIBILITY, AND NOT THE COMPANY'S, TO FILE A TIMELY ELECTION UNDER SECTION 83(B) OF THE CODE. THE COMPANY AND ITS LEGAL COUNSEL CANNOT ASSUME RESPONSIBILITY FOR FAILURE TO FILE THE 83(B) ELECTION IN A TIMELY MANNER UNDER ANY CIRCUMSTANCES.

14. NOTICES. Any notices provided for in your Award or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by the Company to you, five days after deposit in the U.S. mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery

and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

15. GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the provisions of your Award and those of the Plan, the provisions of the Plan will control. In addition, your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

16. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

17. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this Award will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

18. SEVERABILITY. If all or any part of this Award or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Award or the Plan not declared to be unlawful or invalid. Any Section of this Award (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

19. MISCELLANEOUS.

a. The rights and obligations of the Company under your Award are transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns. Your rights and obligations under your Award may only be assigned with the prior written consent of the Company.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

c. You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

* * *

This Restricted Stock Award Agreement will be deemed to be signed by the Company and Participant upon the signing by Participant of the Restricted Stock Award Grant Notice to which it is attached.

ATTACHMENT II

2014 EQUITY INCENTIVE PLAN

ATTACHMENT III

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED and pursuant to that certain Restricted Stock Award Grant Notice and Restricted Stock Award Agreement dated _____ (the "***Award***"), **[**Participant's Name**]** hereby sells, assigns and transfers unto Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "***Company***") _____ (_____ shares of the Common Stock of the Company, standing in the undersigned's name on the books of the Company represented by Certificate No(s). _____ and does hereby irrevocably constitute and appoint the Company's Secretary as attorney-in-fact to transfer the said Common Stock on the books of the Company with full power of substitution in the premises. This Assignment Separate From Certificate may be used only in accordance with and subject to the terms and conditions of the Award, in connection with the reacquisition of shares of Common Stock of the Company issued to the undersigned pursuant to the Award, and only to the extent that such shares remain subject to the Company's Reacquisition Right under the Award.

Dated:__

_____

(Signature)

_____

(Print Name)

INSTRUCTIONS: Please do not fill in any blanks other than the "Signature" line and the "Print Name" line.

ATTACHMENT IV

JOINT ESCROW INSTRUCTIONS

Secretary
Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030

Dear Sir or Madam:

As Escrow Agent for both Bellicum Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), and the undersigned recipient ("***Recipient***") of Common Stock of the Company (the "***Common Stock***"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of the Restricted Stock Award Grant Notice (the "***Grant Notice***"), dated _____, to which a copy of these Joint Escrow Instructions is attached as Attachment IV, and pursuant to the terms of the Restricted Stock Award Agreement (the "***Agreement***"), which is Attachment I to the Grant Notice, in accordance with the following instructions:

1. In the event Recipient ceases to render services to the Company or an affiliate of the Company during the vesting period set forth in the Grant Notice, the Company or its affiliate or assignee, as applicable, will give to Recipient and you a written notice specifying the number of shares of Common Stock that will be transferred to the Company. Recipient and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing you are directed (a) to date any stock assignments necessary for the transfer in question, (b) to fill in the number of shares of Common Stock being transferred, and (c) to deliver the same, together with the certificate evidencing the shares of Common Stock to be transferred, to the Company.

3. Recipient irrevocably authorizes the Company to deposit with you any certificates evidencing shares of Common Stock to be held by you hereunder and any additions and substitutions to said shares of Common Stock as specified in the Grant Notice and the Agreement. Recipient does hereby irrevocably constitute and appoint you as Recipient's attorney-in-fact and agent for the term of this escrow to execute with respect to such securities and other property all documents of assignment and/or transfer and all stock certificates necessary or appropriate to make all securities negotiable and complete any transaction herein contemplated.

4. This escrow will terminate and the shares of Common Stock held hereunder will be released in full upon the full vesting of the shares of Common Stock in accordance with the vesting schedule set forth in the Grant Notice or upon the earlier return of the shares of Common Stock to the Company pursuant to the Company's Reacquisition Right (as defined in the Agreement) or other forfeiture condition under the Company's 2014 Equity Incentive Plan.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Recipient, you will deliver all of same to Recipient and will be discharged of all further obligations hereunder; *provided, however*, that if

at the time of termination of this escrow you are advised by the Company that the property subject to this escrow is the subject of a pledge or other security agreement, you will deliver all such property to the pledgeholder or other person designated by the Company.

6. Except as otherwise provided in these Joint Escrow Instructions, your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You will be obligated only for the performance of such duties as are specifically set forth herein and may rely and will be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties or their assignees. You will not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Recipient while acting in good faith and any act done or omitted by you pursuant to the advice of your own attorneys will be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law, and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree of any court, you will not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

9. You will not be liable in any respect on account of the identity, authority or rights of the parties executing or delivering or purporting to execute or deliver the Grant Notice, the Agreement or any documents or papers deposited or called for hereunder.

10. You will not be liable for the outlawing of any rights under any statute of limitations with respect to these Joint Escrow Instructions or any documents deposited with you.

11. Your responsibilities as Escrow Agent hereunder will terminate if you cease to be Secretary of the Company or if you resign by written notice to the Company. In the event of any such termination, the Secretary of the Company will automatically become the successor Escrow Agent unless the Company appoints another successor Escrow Agent and Recipient hereby confirms the appointment of such successor as Recipient's attorney-in-fact and agent to the full extent of your appointment.

12. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto will join in furnishing such instruments.

13. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such dispute has been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you will be under no duty whatsoever to institute or defend any such proceedings.

14. Any notice required or permitted hereunder will be given in writing and will be deemed effectively given upon personal delivery, including delivery by express courier or five (5) days after deposit in the U.S. Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties hereunto entitled at the following addresses, or at such other addresses as a party may designate by ten (10) days' advance written notice to each of the other parties hereto:

COMPANY: Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030
Attn: Chief Financial Officer

RECIPIENT: __

__
__
__

ESCROW AGENT: Secretary
Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030

By signing these Joint Escrow Instructions you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Grant Notice or the Agreement.

15. You are entitled to employ such legal counsel, including without limitation Cooley LLP, and other experts as you may deem necessary to advise you in connection with your obligations hereunder. You may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor. The Company will be responsible for all fees generated by such legal counsel in connection with your obligations hereunder.

16. This instrument will be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns. It is understood and agreed that references to "you" or "your" herein refer to the original Escrow Agent and to any and all successor Escrow Agents. It is understood and agreed that the Company may at any time or from time to time assign its rights under the Grant Notice, the Agreement and these Joint Escrow Instructions in whole or in part.

17. These Joint Escrow Instructions will be governed by and interpreted and determined in accordance with the laws of the State of Delaware, as such laws are applied by Delaware courts to contracts made and to be performed entirely in Delaware by residents of that state.

Very truly yours,

BELLICUM PHARMACEUTICALS, INC.

By__

Title__

RECIPIENT

(Signature) _____

(Print Name) _____

ESCROW AGENT:

(Signature) _____

(Print Name) _____

BELLICUM PHARMACEUTICALS, INC.
RESTRICTED STOCK UNIT GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to Section 6(b) of the Company's 2014 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant a Restricted Stock Unit Award for the number of shares of the Company's Common Stock ("***Restricted Stock Units***") set forth below (the "***Award***"). The Award is subject to all of the terms and conditions as set forth in this notice of grant (this "***Restricted Stock Unit Grant Notice***") and in the Plan and the Restricted Stock Unit Award Agreement (the "***Award Agreement***"), both of which are attached hereto and incorporated herein in their entirety. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Plan or the Award Agreement. In the event of any conflict between the terms in the Award and the Plan, the terms of the Plan shall control.

Participant: __
Date of Grant: __
Grant Number: __
Vesting Commencement Date: __
Number of Restricted Stock Units: __

Vesting Schedule: [The Restricted Stock Units will vest on each of the first, second, third and fourth anniversaries of the Vesting Commencement Date, subject to the Participant's Continuous Service through each such vesting date.]

Issuance Schedule: Subject to any Capitalization Adjustment, one share of Common Stock (or its cash equivalent, at the discretion of the Company) will be issued for each Restricted Stock Unit that vests at the time set forth in Section 6 of the Award Agreement.

Additional Terms/Acknowledgements: Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of the Common Stock pursuant to the Award specified above and supersede all prior oral and written agreements on the terms of this Award with the exception, if applicable, of (i) the written employment agreement, offer letter or other written agreement entered into between the Company and Participant specifying the terms that should govern this specific Award, (ii) restricted stock unit awards or options previously granted and delivered to Participant, and (iii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law.

By accepting this Award, Participant acknowledges having received and read the Restricted Stock Unit Grant Notice, the Award Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Participant consents to receive Plan documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC. **PARTICIPANT**

By: __ __
Signature Signature

Title: __ Date: __

Date: __

ATTACHMENTS: Award Agreement and 2014 Equity Incentive Plan

BELLICUM PHARMACEUTICALS, INC.
2014 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Grant Notice (the "***Grant Notice***") and this Restricted Stock Unit Award Agreement (the "***Agreement***"), Bellicum Pharmaceuticals, Inc. (the "***Company***") has awarded you ("***Participant***") a Restricted Stock Unit Award (the "***Award***") pursuant to Section 6(b) of the Company's 2014 Equity Incentive Plan (the "***Plan***") for the number of Restricted Stock Units/shares indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement or the Grant Notice shall have the same meanings given to them in the Plan. The terms of your Award, in addition to those set forth in the Grant Notice, are as follows.

1. GRANT OF THE AWARD. This Award represents the right to be issued on a future date one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 below) as indicated in the Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "***Account***") the number of Restricted Stock Units/shares of Common Stock subject to the Award. Notwithstanding the foregoing, the Company reserves the right to issue you the cash equivalent of Common Stock, in part or in full satisfaction of the delivery of Common Stock in connection with the vesting of the Restricted Stock Units, and, to the extent applicable, references in this Agreement and the Grant Notice to Common Stock issuable in connection with your Restricted Stock Units will include the potential issuance of its cash equivalent pursuant to such right. This Award was granted in consideration of your services to the Company.

2. VESTING. Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice, provided that vesting will cease upon the termination of your Continuous Service. Upon such termination of your Continuous Service, the Restricted Stock Units/shares of Common Stock credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in or to such underlying shares of Common Stock.

3. NUMBER OF SHARES. The number of Restricted Stock Units/shares subject to your Award may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Any additional Restricted Stock Units, shares, cash or other property that becomes subject to the Award pursuant to this Section 3, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Restricted Stock Units and shares covered by your Award. Notwithstanding the provisions of this Section 3, no fractional shares or rights for fractional shares of Common Stock shall be created pursuant to this Section 3. Any fraction of a share will be rounded down to the nearest whole share.

4. SECURITIES LAW COMPLIANCE. You may not be issued any Common Stock under your Award unless the shares of Common Stock underlying the Restricted Stock Units are either (i) then registered under the Securities Act, or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award must also

comply with other applicable laws and regulations governing the Award, and you shall not receive such Common Stock if the Company determines that such receipt would not be in material compliance with such laws and regulations.

5. TRANSFER RESTRICTIONS. Prior to the time that shares of Common Stock have been delivered to you, you may not transfer, pledge, sell or otherwise dispose of this Award or the shares issuable in respect of your Award, except as expressly provided in this Section 5. For example, you may not use shares that may be issued in respect of your Restricted Stock Units as security for a loan. The restrictions on transfer set forth herein will lapse upon delivery to you of shares in respect of your vested Restricted Stock Units.

a. Death. Your Award is transferable by will and by the laws of descent and distribution. At your death, vesting of your Award will cease and your executor or administrator of your estate shall be entitled to receive, on behalf of your estate, any Common Stock or other consideration that vested but was not issued before your death.

b. Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your right to receive the distribution of Common Stock or other consideration hereunder, pursuant to a domestic relations order, marital settlement agreement or other divorce or separation instrument as permitted by applicable law that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this Award with the Company General Counsel prior to finalizing the domestic relations order or marital settlement agreement to verify that you may make such transfer, and if so, to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

6. DATE OF ISSUANCE.

a. The issuance of shares in respect of the Restricted Stock Units is intended to comply with Treasury Regulations Section 1.409A-1(b)(4) and will be construed and administered in such a manner.

Subject to the satisfaction of the Withholding Taxes set forth in Section 11 of this Agreement, in the event one or more Restricted Stock Units vests, the Company shall issue to you one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 above). Each issuance date determined by this paragraph is referred to as an "***Original Issuance Date***".

b. If the Original Issuance Date falls on a date that is not a business day, delivery shall instead occur on the next following business day. In addition, if:

1) the Original Issuance Date does not occur (1) during an "open window period" applicable to you, as determined by the Company in accordance with the Company's then-effective policy on trading in Company securities, or (2) on a date when you are otherwise permitted to sell shares of Common Stock on an established stock exchange or stock market (including but not limited to under a previously established written trading plan that meets

the requirements of Rule 10b5-1 under the Exchange Act and was entered into in compliance with the Company's policies (a "***10b5-1 Plan***")), *and*

2) either (1) Withholding Taxes does not apply, or (2) the Company decides, prior to the Original Issuance Date, (A) not to satisfy the Withholding Taxes by withholding shares of Common Stock from the shares otherwise due, on the Original Issuance Date, to you under this Award, and (B) not to permit you to then effect a sale on the market under a 10b5-1 Plan and (C) not to permit you to pay your Withholding Taxes in cash,

then the shares that would otherwise be issued to you on the Original Issuance Date will not be delivered on such Original Issuance Date and will instead be delivered on the first business day when you are not prohibited from selling shares of the Company's Common Stock in the open public market, but in no event later than December 31 of the calendar year in which the Original Issuance Date occurs (that is, the last day of your taxable year in which the Original Issuance Date occurs), or, if and only if permitted in a manner that complies with Treasury Regulations Section 1.409A-1(b)(4), no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the shares of Common Stock under this Award are no longer subject to a "substantial risk of forfeiture" within the meaning of Treasury Regulations Section 1.409A-1(d).

c. The form of delivery (*e.g.*, a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

7. DIVIDENDS. You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment.

8. RESTRICTIVE LEGENDS. The shares of Common Stock issued under your Award shall be endorsed with appropriate legends as determined by the Company.

9. EXECUTION OF DOCUMENTS. You hereby acknowledge and agree that the manner selected by the Company by which you indicate your consent to your Grant Notice is also deemed to be your execution of your Grant Notice and of this Agreement. You further agree that such manner of indicating consent may be relied upon as your signature for establishing your execution of any documents to be executed in the future in connection with your Award.

10. AWARD NOT A SERVICE CONTRACT.

a. Nothing in this Agreement (including, but not limited to, the vesting of your Award or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ or service of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

b. By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice may not be earned unless (in addition to any other conditions described in the Grant Notice and this Agreement) you continue as an employee, director or consultant at the will of the Company and affiliate, as applicable (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "***reorganization***"). You acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with the Company's right to terminate your Continuous Service at any time, with or without your cause or notice, or to conduct a reorganization.

11. WITHHOLDING TAXES.

a. On each vesting date, and on or before the time you receive a distribution of the shares of Common Stock in respect of your Restricted Stock Units, and at any other time as reasonably requested by the Company in accordance with applicable tax laws, you hereby authorize any required withholding from the Common Stock issuable to you and/or otherwise agree to make adequate provision, including in cash, for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate that arise in connection with your Award (the "***Withholding Taxes***"). Additionally, the Company or any Affiliate may, in its sole discretion, satisfy all or any portion of the Withholding Taxes obligation relating to your Award by any of the following means or by a combination of such means (and by accepting this Award you hereby authorize any of the following methods of satisfying the Withholding Taxes): (i) withholding from any compensation otherwise payable to you by the Company or an Affiliate; (ii) causing you to tender a cash payment; (iii) permitting or requiring you to enter into a "same day sale" commitment, if applicable, with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a "***FINRA Dealer***") whereby you irrevocably elect to sell a portion of the shares to be delivered in connection with your Restricted Stock Units to satisfy the Withholding Taxes and whereby the FINRA Dealer irrevocably commits to forward the proceeds necessary to satisfy the Withholding Taxes directly to the Company and/or its Affiliates; or (iv) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award with a Fair Market Value (measured as of the date shares of Common Stock are issued pursuant to Section 6) equal to the amount of such Withholding Taxes; *provided*, *however*, that the number of such shares of Common Stock so withheld will not exceed the amount necessary to satisfy the Withholding Taxes using the minimum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income; and *provided*, further, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Board or the Company's Compensation Committee.

b. Unless the Withholding Taxes are satisfied, the Company shall have no obligation to deliver to you any Common Stock or any other consideration pursuant to this Award.

c. In the event the Withholding Taxes arise prior to the delivery to you of Common Stock or it is determined after the delivery of Common Stock to you that the amount of the Withholding Taxes was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

12. TAX CONSEQUENCES. The Company has no duty or obligation to minimize the tax consequences to you of this Award and shall not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so. You understand that you (and not the Company) shall be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

13. UNSECURED OBLIGATION. Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company's obligation, if any, to issue shares or other property pursuant to this Agreement. You shall not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 6 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

14. NOTICES. Any notice or request required or permitted hereunder shall be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

15. HEADINGS. The headings of the Sections in this Agreement are inserted for convenience only and shall not be deemed to constitute a part of this Agreement or to affect the meaning of this Agreement.

16. MISCELLANEOUS.

a. The rights and obligations of the Company under your Award shall be transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by, the Company's

successors and assigns.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

c. You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

d. This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

e. All obligations of the Company under the Plan and this Agreement shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

17. GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law. No recovery of compensation under such a clawback policy will be an event giving rise to a right to voluntarily terminate employment upon a resignation for "good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

18. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of the Award subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating benefits under any employee benefit plan (other than the Plan) sponsored by the Company or any Affiliate except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any or all of the employee benefit plans of the Company or any Affiliate.

19. SEVERABILITY. If all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

20. OTHER DOCUMENTS. You hereby acknowledge receipt or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act. In addition, you acknowledge receipt of the Company's policy permitting certain individuals

to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

21. AMENDMENT. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that, except as otherwise expressly provided in the Plan, no such amendment materially adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the Award as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

22. SECTION 409A OF THE CODE. This Award is intended to be exempt from the application of Section 409A of the Code, including but not limited to by reason of complying with the "short-term deferral" rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and any ambiguities herein shall be interpreted accordingly. Notwithstanding the foregoing, if it is determined that the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and determined to be deferred compensation subject to Section 409A of the Code, this Award shall comply with Section 409A to the extent necessary to avoid adverse personal tax consequences and any ambiguities herein shall be interpreted accordingly. If it is determined that the Award is deferred compensation subject to Section 409A and you are a "Specified Employee" (within the meaning set forth in Section 409A(a)(2)(B)(i) of the Code) as of the date of your "Separation from Service" (within the meaning of Treasury Regulation Section 1.409A-1(h) and without regard to any alternative definition thereunder), then the issuance of any shares that would otherwise be made upon the date of your Separation from Service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the Separation from Service, with the balance of the shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the shares is necessary to avoid the imposition of adverse taxation on you in respect of the shares under Section 409A of the Code. Each installment of shares that vests is intended to constitute a "separate payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2).

* * * * *

This Restricted Stock Unit Award Agreement shall be deemed to be signed by the Company and the Participant upon the signing by the Participant of the Restricted Stock Unit Grant Notice to which it is attached.

ATTACHMENT

2014 EQUITY INCENTIVE PLAN

BELLICUM PHARMACEUTICALS, INC.
STOCK OPTION GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN; INDUCEMENT AWARD)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to its 2014 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this notice and the Plan, the terms of the Plan will control.

This option is intended to be an Inducement Award (as defined in the Plan), and all shares issued on exercise of this option shall be funded from the Inducement Shares as provided in Section 3(f) of the Plan.

Optionholder:	
Date of Grant:	
Vesting Commencement Date:	
Number of Shares Subject to Option:	
Exercise Price (Per Share):	
Total Exercise Price:	
Expiration Date:	

Type of Grant: Nonstatutory Stock Option

Exercise Schedule: ☒ Same as Vesting Schedule ☐ Early Exercise Permitted

Vesting Schedule: **[**One-fourth **(**1/4th**)** of the shares vest one year after the Vesting Commencement Date; the balance of the shares vest in a series of thirty-six (36) successive equal monthly installments measured from the first anniversary of the Vesting Commencement Date, subject to Optionholder's Continuous Service as of each such date **]**

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company
☒ Pursuant to a Regulation T Program if the shares are publicly traded
☒ By delivery of already-owned shares if the shares are publicly traded
☒ Subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) options previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this option upon the terms and conditions set forth therein. By accepting this option, Optionholder consents to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC.

By:_____
Signature

Title:_____

Date:_____

OPTIONHOLDER:

_____
Signature

Date:_____

ATTACHMENTS: Option Agreement, 2014 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

BELLICUM PHARMACEUTICALS, INC.
2014 EQUITY INCENTIVE PLAN

OPTION AGREEMENT
(INDUCEMENT AWARD)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Bellicum Pharmaceuticals, Inc.(the "***Company***") has granted you an option under its 2014 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. EXERCISE PRIOR TO VESTING ("EARLY EXERCISE"). If permitted in your Grant Notice (*i.e.*, the "Exercise Schedule" indicates "Early Exercise Permitted") and subject to the provisions of your option, you may elect at any time that is both (i) during the period of your Continuous Service and (ii) during the term of your option, to exercise all or part of your option, including the unvested portion of your option; *provided, however,* that:

a. a partial exercise of your option will be deemed to cover first vested shares of Common Stock and then the earliest vesting installment of unvested shares of Common Stock;

b. any shares of Common Stock so purchased from installments that have not vested as of the date of exercise will be subject to the purchase option in favor of the Company as described in the Company's form of Early Exercise Stock Purchase Agreement; and

c. you will enter into the Company's form of Early Exercise Stock Purchase Agreement with a vesting schedule that will result in the same vesting as if no early exercise had occurred.

5. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

a. Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

b. Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

c. Subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

6. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

7. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your

option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

8. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 8(d) below); *provided, however,* that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above relating to "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy. Notwithstanding the foregoing, if (i) you are a Non-Exempt Employee, (ii) your Continuous Service terminates within six (6) months after the Date of Grant, and (iii) you have vested in a portion of your option at the time of your termination of Continuous Service, your option will not expire until the earlier of (x) the later of (A) the date that is seven (7) months after the Date of Grant, and (B) the date that is three (3) months after the termination of your Continuous Service, and (y) the Expiration Date;

c. twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 8(d)) below;

d. eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

e. the Expiration Date indicated in your Grant Notice; or

f. the day before the tenth (10th) anniversary of the Date of Grant.

9. EXERCISE.

a. You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other

person as the Company may designate, together with such additional documents as the Company may then require.

b. By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

c. By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2711 or NYSE Member Rule 472 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 9(c). The underwriters of the Company's stock are intended third party beneficiaries of this Section 9(c) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

10. TRANSFERABILITY. Except as otherwise provided in this Section 10, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

a. Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

b. Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

c. Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

11. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

12. WITHHOLDING OBLIGATIONS.

a. At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

b. Upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). If the date of determination of any tax withholding obligation is deferred to a date later than the date of exercise of your option, share withholding pursuant to the preceding sentence shall not be permitted unless you make a proper and timely election under Section 83(b) of the Code, covering the aggregate number of shares of Common Stock acquired upon such exercise with respect to which such determination is otherwise deferred, to accelerate the determination of such tax withholding obligation to the date of exercise of your option. Notwithstanding the filing of such election, shares of Common Stock shall be withheld solely from fully vested shares of Common Stock determined as of the date of exercise of your option that are otherwise issuable to you upon such exercise. Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

c. You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation

to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

13. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

14. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

15. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

16. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

17. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

18. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder

of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

19. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

20. MISCELLANEOUS.

a. The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

c. You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

d. This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

e. All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

2014 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

Bellicum Pharmaceuticals, Inc.
Life Sciences Plaza
2130 West Holcombe Boulevard, Suite 850
Houston, Texas 77030 Date of Exercise: _____

This constitutes notice to Bellicum Pharmaceuticals, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option:	Nonstatutory
Stock option dated:	_____
Number of Shares as to which option is exercised:	_____
Certificates to be issued in name of:	_____
Total exercise price:	$_____
Cash payment delivered herewith:	$_____
[Value of _____ Shares delivered herewith:[1]	$_____]
[Value of _____ Shares pursuant to net exercise[2]:	$_____]
[Regulation T Program (cashless exercise[3]):	$_____]

[1] Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.
[2] The option must be a Nonstatutory Stock Option, and Bellicum Pharmaceuticals, Inc. must have established net exercise procedures at the time of exercise, in order to utilize this payment method.
[3] Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan (as it may be amended from time to time) and (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option.

Very truly yours,

BELLICUM PHARMACEUTICALS, INC.
STOCK OPTION GRANT NOTICE
(2014 EQUITY INCENTIVE PLAN)

Bellicum Pharmaceuticals, Inc. (the "***Company***"), pursuant to its 2014 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this notice and the Plan, the terms of the Plan will control.

Optionholder:	
Date of Grant:	
Vesting Commencement Date:	
Number of Shares Subject to Option:	
Exercise Price (Per Share):	
Total Exercise Price:	
Expiration Date:	

Type of Grant: ☐ Incentive Stock Option ☒ Nonstatutory Stock Option

Exercise Schedule: ☒ Same as Vesting Schedule ☐ Early Exercise Permitted

Vesting Schedule: [***For initial grants****:* The shares shall vest in a series of thirty-six (36) successive equal monthly installments measured from the Vesting Commencement Date, subject to Optionholder's Continuous Service as of each such date and the potential acceleration provisions set forth in Section 11 of the Option Agreement**]** **[*For annual grants:*** The shares shall vest in a series of twelve (12) successive equal monthly installments until the Company's next annual stockholder meeting, provided that in any event the shares will become fully vested on the date of the Company's next annual stockholder meeting, subject to Optionholder's Continuous Service as of each such date and the potential acceleration provisions set forth in Section 11 of the Option Agreement]

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company

☒ Pursuant to a Regulation T Program if the shares are publicly traded

☒ By delivery of already-owned shares if the shares are publicly traded

☒ If and only to the extent this option is a Nonstatutory Stock Option, and subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

[1] If this is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calender year. An excess over $100,000 is a Nonstatutory Stock Option.

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) options previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this option upon the terms and conditions set forth therein. By accepting this option, Optionholder consents to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

BELLICUM PHARMACEUTICALS, INC.

By:_____
Signature

Title:_____

Date:_____

OPTIONHOLDER:

_____
Signature

Date:_____

ATTACHMENTS: Option Agreement, 2014 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

BELLICUM PHARMACEUTICALS, INC.
2014 EQUITY INCENTIVE PLAN

OPTION AGREEMENT
(INCENTIVE STOCK OPTION OR NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Bellicum Pharmaceuticals, Inc.(the "***Company***") has granted you an option under its 2014 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. EXERCISE PRIOR TO VESTING ("EARLY EXERCISE"). If permitted in your Grant Notice (*i.e.*, the "Exercise Schedule" indicates "Early Exercise Permitted") and subject to the provisions of your option, you may elect at any time that is both (i) during the period of your Continuous Service and (ii) during the term of your option, to exercise all or part of your option, including the unvested portion of your option; *provided, however,* that:

a. a partial exercise of your option will be deemed to cover first vested shares of Common Stock and then the earliest vesting installment of unvested shares of Common Stock;

b. any shares of Common Stock so purchased from installments that have not vested as of the date of exercise will be subject to the purchase option in favor of the Company as described in the Company's form of Early Exercise Stock Purchase Agreement;

c. you will enter into the Company's form of Early Exercise Stock Purchase Agreement with a vesting schedule that will result in the same vesting as if no early exercise had occurred; and

d. if your option is an Incentive Stock Option, then, to the extent that the aggregate Fair Market Value (determined at the Date of Grant) of the shares of Common Stock with respect to which your option plus all other Incentive Stock Options you hold are exercisable for the first time by you during any calendar year (under all plans of the Company and its Affiliates) exceeds one hundred thousand dollars ($100,000), your option(s) or portions thereof that exceed such limit (according to the order in which they were granted) will be treated as Nonstatutory Stock Options.

5. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

a. Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

b. Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

c. If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

6. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

7. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

8. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. twelve (12) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 8(d) below); *provided, however,* that if during any part of such twelve (12) month period your option is not exercisable solely because of the condition set forth in the section above relating to "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of twelve (12) months after the termination of your Continuous Service; *provided further,* if during any part of such twelve (12) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy;

c. twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 8(d)) below;

d. eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

e. the Expiration Date indicated in your Grant Notice; or

f. the day before the tenth (10th) anniversary of the Date of Grant.

If your option is an Incentive Stock Option, note that to obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the Date of Grant and ending on the day three (3) months before the date of your option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be

treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

9. EXERCISE.

a. You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

b. By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

c. If your option is an Incentive Stock Option, by exercising your option you agree that you will notify the Company in writing within fifteen (15) days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your option that occurs within two (2) years after the Date of Grant or within one (1) year after such shares of Common Stock are transferred upon exercise of your option.

d. By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2711 or NYSE Member Rule 472 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 9(d). The underwriters of the Company's stock are intended third party beneficiaries of this Section 9(d) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

10. TRANSFERABILITY. Except as otherwise provided in this Section 10, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

a. Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

b. Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement. If this option is an Incentive Stock Option, this option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

c. Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

11. CHANGE IN CONTROL.

a. If a Change in Control occurs and as of immediately prior to the effective time of such Change in Control your Continuous Service has not terminated, then, as of the effective time of the Change in Control, the vesting and exercisability of your option will be accelerated in full.

b. If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state

and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 11(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 11(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 11(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

12. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation

on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

13. WITHHOLDING OBLIGATIONS.

a. At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

b. If this option is a Nonstatutory Stock Option, then upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). If the date of determination of any tax withholding obligation is deferred to a date later than the date of exercise of your option, share withholding pursuant to the preceding sentence shall not be permitted unless you make a proper and timely election under Section 83(b) of the Code, covering the aggregate number of shares of Common Stock acquired upon such exercise with respect to which such determination is otherwise deferred, to accelerate the determination of such tax withholding obligation to the date of exercise of your option. Notwithstanding the filing of such election, shares of Common Stock shall be withheld solely from fully vested shares of Common Stock determined as of the date of exercise of your option that are otherwise issuable to you upon such exercise. Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

c. You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

14. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair

market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

15. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

16. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

17. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

18. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

19. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

20. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be

unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

21. MISCELLANEOUS.

a. The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

b. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

c. You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

d. This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

e. All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

2014 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

Bellicum Pharmaceuticals, Inc.
2130 West Holcombe Boulevard, Suite 800
Houston, Texas 77030 Date of Exercise: _____

This constitutes notice to Bellicum Pharmaceuticals, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option (check one):	Incentive ☐	Nonstatutory ☒
Stock option dated:	_____	_____
Number of Shares as to which option is exercised:	_____	_____
Certificates to be issued in name of:	_____	_____
Total exercise price:	$_____	$_____
Cash payment delivered herewith:	$_____	$_____
[Value of _____ Shares delivered herewith:	$_____	$_____]
[Value of _____ Shares pursuant to net exercise[2]:	$_____	$_____]
[Regulation T Program (cashless exercise[3]):	$_____	$_____]

[1] Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.
[2] The option must be a Nonstatutory Stock Option, and Bellicum Pharmaceuticals, Inc. must have established net exercise procedures at the time of exercise, in order to utilize this payment method.
[3] Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Bellicum Pharmaceuticals, Inc. 2014 Equity Incentive Plan, (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option, and (iii) if this exercise relates to an incentive stock option, to notify you in writing within fifteen (15) days after the date of any disposition of any of the Shares issued upon exercise of this option that occurs within two (2) years after the date of grant of this option or within one (1) year after such Shares are issued upon exercise of this option.

Very truly yours,

RESEARCH COLLABORATION AGREEMENT

THIS AGREEMENT, made effective the 28th day of October, 2016 (hereinafter the "Effective Date"), is entered into by and between Ospedale Pediatrico Bambino Gesú, having its address at Rome, Piazza S. Onofrio n. 4 - 00165, extra-territorial area in accordance with the Lateran Treaty, in the person of the President of the Board of Directors and Legal Representative, Ms Mariella Enoc ("OPBG") and Bellicum Pharmaceuticals, Inc., a Delaware corporation, with principal offices located at 2130 W. Holcombe Blvd. Suite 800, Houston, TX 77030 (hereinafter "Bellicum"), each individually a "Party" and collectively the "Parties", governing research to be conducted at OPBG and at Bellicum.

The Parties agree as follows:
WHEREAS Bellicum is engaged in the development of cell and gene therapies;

WHEREAS, OPBG is an institution dedicated to research and health care in pediatrics, having intellectual property, know-how and experience regarding cell and gene therapy, and specific know-how regarding same;

WHEREAS Bellicum and OPBG are collaborating on Bellicum's BPX-501 clinical trial and Bellicum and OPBG desire to expand this collaboration to develop collaborative research projects and additional clinical trials (detailed in exhibit A); and,

WHEREAS Bellicum is willing to fund such collaborative research activities.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and conditions hereinafter recited, the parties do hereby agree as follows:

1. Definitions

For purposes of this Agreement, the following definitions apply:

1.1 "Affiliate(s)" shall mean any corporation or business entity which is controlled by, controls, or is under common control of Bellicum at the time of execution of this Agreement. For this purpose, the meaning of the word "control" shall include, without limitation, direct or indirect ownership of more than fifty percent (50%) of the voting shares of such corporation, or fifty percent (50%) of the ownership interests in such other business entity.

1.2 "Agreement Period" shall mean the period commencing on the Effective Date of this Agreement and terminating on June 30, 2017.

1.3 "Project" shall mean the research projects described more fully in Exhibit A (which is incorporated herein by reference and made part of this Agreement) or such

modifications of Exhibit A as may be mutually agreed upon in writing by duly authorized representatives of OPBG and Bellicum.

More in detail, research activities will be focused […***…]. Bellicum will provide to OPBG […***…] for all the activities reported in exhibit A. […***…].

Bellicum will provide […***…]. Bellicum will provide expertise as well as Materials to […***…].

1.4 "Project Costs" shall mean all costs that both OPBG and Bellicum will incur to conduct all Step 1 activities foreseen in each of the research projects listed in Exhibit A in accordance with this Agreement. A detailed repartition of Project Costs between OPBG and Bellicum is set forth in Exhibit B – Budget.

1.5 "Project Team" shall mean the Principal Investigator, […***…], and the OPBG colleagues […***…] and research technicians who are engaged in the Project.

1.6 “Materials” shall mean all raw reagents shared between Parties, including […***…], etc.

2. Research

2.1 During the Agreement Period, the Project Team shall conduct activities in the Step 1 of the research projects listed in Exhibit A, in collaboration with Bellicum.

2.2 During the final […***…] months of the Agreement Period, the Parties will discuss in good faith an agreement to […***…]. If the Parties agree to […***…], the activities and the economic terms of […***…] will be negotiated and will be the object of another specific agreement.

2.3 Bellicum commits to involve OPBG in all clinical trials related to the Materials. Such involvement will be as following:

a. For all clinical trials in […***…], OPBG will be a) among the clinical centres involved in the trials and b) OPBG will be the lead centre on the […***…] trial with the understanding that […***…] may be the lead centre on […***…].
b. For all […***…] clinical trials with […***…] that will […***…], OPBG will be involved in the[…***…].

2. 4 During the Agreement Period, the Principal Investigator and representatives of Bellicum shall meet from time to time to discuss and agree the planning and progress of the Step 1 of all research projects listed in Exhibit A. During these meetings, each Party will have access to the data produced in the Project.

2. 5 OPBG shall […***…] send to Bellicum a written progress report on activities and results concerning the Step 1 of the research projects listed in Exhibit A. A final written report setting forth the results achieved under and pursuant to the Step 1 of the research projects listed in Exhibit A shall be submitted by OPBG to Bellicum within […***…] days of termination of the research which is the subject of this Agreement. Such final report shall include: a complete summary of the research carried out and detailed experimental protocols of the research performed in the course of Step 1 of the research projects listed in Exhibit A.

2. 6 OPBG shall, throughout the term of this Agreement, provide access to Bellicum of all data and other information generated by or on behalf of the Project Team pursuant to this Agreement including, without limitation, all raw data obtained as a result of studies conducted in the course of Step 1 of the research projects listed in Exhibit A and all experimental and technical procedure documents (such as batch production records) developed under the Step 1 of the research projects listed in Exhibit A. Such access may be by electronic or photocopy means. Bellicum may copy and use, after OPBG agreement, all such data and information related to the activities specified in Exhibit A.

2.7 All studies done in connection with Step 1 of the research projects listed in Exhibit A shall be carried out in strict compliance with any applicable national, state, or local laws, regulations, or guidelines governing the conduct of such research.

2.8 OPBG shall promptly advise Bellicum in respect to any changes in the relevant personnel comprising the Project Team. If, for any reason, the Principal Investigator ceases to be associated with OPBG, or otherwise becomes unavailable to work on the Step 1 of the research projects listed in Exhibit A, a qualified replacement scientist at OPBG shall be mutually appointed by OPBG and Bellicum to be the Principal Investigator, or, at Bellicum's sole option, this Agreement shall be terminated on thirty (30) days written notice.

2.9 Bellicum will supply OPBG with sufficient quantities of Materials, including without limitation […***…] to carry out Step 1 of

the research projects listed in Exhibit A. OPBG understands and agrees that the Materials may have unpredictable and unknown biological and/or chemical properties, that they are to be used with caution, and that they are not to be used for testing in or treatment of humans. OPBG will use the Materials solely for the Step 1 of the research projects listed in Exhibit A and in compliance with all applicable laws and regulations, including, but not limited to, any laws or regulations relating to the research, testing, production, storage, transportation, export, packaging, labeling or other authorized use of the Materials. OPBG shall be responsible for obtaining and maintaining approval for the use of any animal subjects prior to commencing the Step 1 of the research projects listed in Exhibit A. At the termination of the Step 1 of the research projects listed in Exhibit A, OPBG will return unused Materials to Bellicum.

2.10 OPBG will generate certain Materials in the course of the Project. Where the transfer of these Materials to Bellicum is anticipated by the research projects set out in Exhibit A, Bellicum will be responsible for shipping and insurance of said Materials.

3.Payments

3.1 Bellicum shall provide support for Step 1 of the the research projects listed in Exhibit A by funding costs for […***…], listed in Exhibit B. These amounts represent a maximum figure and are inclusive of all direct and indirect costs.

3.2 To offset startup costs for the activities performed by OPBG in Exhibit B, Bellicum will pay OPBG 100,000 euros in advance. Then Bellicum will reimburse OPBG for those activities in Exhibit A as they are performed. Amounts paid by Bellicum in advance will be deducted against current invoices.

For clarity, Bellicum will pay amounts directly to the third party service providers for services and equipment listed on Exhibit B. Bellicum will have many of the consumables and equipment necessary for the activities in Exhibit B delivered to OPBG; OPBG will invoice Bellicum for consumables and equipment not provided by Bellicum. Bellicum will pay OPBG for clinical product manufacturing validation rounds performed by OPBG. Then, for amounts not previously paid by Bellicum, OPBG will invoice Bellicum per Exhibit B on a […***…] basis for activities performed under Exhibit B.

Additionally, the […***…] listed in Exhibit A will be the subjects of separate […***…] between OPBG and Bellicum. If and when Bellicum and OPBG take other research projects under Exhibit A into […***…], respective OPBG-Bellicum […***…] will govern those […***…].

3.3 Direction of Payments

Payments under the terms of this Agreement shall be made by wire payable to:

Account holder: Ospedale Pediatrico Bambino Gesù
Bank: UNICREDIT
Address: Piazza S. Onofrio 4 00165 Roma - Italy
[…***…]

4. Non-Disclosure Agreement and Publications

4.1 Nothing in this Agreement shall be construed to limit the freedom of the Principal Investigator, physicians, research scientists, or other individuals conducting the Project to engage in similar research performed independently under other grants with parties other than Bellicum.

4.2 Except in the furtherance of this Agreement or as provided in Section 4.3 below, the Parties will not use and will not disclose orally, by written publication, or otherwise, any confidential information of the other Party or results of the Step 1 research projects listed in Exhibit A. Notwithstanding this section 4.2, such obligation of confidentiality shall not apply to information that at the time of disclosure:

(a) is in the public domain;
(b) has come into the public domain through no fault of the Party;
(c) was known to to the Party prior to its disclosure by the other Party;
(d) is disclosed by a third party not under an obligation of non-disclosure;
(e) is required by law or legal process to be disclosed; or
(f) written permission for disclosure has been granted to the Party by the other Party.

4.3 In the exercise of the rights of academic freedom of an educational institution and its faculty, OPBG and Bellicum shall have the right to publish in scientific or other journals, or to present at professional conferences or other meetings, the results of the Step 1 research projects listed in Exhibit A conducted under this Agreement. […***…]

[…***…]. Bellicum may disclose non-public Step 1 research projects results to regulatory bodies as well as to other entities under confidentiality terms equivalent to those contained herein.

5. Ownership and Patents

5.1 OPBG shall have sole and exclusive ownership rights to any invention of a product, device, process, or method, whether patentable or unpatentable arising out of OPBG's work under the Project ("Invention").

5.2 Further, OPBG agrees to grant Bellicum an exclusive license to said Invention and the terms of exercise of such license will be determined if a specific agreement between the Parties will be found.

5.3 For clarity, OPBG inventions that exist as of the Effective Date or that subsequently arise outside the scope of the Project are not affected by this Agreement.

5.4 OPBG grants a paid-up worldwide co-exclusive (co-exclusive with OPBG), license for non-commerical development of OPBG's CD19 CAR-T technology and a paid-up worldwide exclusive license to Bellicum to commercialize OPBG's CD19 CAR-T technology after definition of a specific agreement.

5.5 OPBG grants a paid-up worldwide co-exclusive (co-exclusive with OPBG), license for non-commerical development of OPBG's CAR.GD2 CAR-T technology and a paid-up worldwide exclusive license to Bellicum to commercialize OPBG's CAR.GD2 CAR-T technology after definition of a specific agreement.

5.6 OPBG will provide to Bellicum reasonable quantities of […***…] for OPBG's […***…] to be used for the activities reported in Exhibit A. OPBG will also provide Bellicum with reasonable initial quantities of […***…] for OPBG's […***…]; Bellicum will pay all costs of shipping and of expanding these […***…].

5.7 Bellicum shall be responsible for payment of patent application filing and prosecution costs for Inventions and for OPBG technologies that Bellicum receives rights in under this Section 5.

5.8 Bellicum will not use […***…] in commercially marketed products. For clarity, Bellicum may produce, or have produced by third parties, […***…] and may use

that […***…] in commercially marketed products. Bellicum will provide OPBG with customary indemnification and insurance provisions with respect to Bellcium's use of such […***…].

6. Termination

6.1 This Agreement shall remain in effect for the Agreement Period, as outlined in Section 1.2. unless earlier terminated in accordance with this Clause.

6.2 In the event that the activities reported in Exhibit A fail and it will be impossible to find a remedy within sixty (60) days, either Party may terminate this Agreement by giving thirty (30) days written notice of termination to the other party.

6.3 Termination or expiry of this Agreement shall not release either party hereto from any liability or right of action which at the time of termination has already accrued to either party hereto or which may thereafter accrue in respect of any act or omission prior to such termination. Such rights shall include but not be limited to the recovery of any monies due hereunder. Sections 2.3, 2.4, 2.5, 3, 4, 5, 7, 10, 11 and 12 shall survive termination of this agreement.

6.4 Notwithstanding section 6.1 above, Bellicum may terminate this Agreement without cause by providing OPBG with six months' written notice. In such event, Bellicum will continue to pay the […***…] payments during this six month notice period. As of the termination date, Bellicum's obligation to pay under section 3 will end.

7. Indemnification

7.1 Bellicum shall defend, indemnify and hold harmless OPBG, the Principal Investigator, OPBG's trustees, officers, agents, staff, employees, students, and faculty members, and its affiliated hospitals (collectively, the "Indemnitees") from any and all liability, loss, damage, cost, and expense, including reasonable attorneys' fees and costs (collectively, "Losses") incurred by the Indemnitees in connection with

(i) any claim or lawsuit brought by a third party ("Claim") arising from the actions carried out pursuant to the obligations of and in accordance with the terms of this Agreement;

(ii) any breach of representation or warranty made by Bellicum under this Agreement;

(iii) any third party personal injury, illness or death, or loss or damage to third party property arising from the use of product containing Materials which had been manufactured according to the Project and in compliance with the terms of this Agreement; and

(iv) any infringement or any allegation of infringement of any third party's Intellectual property arising from the use of Materials supplied under this Agreement, provided that such infringement is not in relation to Belicum's Intellectual Property.

7.2 Notwithstanding the foregoing, Bellicum will not be responsible for any liability, claims, lawsuits, losses, demands, damages, costs, and expenses (including attorney's fees and court costs) which arise solely from:

(i) the gross negligence or intentional misconduct of OPBG or the Principal Investigator; and

(ii) actions by OPBG or the Principal Investigator in violation of applicable laws or regulations.

In the event that either party receives a claim or demand in respect of a matter which is the subject of an indemnity under this Clause it shall give the other party notice thereof as soon as reasonably practicable and shall permit the other party to assist in the defence thereof at the other party's expense. The parties shall co-operate in such defence by providing reasonable access to evidence available to them and each shall be entitled to participate in the other's defence to the extent that in its judgement it may be prejudiced thereby.

Notwithstanding anything to the contrary contained herein, to the extent permitted by law, OPBG's total liability (whether for breach of Agreement, negligence, breach of statutory duty and/or other tort, or otherwise) in connection with or as a result of the activities carried out under this Agreement shall be limited to the aggregate amount received by the Bellicum under this Agreement.

8. Insurance

8.1 Liability for Materials. OPBG shall not have any liability whatsoever resulting from, and Bellicum shall fully indemnify OPBG against, all claims, suits, actions, demands, liabilities and expenses brought against or suffered by Principal Investigator or OPBG; or its directors, officers or employees and against all costs incurred in connection therewith, arising out of or resulting from use of Materials.

8.2 During the term of this Agreement, Bellicum shall maintain in full force and effect a policy or policies of general liability insurance (with product liability endorsements) with limits of not less than $[…***…];

9. Independent Contractors

Bellicum and OPBG shall at all times act as independent parties and nothing contained in this Agreement shall be construed or implied to create an agency or partnership. Neither party shall have the authority to contract or incur expenses on behalf of the other except as may be expressly authorized by collateral agreements set forth in writing and signed by both Parties. The Principal Investigator and members of the Project Team shall not be deemed to be employees of Bellicum.

10. Use of Institution Name/Public Statements

10.1 Each Party agrees that it will not at any time during or following termination of this Agreement use the name of the other party or any other names, insignia,

symbol(s), or logotypes associated with the other party or any variant or variants thereof or the names of the Principal Investigator or any other faculty member or employee orally or in any literature, advertising, or other materials without the prior written consent of the other party, which consent may be withheld at the other party's sole discretion. Notwithstanding the foregoing, each party shall be permitted to state orally and in writing the fact that the Project is being conducted at OPBG under the direction of the Principal Investigator.

10.2 OPBG agrees to make no public presentations about the Project outside of appropriate scientific meetings, to issue no news releases about the Project, and neither party shall make use of the other's name in any form of public information without the written permission of the other party.

11. Severability

If any one or more of the provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired thereby.

12. Waiver

No waiver or forbearance by a party in enforcing any of its rights under this Agreement shall prejudice or affect the ability of such party to enforce such rights or any of its other rights at any time in the future unless made in writing. No waiver shall be effective unless in writing and signed by the waiving party. For the avoidance of doubt, it is agreed that a waiver of a right on one occasion shall not constitute a wavier of the same right in the future

13. Notices

Any notice or communication required or permitted to be given or made under this Agreement by one of the parties hereto to the other shall be in writing and shall be deemed to have been sufficiently given or made for all purposes if mailed by certified mail, postage prepaid, addressed to such other party at its respective address as follows:

If to Bellicum:

Annemarie Moseley, M.D. Ph.D.
COO, Executive VP for Clinical Development
Bellicum Pharmaceuticals, Inc.
2130 W. Holcombe Blvd. Suite 800
Houston, TX 77030

If to OPBG with respect to all non-technical matters:

Sonya Jane Martin, MD
Head of Grant and Technology Transfer Office
Scientific Directorate
Ospedale Pediatrico Bambino Gesù

Viale Ferdinando Baldelli, 41
00146 Rome - Italy

If to OPBG with respect to technical questions:

(Investigator's name, address, and phone number)
Franco Locatelli, MD PhD
Head of Paediatric Oncohematology Department
Ospedale Pediatrico Bambino Gesù
Piazza S. Onofrio, 4
00165 Rome - Italy

14. Assignment

This Agreement may be assigned by Bellicum to any parent, subsidiary, or Affiliate of Bellicum or to any successor in interest by reason of any merger, acquisition, partnership, or license agreement without OPBG's prior written approval provided that in the absence of a novation, the Purchaser shall remain liable to the Contractor in its capacity as principal obligor. This Agreement may be assigned by Bellicum to any other entity with OPBG's prior written approval which shall not be unreasonably withheld.

15. Entirety

This Agreement represents the entire agreement of the parties and it expressly supersedes all previous written and oral communications between the parties. No amendment, alteration, or modification of this Agreement or any exhibits attached hereto shall be valid unless executed in writing by authorized signatories of both parties.

16. Warranties

OPBG MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE RESULTS OF THE PROJECT OR OF THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF SUCH PROJECT OR RESULTS. OPBG shall not be liable for any direct, consequential, or other damages suffered by Bellicum or any other party as a result of the conduct of the Project. All warranties made or to be made in connection with the Project shall be made by Bellicum thereof and none of such warranties shall directly or indirectly by implication obligate in any way OPBG, the Principal Investigator, OPBG's trustees, officers, agents, staff, employees, students, and faculty members, and its affiliated hospitals.

17. Governing Law

This Agreement shall be governed and construed in accordance with Italian law. Any matter, claim or dispute arising out of or in connection with this Agreement, whether contractual or non-contractual, shall be governed by and determined in accordance with Italian law. All disputes arising in connection with this Agreement shall be determined exclusively by the Tribunal of Rome.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in duplicate counterpart original by their duly authorized representatives to be effective as of the Effective Date.

Bellicum Pharmaceuticals, Inc. **Ospedale Pediatrico Bambino Gesú**

By: /s/ Thomas J. Farrell
Thomas J. Farrell
President and CEO

By: /s/ Mariella Enoc
Mariella Enoc
President of the Board of Directors

Acknowledged by Principal Investigators

Bellicum Pharmaceuticals, Inc. **Ospedale Pediatrico Bambino Gesú**

By: /s/ Dr. Annemarie Moseley
Dr. Annemarie Moseley

By: /s/ Dr. Franco Locatelli
Dr. Franco Locatelli

Exhibit A

Parties will collaborate for the development of the following specific translational research projects:

1) Title: [...*...]**

Introduction:

[…***…]

Objectives: […***…]

Activities:

Step I

[…***…]

Step II

[…***…]

Budget

Step I: […***…]

Step II: […***…]

2) Title: [...*...]**

Introduction:

[…***…]

Objectives: […***…]

Activities:

Step I

[…***…]

Step II

[…***…]

Budget

Step I: […***…]

Step II: […***…]

Title: [...*...]**
Project 3) [...*...]**
Project 4) [...*...]**
Project 5) [...*...]**

Introduction:

[…***…]

Objectives: […***…]

Activities:

Step I:

[…***…]

[…***…]

Step II

[…***…]

Budget

Step I: […***…]

Step II: […***…]

6) Title: [...*...]**

Introduction:

[…***…]

[…***…]

Objectives: […***…]

Activities:

Step I:

[…***…]

Step II

[…***…]

Budget

Step I: […***…]

Step II: […***…]

Exhibit B - Budget – Project 1

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Direct Payments to OPBG	Bellicum Costs

[...***...]

[…***…]

*****Confidential Treatment Requested**

Exhibit B - Budget – Project 2

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Direct Payments to OPBG	Bellicum Costs
[…***…]							

*****Confidential Treatment Requested**

Exhibit B - Budget – Project 3

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Direct Payments to OPBG	Bellicum Costs
[…***…]							

[…***…]

*****Confidential Treatment Requested**

Exhibit B - Budget – Project 4

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Direct Payments to OPBG	Bellicum Costs
[…***…]							

[…***…]

*****Confidential Treatment Requested**

Exhibit B - Budget – Project 5

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Direct Payments to OPBG	Bellicum Costs
[…***…]							

[…***…]

*****Confidential Treatment Requested**

Exhibit B - Budget – Project 6

Year 2016: […***…]	Names	Qualifications	Time dedicated to the project (Person month)	Cost	OPBG Cost	Bellicum Items	Bellicum Costs
[…***…]							

[…***…]

*****Confidential Treatment Requested**

Exhibit 10.41
*****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 240.24b-2

CO-DEVELOPMENT AND CO-COMMERCIALISATION AGREEMENT

BETWEEN

ADAPTIMMUNE LIMITED

AND

BELLICUM PHARMACEUTICALS, INC.

TABLE OF CONTENTS

Exhibits

CO-DEVELOPMENT AND CO-COMMERCIALISATION AGREEMENT

THIS CO-DEVELOPMENT AND CO-COMMERCIALISATION AGREEMENT ("**Agreement**") is made and entered into on December 16, 2016 ("**Effective Date**") BETWEEN

(A) **ADAPTIMMUNE LIMITED** having its principal place of business at 101 Park Drive, Milton Park, Abingdon, Oxon, OX14 4RX, United Kingdom ("**Adaptimmune**"); and

(B) **BELLICUM PHARMACEUTICALS, INC.**, having its principal place of business at 2130 W. Holcombe Blvd., #800, Houston, TX 77030, United States of America ("**Bellicum**").

Bellicum and Adaptimmune are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**."

BACKGROUND:

(A) Adaptimmune is a biotechnology company that is engaged in research and development of TCR therapies for pharmaceutical therapy use.

(B) Bellicum is a biopharmaceutical company that is engaged in the research, development, manufacture and anticipated commercialisation of pharmaceutical immunotherapies, and has specific technologies which it is interested in combining with Adaptimmune's TCR therapies.

(C) Bellicum and Adaptimmune desire to collaborate in relation to the development of certain T cell therapies wherein such T cell bears a membrane bound exogenous TCR and which T cell therapies include technologies developed by both Parties.

(D) Based on the foregoing premises and the mutual covenants and obligations set forth below, the Parties agree as follows.

THE PARTIES AGREE:

Article 1 DEFINITIONS

Capitalized terms used in this Agreement, whether used in the singular or plural, shall have the meanings set forth below or elsewhere herein, unless otherwise specifically indicated herein.

Accounting Standard	means, either (a) International Financial Reporting Standards ("IFRS") or (b) US generally accepted accounting principles ("GAAP"), in either case, which standards or principles (as applicable) are currently used at the applicable time, and as consistently applied, by the applicable Party;
Adaptimmune Background IP	means Background IP Controlled by Adaptimmune or its Affiliates;
Adaptimmune Candidate	means any Candidate (including the Joint Selected Candidate) directed to the Adaptimmune Target;
Adaptimmune Foreground IP	means any Foreground IP Controlled by Adaptimmune or its Affiliates, and as defined further in Article 12;

Adaptimmune Licensed Know-How	means, as Controlled by Adaptimmune or its Affiliates as of the Effective Date or during the Term, any Intellectual Property Rights specific to any Selected Target, Therapy or Candidate or otherwise necessary for the performance of any Co-Development Plan or for performing any manufacturing or commercialisation activities for such Therapy or Candidate, but in all cases excluding any Patents;
Acquiring Third Party	means a Third Party (including in each case any entity which directly or indirectly controls, is controlled by, or is under common control with such Third Party) which, as at the date of the Change of Control, controls or owns […***…].
Adaptimmune Licensed Patents	means any Patents Controlled by Adaptimmune or its Affiliates as of the Effective Date or during the Term and which either (a) Cover a Therapy or Joint Selected Candidate or Selected Target, or a method related to use thereof; or (b) which would, in the absence of the licences under this Agreement, be infringed by the performance of the Co-Development Plan or manufacture or commercialisation of any Therapy or Candidate;
Adaptimmune Reserved Activities	is defined in Clause 5.6;
Adaptimmune Target	means the Initial Target or the Target jointly agreed between the Parties to be the Adaptimmune Target for the purposes of development of Adaptimmune Candidates under the Co-Development Phase and as designated in accordance with Clause 4.1.1;
Adaptimmune Technology	shall have the meaning given in Exhibit 4A;
Adaptimmune Therapy	has the meaning provided for in Exhibit 3;
Additional HLA Candidates	means, on a Selected Target-by-Selected Target basis, a Candidate directed to an epitope derived from such Selected Target presented by a different HLA Type than the HLA Type used to develop the Joint Selected Candidate directed to such Selected Target;
Affiliate	means any Person that, directly or indirectly (through one or more intermediaries) controls, is controlled by, or is under common control with a Party. For purposes of this Clause, "control" means the direct or indirect ownership of more than fifty percent (50%) of the voting stock or other voting interests or interest in the profits of the Party;
Agreed FTE Rates	means the rates set out in Exhibit 2 as amended by the Parties from time to time.

Agreement	means this Co-Development and Pre-Commercialisation Agreement;
Alliance Manager	means the individual appointed by each Party as the principal point of contact for communication between the Parties under this Agreement;
Applicable Laws	means all applicable international, multi-national, national, regional, state, provincial and local laws, rules, regulations, ordinances, declarations, requirements, directives, guidance, policies and guidelines which are in force during the Term and in any jurisdiction in which any Clinical Trial or other activity under this Agreement is performed or in which any Therapy is manufactured, sold or supplied to the extent in each case applicable to any Party to this Agreement, including, as applicable to activities hereunder, the regulations and regulatory guidance promulgated by the FDA, the Consolidated Guidance E6 on Good Clinical Practice adopted by the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, as ratified by the FDA, the Clinical Trials Directive (Directive 2001/20/EC of 4th April 2001) and the Data Protection Directive (Directive 95/46/EC of 24th October 1995) and the respective implementing legislation**,** the conditions and requirements imposed by the related ethics committee and any of the foregoing which relate to ethical business conduct, the import or export of goods, technical data or other items, and data protection and privacy rules, as any of the foregoing may be amended from time to time;
Background IP	means all Intellectual Property Rights Controlled by either Party as of the Effective Date or during the Term, but excluding the Foreground IP;
Bellicum Background IP	means Background IP Controlled by Bellicum or its Affiliates;
Bellicum Candidate	means any Candidate (including the Joint Selected Candidate) directed to the Bellicum Target;
Bellicum Foreground IP	means any Foreground IP Controlled by Bellicum or its Affiliates, and as defined further in Article 12;
Bellicum Licensed Know-How	means, as Controlled by Bellicum or its Affiliates as of the Effective Date or during the Term, any Intellectual Property Rights specific to any Selected Target, Therapy or Candidate or otherwise necessary for the performance of any Co-Development Plan or for performing any manufacturing or commercialisation activities for such Therapy or Candidate, but in all cases excluding any Patents;
Bellicum Licensed Patents	means any Patents Controlled by Bellicum or its Affiliates as of the Effective Date or during the Term and which either (a) Cover a Therapy or Joint Selected Candidate or Selected Target, or a method related to use thereof; or (b) which would, in the absence of the licences under this Agreement, be infringed by the performance of the Co-Development Plan or manufacture or commercialisation of any Therapy or Candidate;
Bellicum Reserved Activities	is defined in Clause 5.6;

Bellicum Target	means the Target jointly agreed between the Parties to be the Bellicum Target for the purposes of development of Bellicum Candidates under the Co-Development Phase and as designated in accordance with Clause 4.1.1;
Bellicum Technology	shall have the meaning given in Exhibit 4B;
Candidate	means any starting TCR, as well as any product or Therapy that comprises T cells bearing a corresponding membrane bound exogenous TCR, and in each case which is developed under any Co-Development Plan;
Change of Control	means with respect to a Party, (a) the sale or disposition to an Acquiring Third Party of all or substantially all of the business or assets of such Party to which the subject matter of this Agreement relates, including all of or substantially all of the Licensed Intellectual Property under which such Party has granted rights to the other Party under this Agreement; or (b) (i) the acquisition by an Acquiring Third Party of more than fifty percent (50%) of the issued voting shares or stock in such Party, or (ii) the acquisition, merger or consolidation of such Party with or into an Acquiring Third Party. A Change of Control will not include an acquisition, merger or consolidation or similar transaction of a Party in which the holders of the voting shares in such Party immediately prior to such acquisition, merger, consolidation or transaction, will beneficially own, directly or indirectly, at least fifty percent (50%) of the voting shares in the Acquiring Third Party or the surviving entity in such acquisition, merger, consolidation or transaction, as the case may be, immediately after such acquisition, merger, consolidation or transaction;
Clinical Trial	means a Phase I Clinical Trial, Phase II Clinical Trial, Phase III Clinical Trial, or Phase IV Clinical Trial, as the case may be, and any clinical studies specifically including pediatric subjects, or any other equivalent, combined or other trial in which any Therapy is administered to a human subject;
CMC	means chemistry, manufacturing and control;
Co-Commercialisation Agreement	is define in Clause 7.2;
CoC Party	is defined in Clause 17.5.4;
Co-Development Phase	means the phases of the Co-Development Plan in which a Candidate or Joint Selected Candidate is being developed including pre-clinical testing and Clinical Trials using such Joint Selected Candidate;
Co-Development Plan	means a program of activities and work for the development of Candidates directed to a Selected Target and including a Joint Selected Candidate;
CMO	means a Third Party with which a Party has contracted to conduct manufacturing (including process development and scale-up) of a Joint Selected Candidate or Therapy on behalf of such Party;

Commercially Reasonable Efforts	means, on a Party-by-Party basis, that level of efforts and resources required to carry out a particular task or obligation in an active and sustained manner, consistent with the general practice followed by the Party in the exercise of its reasonable business discretion relating to other pharmaceutical therapies or products owned by it, or to which it has exclusive rights, which are of similar market potential at a similar stage in their development or life, taking into account issues of patent coverage, safety and efficacy, therapy profile, the competitiveness of any therapy in development and in the marketplace, supply chain management considerations, the proprietary position of the product or therapy, the regulatory structure involved, the profitability of the applicable therapies (including pricing and reimbursement status achieved), and other relevant factors, including technical, legal, scientific and/or medical factors;
Completion	means (a) in relation to any POC Plan or Co-Development Plan, or any phase of any such plan, substantial completion of all activities under such plan or phase of such plan, including as relevant delivery of any final report and the attainment of any mutually agreed success criteria for such phase; and (b) in relation to any Clinical Trial, provision of a final report in relation to such Clinical Trial in accordance with the applicable Clinical Trial protocol;
Confidential Information	means non-public, proprietary information (of whatever kind and in whatever form or medium, including copies thereof), tangible materials or other deliverables (a) disclosed by or on behalf of a Party in connection with this Agreement, whether prior to or during the Term and whether disclosed orally, electronically, by observation or in writing, or (b) created by, or on behalf of, either Party and provided to the other Party, or created jointly by the Parties, in the course of this Agreement; provided, that, notwithstanding the foregoing, to the extent a Party is allocated ownership of Intellectual Property Rights embodied by or containing a given piece of information under this Agreement in accordance with Article 12, such information shall be deemed to be solely the Confidential Information of such Party regardless of which Party initially disclosed or created such information;
Control or Controlled by	means the rightful possession by a Party, whether directly or indirectly and whether by ownership, license (other than pursuant to this Agreement) or otherwise, as of the Effective Date or during the Term, of the right (excluding where any required Third Party consent cannot be obtained) to grant a license, sublicense or other right to exploit as provided herein, without violating the terms of any agreement with any Third Party;
Covers or Covered or Covering	means, with respect to a particular Patent and in reference to a particular compound, process, Candidate or Therapy (whether alone or in combination with one or more other ingrediates) that the use, manufacture, sale, supply, import, offer for sale of such compound, Candidate or Therapy or use of such process would infringe a Valid Claim of such Patent in the absence of any license granted under this Agreement or in the case of a patent application would infringe the claim of such patent application if such patent application was a granted patent;
Development Costs	is defined in Clause 10.2.3;

Dispute	is defined in Clause 18.1;
Effective Date	is defined in the Preamble;
EMA	means the European Medicines Agency and any successor thereto;
Enforcement	is defined in Clause 12.6.3;
EU	means the member states of the European Union and Switzerland, or any successor entity thereto performing similar functions;
Exclusive License	is defined in Clause 8.2.1;
FDA	means the US Food and Drug Administration, or any successor entity thereto performing similar functions;
Field	means any and all uses, including human and animal therapeutic, palliative, prophylactic and diagnostic uses, of a product or therapy that comprises T cells bearing a membrane bound exogenous TCR, therefore expressly excluding any product or therapy that comprises soluble TCRs;
Foreground IP	means any Intellectual Property Rights created in the performance of this Agreement including under any POC Plan or Co-Development Plan;
FTE	means the equivalent of the work of one employee full time (equivalent to a twelve month period of work), including experimental laboratory work, recording and writing up results, reviewing literature and references, holding scientific discussions, managing and leading scientific staff, conducting development activities, carrying out related management duties, and training (including health and safety training);
GMP	means all current Good Manufacturing Practices applicable to biopharmaceuticals in the US and/or in the European Union, as are in effect from time to time during the Term and in each case as applicable to the activities being carried out under this Agreement;
GLP	means all applicable current Good Laboratory Practice standards for laboratory activities for pharmaceuticals, as set forth in the FDA's Good Laboratory Practice regulations as defined in 21 C.F.R. Part 58 and/or the Good Laboratory Practice principles of the Organization for Economic Co-Operation and Development ("OECD"), and such standards of good laboratory practice as are required by the European Union and other organizations and governmental agencies in countries in which the relevant activity under this Agreement is being performed;
GxP	means any of the following as applicable to this Agreement: GLP and GMP;

HLA	means a human leukocyte antigen;
HLA Type	means a human leukocyte antigen type;
iCasp9 Switch	means Bellicum's proprietary, inducible iCasp9 safety switch […***…] that has a binding site which is activated with rimiducid to fully or partially eliminate the cells;
iCasp9 Technology	means any technology utilizing a small molecule to dimerize caspase-9 molecule(s);
iMC Switch	means Bellicum's proprietary, inducible iMC safety switch […***…] that has a binding site which is activated with rimiducid to fully or partially eliminate the cells;
iMC Technology	means any technology utilizing a small molecule to dimerize co-stimulatory molecule(s);
IND	means an investigational new drug application filed with the FDA pursuant to 21 CFR Part 312 before the commencement of Clinical Trials of a Therapy, or any comparable or equivalent filing (including any Clinical Trial Authorization filed in the EU) with any relevant regulatory authority in any other jurisdiction required before the commencement of any Clinical Trial in such jurisdiction;
Indemnitee	is defined in Clause 16.3;
Indemnitor	is defined in Clause 16.3;
Infringement	is defined in Clause 12.6.1;
Initial Success Criteria	means the criteria mutually agreed between the Parties in writing, the fulfillment of which indicate initial success in POC Phase;
Intellectual Property Rights	means Patents, rights to discoveries, inventions, copyrights and related rights, trademarks, trade names and domain names, rights in designs, rights in computer software, database rights, rights in confidential information (including know-how) and any other intellectual property rights, in each case whether registered or unregistered and including all applications (or rights to apply) for, and renewals or extensions of, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world;
JCC	is defined in Clause 2.4.1;
JDC	is defined in Clause 2.3.1;
Joint IP	is defined in Clause 12.1.2;

Joint Selected Candidate	means a Candidate selected by the JDC for pre-clinical development in accordance with Clause 5.1.5, and includes any Candidate that is mutually agreed to replace any previously designated Joint Selected Candidate in accordance with Clause 5.1.5;
JPT	is defined in Clause 2.5;
JSC	is defined in Clause 2.2.1;
Licensed Intellectual Property	means, as applicable, the Bellicum Licensed Know-How, Bellicum Licensed Patents, Adaptimmune Licensed Know-How and Adaptimmune Licensed Patents;
Loss or Losses	is defined in Clause 16.1;
MAA or Marketing Approval Application	means a BLA, sBLA, NDA, sNDA and any equivalent thereof in the US or any other country or jurisdiction. As used herein: "BLA" means a Biologics License Application and amendments thereto filed pursuant to the requirements of the FDA, as defined in 21 C.F.R. § 600 et seq., for FDA approval of a Therapy and "sBLA" means a supplemental BLA; and "NDA" means a New Drug Application and amendments thereto filed pursuant to the requirements of the FDA, as defined in 21 C.F.R. § 314 et seq., for FDA approval of a Therapy and "sNDA" means a supplemental NDA;
Non-Publishing Party	is defined in Clause 14.4.1;
Opt-Out Candidate/ Therapy	Is defined in Clause 17.2.1;
Party or Parties	is defined in the Preamble;
Patent(s)	means any and all patents and patent applications and any patents issuing therefrom or claiming priority therefrom, worldwide, together with any extensions (including patent term extensions and supplementary protection certificates) and renewals thereof, reissues, reexaminations, substitutions, confirmation patents, registration patents, invention certificates, patents of addition, renewals, divisionals, continuations, and continuations-in-part of any of the foregoing;
Person	means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization;
Phase I Clinical Trial	means a human clinical trial, the principal purpose of which is preliminary determination of safety of a Therapy in healthy individuals or patients as described in 21 C.F.R. §312.21(a), or similar clinical study in a country other than the US;

Phase II Clinical Trial	means a human clinical trial, the principal purpose of which is a preliminary determination of efficacy of a Therapy in patients being studied as described in 21 C.F.R. §312.21(b), or similar clinical study in a country other than the US; provided, that, to the extent there is any ambiguity as to whether a given human clinical trial constitutes a Phase II Clinical Trial or a "Phase I(b)" clinical trial, such trial shall be a Phase II Clinical Trial for the purposes of this Agreement;
Phase III Clinical Trial	means a human clinical trial, the principal purpose of which is to demonstrate clinically and statistically the efficacy and safety of a Therapy for one or more indications in order to obtain Marketing Approval of such Therapy for such indication(s), as further defined in 21 C.F.R. §312.21(c) or a similar clinical study in a country other than the US; provided, that, to the extent there is any ambiguity as to whether a given human clinical trial constitutes a Phase III Clinical Trial or a "Phase II(b)" clinical trial, such trial shall be a Phase III Clinical Trial for the purposes of this Agreement;
Phase IV Clinical Trial	means a human clinical trial, or other test or study, of a Therapy that is (a) commenced after receipt of the initial Regulatory Approval for such Therapy in the country for which such clinical trial is being conducted, and that is conducted within the parameters of the Regulatory Approval for such Therapy (and which may include investigator sponsored clinical trials), including a clinical trial conducted due to the request or requirement of a Regulatory Authority or as a condition of a previously granted Regulatory Approval, but shall not include any Phase III Clinical Trial (including any "Phase III(b)" trial), (b) an investigator sponsored clinical trial approved by the JCC that does not fall within the parameters of a Therapy's Regulatory Approval, or (c) any REMS (Risk Evaluation and Mitigation Strategy)/RMP (Risk Management Plan) related study of a Therapy in a country in the Territory after Regulatory Approval of such Therapy has been obtained from an appropriate Regulatory Authority in such country. Phase IV Clinical Trials may include trials or studies conducted in support of post-Regulatory Approval exploitation of such Therapy (for example only, pricing/reimbursement, epidemiological studies, modeling and pharmacoeconomic studies, post-marketing surveillance studies and health economics studies);
POC Criteria	means the criteria mutually agreed between the Parties in writing the fulfillment of which will constitute successful Completion of the POC Phase;
POC Phase	means the initial proof of concept phase performed in accordance with the POC Plan;
POC Plan	means the plan for the POC Phase as set out in Exhibit 1 as amended from time to time in accordance with this Agreement;
POC Target	means the Target that is the subject of the POC Plan;

Prosecute or Prosecute and Maintain or Prosecution and Maintenance	means, with respect to a Patent, all activities associated with the preparation, filing, prosecution and maintenance of such Patent , as well as activities associated with re-examinations, reissues, applications for patent term adjustments and extensions, supplementary protection certificates and the like with respect to that Patent, together with the conduct of interferences, derivation proceedings, pre- and post-grant proceedings, the defense of oppositions and other similar proceedings with respect to that Patent;
Prosecuting Party	means the Party responsible for Prosecution under Clauses 12.2 and 12.3 of this Agreement;
Publishing Party	is defined in Clause 14.4.1;
Quality Agreement	means, as relevant in the context of this Agreement, a written agreement that documents the responsibilities and quality expectations between (a) Bellicum and any internal or external supplier, contract manufacturer or service provider (including, to the extent applicable, Adaptimmune) or (b) Adaptimmune and any internal or external supplier, contract manufacturer or service provider (including, to the extent applicable, Bellicum);
Regulatory Approval	means the technical, medical and scientific licenses, registrations, authorizations and approvals required for marketing or use of a Therapy (including approvals of, BLAs, IND applications, pre- and post- approvals, and labeling approvals and any supplements and amendments to any of such approvals) of any national, supra-national, regional, state or local regulatory agency, department, bureau, commission, council or other governmental entity, necessary for the development, manufacture, distribution, marketing, promotion, offer for sale, use, import, export or sale of a Therapy in a regulatory jurisdiction. In the US, Regulatory Approval means approval of any Marketing Approval Application or equivalent by the FDA. Regulatory Approval shall include obtaining any pricing reimbursement or other pricing approval requirement;
Regulatory Authority	means the FDA, EMA, any other regulatory authority or body with regulation or governance over the performance of any part of the activities under this Agreement;
Release	is defined in Clause 14.1;
Reserved Activities	is defined in Clause 5.6;
Rules	is defined in Clause 18.2.1;
SAE	means a serious adverse effect resulting from any Clinical Trial or administration of a Therapy;
Selected Target	is defined in Clause 4.1.2;
Sublicensee	means a Third Party or Affiliate who has been granted a sublicense under any license under this Agreement;

SUSAR	means a suspected unexpected serious adverse reaction resulting from any Clinical Trial or administration of any Therapy to a human being;
Target	means the protein from which a peptide antigen is derived to form an HLA-peptide antigen epitope (including all HLA Types);
Target List	is defined in Clause 3.1.3;
TCR	means T-cell receptor;
Term	is defined in Clause 17.1;
Therapy	means a therapy (including T cell products and the production and/or delivery of T cells to human or animal subjects) utilising the genetic engineering of T-cells to express an affinity-optimized membrane bound exogenous TCR, and comprising a Joint Selected Candidate;
Third Party	means any entity other than Adaptimmune or Bellicum or an Affiliate of either of them;
Third Party Claims	is defined in Clause 16.1;
Third Party Infringement Claim	is defined in Clause 12.7.1;
Title 11	is defined in Clause 17.4;
US	means the United States of America and its territories and possessions;
Valid Claim	means, with respect to a particular country, a claim in an unexpired Patent within the Licensed Intellectual Property in such country that has not lapsed or been disclaimed, revoked, held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and that has not been admitted to be invalid or unenforceable through re-examination, re-issue, disclaimer or otherwise, or lost in an interference proceeding; and
VAT	means, in the EU, value added tax calculated in accordance with Council Directive 2006/112/EC and, in a jurisdiction outside the EU, any equivalent tax.

ARTICLE 2 GOVERNANCE

2.1 **Governance Generally**. Up to three (3) voting committees (the JSC, JDC and JCC) may be formed, and two non-voting teams (one for the Adaptimmune Candidate and one for the Bellicum Candidate; each, a JPT) will be set up, to govern and act as reporting bodies during the Term.

2.2 **Joint Steering Committee**.

2.2.1 **Formation and Composition**. As soon as reasonably possible and in any event within […***…] after the Effective Date, Adaptimmune and Bellicum shall establish a joint steering committee (the "**JSC**") to monitor and coordinate the communication and activities of both Parties under this Agreement. The JSC shall be composed of at least […***…] but no more than […***…] representatives designated by each Party and in each case an equal number of representatives from each Party. Representatives must be appropriate for the tasks then being undertaken and the stage of development or commercialisation applicable, in terms of their seniority, decision-making authority, availability, function in their respective organizations, training and experience. Each Party may replace its JSC representatives from time to time upon written notice to the other Party; provided, however, if a Party's JSC representative is unable to attend a JSC meeting, such Party may designate an alternate to attend such JSC meeting by providing notification in writing to the other Party's Alliance Manager and following provision of such written notification the alternate will be entitled to perform the functions of such JSC representative at such JSC meeting. The Alliance Managers may attend meetings of the JSC but shall have no right to vote on any decisions of the JSC.

2.2.2 **JSC Responsibilities**. In addition to its overall responsibility for monitoring the activities of the Parties under this Agreement, the JSC shall, in particular:

(a) work to resolve, through good faith discussions, any dispute, controversy or claim between the Parties arising during the performance of any POC Plan or Co-Development Plan and related to the matters under the authority of the JSC;

(b) review and, pending or after consultation of a Party's JSC representatives with its own management team regarding any material changes in an existing allocation, approve the allocation of each Party's resources and efforts necessary to perform the POC Plan or Co-Development Plan to the extent not agreed by the applicable JPT;

(c) review and approve any material amendments to any POC Plan or Co-Development Plan proposed by the JDC or the applicable JPT;

(d) review and approve any criteria (and amendments to such criteria) for development of any Candidate including criteria required for any Candidate to proceed to the next phase of development;

(e) oversee the implementation of the POC Phase;

(f) oversee the implementation of the Co-Development Plan(s);

(g) ensure that each Party is regularly informed regarding all material activities performed by the other Party under any Co-Development Plan(s), and all material re-allocations under and/or amendments to any POC Plan or Co-Development Plan;

(h) perform such other functions as may be agreed to by the Parties in writing (in each case subject to Clause 2.3) or as specified in this Agreement.

2.2.3 **Decision making for JSC**. Each Party will discuss and attempt to resolve any potential or evolving disagreement related to a POC Plan or Co-Development Plan through its respective Alliance Managers and/or the applicable JPT before it is brought before the JSC for resolution. With respect to the responsibilities of the JSC, each Party shall have one vote on all matters brought before the JSC. The JSC shall operate as to matters within its responsibility by unanimous vote. […***…]. If the JSC is unable to achieve a unanimous vote within […***…] of

any matter being brought before the JSC, then such matter may be referred in writing to the Alliance Managers under Clause 18.1 at either Party's discretion; provided, that, for clarity, the arbitration provisions in Clause 18 shall not apply and, unless otherwise provided explicitly in this Agreement, neither Party shall have final decision-making authority with respect to such matter. Unless otherwise provided explicitly in this Agreement and subject to Clause 2.2.4, where any decision regarding such disagreement is not made within a period of […***…] of such referral to the Party's Alliance Managers in accordance with Clause 18.1 then:

(i) In the case of a decision […***…] decision-making authority;

(ii) in the case of a decision […***…] decision-making authority;

(III) in the case of a decision […***…] decision-making authority;

(iv) in the case of a decision […***…] decision-making authority.

2.2.4 Any JSC decisions, any decisions of the Party's senior managers under Clause 2.2.3, and any decision-making authority exercised by a Party under Clause 2.2.3, are subject to the following: (i) neither the JSC, the senior managers nor either Party shall have the unilateral or overriding authority to amend or modify, or waive a Party's own compliance with, this Agreement including in relation to the scope or terms of any license to Intellectual Property Rights; and (ii) […***…]; and (iii) neither the JSC, the senior managers nor either Party will have the unilateral or overriding authority to amend any POC Plan or Co-Development Plan in any way which would introduce additional safety or ethical concerns in relation to any Clinical Trial; and (iv) neither the JSC, the senior managers nor either Party will have the unilateral or overriding authority to require the other Party to carry out any act which it is not already required to perform under any Co-Development Plan.

2.3 **Joint Development Committee**.

2.3.1 **Formation and Composition**. As soon as reasonably possible after […***…], Adaptimmune and Bellicum shall establish a joint development committee (the "**JDC**") to monitor and coordinate the communication and activities of both Parties under each Co-Development Plan. The JDC shall be composed of at least […***…] but no more than […***…] representatives designated by each Party and in each case an equal number of representatives from each Party. Representatives must be appropriate for the tasks then being undertaken and the applicable stage of research, pre-clinical development or clinical development, in terms of their seniority, decision-making authority, availability, function in their respective organisations, training and experience. Each Party may replace its JDC representatives from time to time upon written notice to the Alliance Manager of the other Party; provided, however, if a Party's JDC representative is unable to attend a JDC meeting, such Party may designate an alternate to attend such JDC meeting by providing notification in writing to the other Party's Alliance Manager and following provision of such written notification the alternate will be entitled to perform the functions of such JDC representative at such JDC meeting. The Alliance Managers may attend meetings of the JDC but shall have no right to vote on any decisions of the JDC.

2.3.2 **JDC Responsibilities for a Co-Development Plan**. The JDC shall have overall responsibility for monitoring the activities of the Parties under this Agreement during co-development (including Clinical Trials) of any Joint Selected Candidates or Therapies containing any Joint Selected Candidates. The JDC shall, in particular:

(a) work to resolve, through good faith discussions, any dispute, controversy or claim related to the matters under the authority of the JDC;

(b) approve each initial POC Plan and Co-Development Plan and recommend to the JSC any material changes to the POC Plan or a Co-Development Plan, including updating the POC Plan or a Co-Development Plan;

(c) monitor performance of the POC Plan or any Co-Development Plan;

(d) review any data arising from any Clinical Trials being conducted under a Co-Development Plan, including any SUSARs and SAEs;

(e) discuss any material regulatory submissions or material correspondence related to Therapies containing a Joint Selected Candidate;

(f) discuss protocols for any Clinical Trial of a Therapy utilising a Joint Selected Candidate, including patient numbers, location numbers, Clinical Trial site and any modifications or amendments to such protocols;

(g) receive reports on any investigation or audit carried out by either Party or by any Regulatory Authority, to the extent such investigation or audit is initiated in connection with any Joint Selected Candidate or any Therapy utilising a Joint Selected Candidate or any facility used for the manufacture of such Joint Selected Candidate or such Therapy, or any Clinical Trial involving such Joint Selected Candidate or such Therapy; and

(h) report to the Parties on the progress of any corrections to any identified non-compliances with Applicable Laws to the extent relevant to any Co-Development Plan.

2.3.3 **JDC Decision Making**.

(a) With respect to the responsibilities of the JDC, each Party shall have one vote on all matters brought before the JDC and the JDC shall operate by unanimous vote. If the JDC is unable to achieve a unanimous vote within […***…] of any matter being brought before the JDC, then such matter may be referred in writing to the JSC at either Party's discretion. Each Party shall make decisions within the JDC in good faith and on a timely basis; provided that any JDC decisions shall be subject to the conditions applied to JSC decisions, as set forth in Clause 2.2.4, and to Clause 5.7.

2.4 **Joint Commercialisation Committee**.

2.4.1 **Formation and Composition**. In the event that a Phase III Clinical Trial for a Therapy utilising a Joint Selected Candidate is initiated, as soon as reasonably practicable after […***…], Adaptimmune and Bellicum shall establish a joint commercialisation committee (the "**JCC**"). As of the Effective Date, the Parties anticipate that the JCC will monitor and coordinate the communication and activities of both Parties relating to the further supply, manufacture and commercialisation of such Therapy utilising a Joint Selected Candidate, and any subsequent Therapies containing a Joint Selected Candidate that enter Phase III Clinical Trials. Unless otherwise set forth in a Co-Commercialisation Agreement executed by the Parties, the JCC shall function in accordance with the remainder of this Clause 2.4 (for clarity, to the extent this Clause 2.4 is inconsistent with the Co-Commercialisation Agreement, the Co-Commercialisation Agreement shall control). The JCC shall be composed of at

least […***…] but no more than […***…] representatives designated by each Party and in each case an equal number of representatives from each Party. Representatives must be appropriate for the tasks then being undertaken and the stage of development and commercialisation, in terms of their seniority, decision-making authority, availability, function in their respective organisations, training and experience. Each Party may replace its JCC representatives from time to time upon written notice to the Alliance Manager of the other Party; provided, however, if a Party's JCC representative is unable to attend a JCC meeting, such Party may designate an alternate to attend such JCC meeting by providing notification in writing to the other Party's Alliance Manager and following provision of such written notification the alternate will be entitled to perform the functions of such JCC representative at such JCC meeting. The Alliance Managers may attend meetings of the JCC but shall have no right to vote on any decisions of the JCC.

2.4.2 **JCC Responsibilities**. In addition to its overall responsibility for monitoring the activities of the Parties under this Agreement with respect to Therapies containing a Joint Selected Candidate, following initiation of Phase III Clinical Trials thereof and during the supply, manufacture and commercialisation of any Therapy utilising a Joint Selected Candidate resulting from such Phase III Clinical Trials, the JCC shall, in particular, with respect to each such Therapy utilising such Joint Selected Candidates):

(a) review and approve an initial worldwide commercialisation plan;

(b) review and approve changes to the then-current worldwide commercialisation plan;

(c) receive reports regarding material submissions to Regulatory Authorities pertaining to any Therapy utilising a Joint Selected Candidate, as needed;

(d) review manufacturing and commercial supply plans pertaining to any Therapy utilising a Joint Selected Candidate;

(e) review and, to the extent permitted by Applicable Laws, approve any applicable policies with respect to pricing reimbursement required for sale and supply of any Therapy utilising a Joint Selected Candidate;

(f) subject to the Co-Commercialisation Agreement, discuss and agree to mechanisms for co-promotion of any Therapy utilising a Joint Selected Candidate in those specific countries where co-promotion will occur in accordance with the Co-Commercialisation Agreement;

(g) discuss pre-marketing and marketing activities pertaining to any Therapy utilising such Joint Selected Candidate;

(h) discuss launch of any Therapy utilising such Joint Selected Candidate;

(i) receive from each Party reports on Net Sales of any Therapy utilising such Joint Selected Candidate; and

(j) perform such other responsibilities as are assigned to the JCC in this Agreement or in the Co-Commercialisation Agreement.

2.4.3 **Decision making for JCC**. Each Party will discuss and attempt to resolve any potential or evolving disagreement related to commercialisation of any Therapy utilising a Joint Selected Candidate through its Alliance Managers before it is brought before the JCC for resolution. With respect to the responsibilities of the JCC, each Party shall have one vote on all matters brought before the JCC. Each JCC shall operate as to matters within its responsibility by unanimous vote. Each Party shall make decisions in good faith and on a timely basis, provided that any JCC decisions shall be subject to the conditions applied to JSC decisions, as set forth in Clause 2.2.4. If the JCC is unable to achieve a unanimous vote within […***…]

[…***…] of any matter being brought before the JCC, then such matter may be referred to Alliance Managers under Clause 18.1 at either Party's discretion. Where any matter or dispute remains unresolved for a further […***…] after such referral, the matter or dispute may be referred in writing to the JSC at either Party's discretion.

2.5 **JPT**. The Parties shall also set-up up joint project teams for each Party's Candidates (each, a "**JPT**") as and when required, the first to be set up as soon as practicable after […***…]. Each JPT shall be specific to a Selected Target and to the corresponding Co-Development Plan, save that the Parties may nominate the same representatives to be present on more than one JPT. The JPT for each Selected Target and corresponding Co-Development Plan shall be responsible for governing the day to day performance of the relevant Co-Development Plan including ensuring that activities thereunder are performed in accordance with the approved timelines and budgets and, as relevant, agreeing to any non-material changes to such Co-Development Plan and for producing the final report and recommendations on completion of the relevant Co-Development Plan. The Parties shall each nominate up to […***…] representatives (and in each case an equal number of representatives) to represent it on each JPT. Each Party may replace its JPT representatives from time to time upon written notice to the other Party; provided, however, if a Party's JPT representative is unable to attend a JPT meeting, such Party may designate an alternate to attend such JPT meeting by providing notification in writing to the other Party's representatives on such JPT and following provision of such written notification the alternate will be entitled to perform the functions of such JPT representative at such JPT meeting. The JPT shall report regularly to the JDC. The final report and recommendations following completion of any phase of a Co-Development Plan shall be provided to the JDC within a maximum of […***…] following completion of the relevant phase and the Parties shall provide all support to the applicable JPT as may be reasonably necessary to meet such timelines. The JPT in relation to any Selected Target shall automatically cease to exist on completion or termination of the Co-Development Plan for such Selected Target.

2.6 **Ad-hoc Committees**. The JSC, JDC or JCC, as appropriate, may also authorise the setting up of sub-committees in relation to particular or specific aspects of any Co-Development Plan or other performance of this Agreement, for example CMC. Such sub-committees shall act in the same way as the JPT and regularly report into the relevant JSC, JDC or JCC.

2.7 **Meetings**.

2.7.1 **JSC Meetings**. During the POC Phase and Co-Development Phase, the JSC shall meet at least […***…] at Adaptimmune's facilities in Abingdon, Oxfordshire, England or at Bellicum's facilities in Houston, TX, USA, or via teleconference or otherwise, in each case as agreed by the JSC. During the Co-Commercialisation Phase, the JSC shall meet at least […***…] at Adaptimmune's facilities in Abingdon, Oxfordshire, England or at Bellicum's facilities in Houston, TX, USA, or via teleconference or otherwise, in each case as agreed by the JSC. Where possible, meetings will be held by telephone conference with only […***…] meetings per […***…] being face to face and at either Adaptimmune's or Bellicum's facility, unless the Parties decide otherwise. Where necessary, for example to resolve any dispute or to agree upon changes to any POC Plan or Co-Development Plan, the JSC shall meet more frequently.

2.7.2 **JCC and JDC Meetings**. The JCC or JDC shall meet at least […***…] at Adaptimmune's facilities in Abingdon, Oxfordshire, England or at Bellicum's facilities in Houston, TX, USA, or via teleconference or otherwise, in each case as agreed by the JDC or JCC. Where possible, meetings will be held by telephone conference with only […***…] meetings per […***…] being face to face and at either Adaptimmune's or Bellicum's facility, unless the Parties decide otherwise. Where necessary, for example to resolve any dispute or to agree upon changes to any Co-Development Plan, as applicable, the JDC shall meet more frequently. The JCC shall meet more regularly where reasonably necessary.

2.7.3 **Meeting Agendas and Minutes**. Not later than […***…] after each of the JSC, JDC, JCC and/or JPT, as applicable, are formed, the respective committees

shall each hold an organizational meeting by videoconference or teleconference to establish their respective operating procedures, including establishment of agendas, and preparation and approvals of minutes. The Parties shall alternate responsibility for taking the meeting minutes; provided that Bellicum shall be responsible for taking the meeting minutes at the first meeting of each committee or team. Meeting minutes shall be sent to both Parties promptly (and in any event within […***…]) after a meeting for review, comment and approval by each Party. Where minutes are not approved by both Parties, the dispute shall be resolved at the next committee or team meeting. A decision that is made at any meeting shall be recorded in meeting minutes.

2.7.4 **General**. Employees of each Party, other than its nominated committee or team representatives, may attend meetings of the JSC, JDC, JCC or JPT as applicable, as non-voting participants. A Party's consultants and advisors involved in a POC Plan or Co-Development Plan may attend meetings of the JSC, JDC, JCC or JPT as non-voting observers; provided that such consultants and advisors are under obligations of confidentiality and non-use applicable to the Confidential Information of the other Party as required by Clause 13.3(e). Each Party shall be responsible for all of its own expenses of participating in the JSC, JDC, JCC or JPT. In addition each Party may nominate the same individuals as representatives on multiple committees.

2.8 **Dissolution.**

2.8.1 **Dissolution of JSC**. The JSC shall dissolve on termination of this Agreement or by mutual agreement of the Parties.

2.8.2 **Dissolution of JDC**. The JDC shall automatically dissolve on completion of all Co-Development Plans or, if earlier, termination of this Agreement.

2.8.3 **Dissolution of JCC**. The JCC shall continue for so long as there is any Joint Selected Candidate (or Therapies containing such Joint Selected Candidates) undergoing Phase III Clinical Trials and/or being commercialized hereunder and, at such time as there are no Joint Selected Candidates (or Therapies containing such Joint Selected Candidates) undergoing Phase III Clinical Trials and/or being commercialized hereunder, the JCC will have no further responsibilities or authority under this Agreement and the JCC will be deemed dissolved by the Parties. The JCC will also be deemed dissolved by the Parties if all Co-Development Plans are terminated or if all Therapies resulting from any Co-Development Agreement fail to obtain at least one Regulatory Approval in at least one country.

2.8.4 **Dissolution of JPT**. Each JPT will be deemed dissolved by the Parties on completion or termination of the applicable Co-Development Plan.

2.8.5 **Dissolution of Ad-hoc sub-committees**. Each Ad-hoc sub-committee will be deemed dissolved by the Parties on completion of the relevant activity in relation to which the sub-committee was set up.

2.9 **Alliance Managers**. Within […***…] of the Effective Date, each Party shall appoint an Alliance Manager to be the principal point of contact for communications under this Agreement. The Alliance Managers shall facilitate the flow of information and collaboration between the Parties and assist in the resolution of potential and pending issues and potential disputes in a timely manner to enable the JSC, JDC, JCC and JPT, in each case for so long as such committee(s) are in existence, and the Parties to reach consensus and avert escalation of such issues or potential disputes. Either Party may replace its Alliance Manager at any time upon prior written notice (including by email) to the other Party's Alliance Manager. Each Party shall ensure that its Alliance Manager is capable of performing the obligations required of an Alliance Manager under this Agreement.

ARTICLE 3 POC PHASE

3.1 **Commencement of POC Phase**

3.1.1 Within […***…] of the Effective Date (or such longer time as mutually agreed by the Parties in writing), the Parties shall commence activities in furtherance of the POC Plan. The POC Plan will describe with specificity […***…]. As of […***…]. Each Party will perform a battery of tests during the POC Phase, as set forth in greater detail in the POC Plan, with the intention that the Parties will conduct mirrored testing where practicable.

3.1.2 Adaptimmune and Bellicum shall use Commercially Reasonable Efforts to perform the activities assigned to them under the POC Plan in accordance with the agreed timescales, including making resources available as and when required and supplying any product, equipment or materials as and when required for performance of the POC Plan. Each Party shall reasonably assist the other Party to facilitate the performance of the POC Plan. Each Party is responsible for the costs incurred by it in performing activities assigned to it under the POC Plan.

3.1.3 As part of the performance of the POC Plan, and with respect to Targets other than the POC Target, the Parties will jointly identify Target criteria that will support the Parties' development and commercialization of viable Candidates. On achievement of Initial Success Criteria for the POC Phase and following mutual agreement to the related Target criteria identified in accordance with this Clause 3.1.3, Adaptimmune will provide to Bellicum a list of at least […***…] Targets ("**Target List**") and supporting validation information, with the mutually desired objective that such Targets on the Target List will meet the agreed Target criteria. Bellicum understands that the Targets on the Target List provided by Adaptimmune will be provided from its internal Target projects and that not all provided Targets will be fully validated; however, as part of Adaptimmune's identification and presentation of the Target List, the Parties will reach a consensus as to what constitutes "validation" of a Target, and then Bellicum will have a right to review all of Adaptimmune's available documentation for each such Target, including but not limited to information relevant to Target validation status. Adaptimmune will select the Targets on the Target List for provision to Bellicum in good faith. The Parties will work together to agree upon which Targets from the Target List may be selected for further validation and development of Candidates during any subsequent Co-Development Phase.

3.1.4 Subject to the limitations set forth in Clause 2.2.4 (as applied to the JDC), and subject to Clauses 2.3.2(b) and 5.7, the JDC may amend in writing the POC Plan from time to time as the POC Phase progresses and results become available.

3.2 **Subcontractors**. A Party may subcontract portions of its work under the POC Plan to (i) any Affiliate or (ii) Third Parties; provided, that such subcontract is in writing and is consistent with the terms and conditions of this Agreement including the confidentiality provisions of Article 13 and any rights granted to such subcontractor are restricted to only those rights necessary for performance by such subcontractor of the portions of work on behalf of such subcontracting Party. Such subcontracting Party will remain fully responsible (at its cost) for all acts or omissions of any subcontractor it appoints (including any acts or omissions which result in a breach of the terms of this Agreement) and shall ensure that each subcontractor complies with the terms and conditions of this Agreement.

3.3 **Progress Reports**. Each Party shall keep the other Party (through the JPT and JDC) informed of its activities, results and accomplishments under the POC Plan and shall provide to the other Party's representatives on the JDC regular written summary updates (for example Word or

Powerpoint documents) at each JDC meeting. All such reports, information and data provided by a Party shall be considered the providing Party's Confidential Information.

3.4 **Completion of POC Phase**. Completion of the POC Phase shall occur on […***…] under the POC Plan, or upon a JDC decision that no further activities are required ("**POC Phase Completion**"). Where POC Phase Completion has not been met within a period of […***…] from the estimated date of POC Phase Completion in accordance with the POC Plan, or where either Party believes at any time on a reasonable and scientifically supported basis that the Initial Success Criteria or POC Criteria will not be met, the Parties (whether directly or through a meeting of the JSC or JDC) shall discuss and mutually agree whether any further proof of concept work should be conducted (for example, in relation to an alternative Candidate or an alternative Target), or whether the POC Plan should terminate. Any termination of the POC Plan shall result in termination of this Agreement (and in this event, Clause 17.7 shall apply), and there shall be no obligation on either Party to carry out any further proof of concept work on any alternative Candidate or Target.

3.5 **Progression to Co-Development Phase**. Within […***…] of the date of POC Phase Completion, Adaptimmune shall provide to Bellicum […***…]. The Adaptimmune […***…] will be reviewed by the JDC and JSC, and the Parties will discuss in good faith and will mutually agree whether or not to proceed to the Co-Development Phase; provided that neither Party is required to proceed to the Co-Development Phase under discussion. The date of such mutual agreement of the Parties to proceed to the Co-Development Phase, as evidenced by minutes of the applicable JSC meeting, shall constitute "**Co-Development Start**". Where the JSC does not and/or the Parties do not agree to proceed to the Co-Development Phase within […***…] of provision of such Adaptimmune […***…] and the POC Phase results by Adaptimmune, then this Agreement shall automatically terminate in accordance with Clause 17.5 (and in this event, Clause 17.7 shall apply).

ARTICLE 4 SELECTION OF TARGETS

4.1 **Selected Targets**.

4.1.1 **Selected Target Identification**. During the POC Phase, the Parties shall consult on and discuss at the JSC any Target being considered by a Party, either by selection from the Target List or the POC Target. The JSC shall agree upon which two Targets will be selected for co-development. The date of such selection by the JSC, as evidenced in minutes of the applicable JSC meeting, shall be the "**Acceptance Date**" for such two Targets. The JSC shall also designate which of the two Selected Targets is the Bellicum Target and which is the Adaptimmune Target. Agreement of the JSC on both Selected Targets must, unless otherwise mutually agreed between the Parties in writing, be made at the latest by […***…] from Co-Development Start. Notwithstanding the foregoing, […***…].

4.1.2 **Target Exclusivity**. On the Acceptance Date, each of the two selected Targets shall thereafter be designated as a "**Selected Target**". As of the Acceptance Date, a Selected Target will not be made available by Adaptimmune or Bellicum to any Third Party for development, and Adaptimmune will not develop any TCRs or

Therapies to such Selected Targets for itself or for or on behalf of any Third Party.

4.1.3 **Target List**. Only Targets set out on the Target List shall be eligible for selection as a Selected Target.

ARTICLE 5 CO-DEVELOPMENT PLAN

5.1 **Co-Development Plan**.

5.1.1 Within […***…] after the Acceptance Date (or such longer time as mutually agreed by the Parties in writing) with respect to a given Selected Target, the JPT shall draft and agree upon a Co-Development Plan for the generation of Candidates directed to each Party's Selected Target, which plan is intended to generate the data necessary to support an IND filing for such Party's Joint Selected Candidate. No activities will be performed in connection with a proposed Co-Development Plan (and accordingly, no costs will be incurred under Clause 10.2) before the applicable JPT has agreed upon such Co-Development Plan. Each of the two Co-Development Plans shall:

(a) be prepared on a global basis;

(b) include the responsibilities of each of the Parties under the Co-Development Plan including as relates to any manufacture of Therapy for Clinical Trials;

(c) include a high level plan setting out an anticipated route (including Phase III Clinical Trials and other required trials) to obtain Regulatory Approval for such Therapy including estimated timelines and estimated budget; and

(d) include the basis for calculation of any budgeted costs, including relevant FTE and FTE Rate information to be applied to such budget (which FTE Rate(s) shall be used to calculate any Development Costs reimbursable in accordance with Clause 10).

5.1.2 Under each Co-Development Plan, each Party shall use Commercially Reasonable Efforts to perform any part of the Co-Development Plan assigned to it, including making resources available as and when required and supplying any product, equipment or materials as and when required and specified under the Co-Development Plan. The Parties may supplement the terms of this Agreement, as necessary, with terms relating to manufacture and supply, quality and/or any other terms deemed necessary or reasonably useful by a Party to govern the Parties' co-development of such Party's respective Candidate. The Parties will negotiate any such supplemental terms in good faith and on a timely basis to prevent any unreasonable delay to activities performed under the Co-Development Plan.

5.1.3 Under each Co-Development Plan, Adaptimmune shall use Commercially Reasonable Efforts to develop and validate starting TCRs ("**Initial Candidates**") directed to each Party's Selected Target within the timescales agreed for the relevant Co-Development Plan. […***…].

5.1.4 Subject to Clause 2.3.2(b), Clause 2.3.3 (which references the limitations set forth in Clause 2.2.4) and Clause 5.7, the JDC may amend in writing the Co-Development Plan for each Party's Initial Candidate and Joint Selected Candidate from time to time and will regularly update the Parties' Co-Development Plans as each phase of the plan progresses. It is envisioned that after […***…]. Exhibit 6 outlines the anticipated

responsibilities of each Party for any Co-Development Plan but may be amended for any particular Co-Development Plan.

5.1.5 The JDC shall also agree upon the criteria for any Initial Candidate to proceed through each Co-Development Phase and in particular the criteria for designation of an Initial Candidate as a Joint Selected Candidate for progression into preclinical development and onwards into Clinical Trials. Initial criteria are set out in Exhibit 7 and these will be amended and reviewed by the JDC as appropriate. Only one Joint Selected Candidate shall proceed to pre-clinical development for any Co-Development Plan at any one time, and an alternative Candidate will only be selected for pre-clinical development where such initial Joint Selected Candidate fails to achieve the agreed criteria for completion of pre-clinical development (such alternative Candidate will be deemed the Joint Selected Candidate upon replacement of the original Joint Selected Candidate). […***…].

5.2 **Subcontractors**. Each Party may subcontract portions of its work under the Co-Development Plan to (i) any Affiliate or (ii) Third Parties; provided in the case of a Third Party, (a) there are no reasonably based objections from the other Party regarding the use of said subcontractor, and (b) such subcontract is in writing and is consistent with the terms and conditions of this Agreement including the confidentiality provisions of Article 13 and any rights granted to such subcontractor are restricted to only those rights necessary for performance by such subcontractor of the portions of work on behalf of the sub-contracting Party. The sub-contracting Party will remain fully responsible (at its cost) for all acts or omissions of any subcontractor it appoints (including any acts or omissions which result in a breach of the terms of this Agreement) and shall ensure that each subcontractor complies with the terms and conditions of this Agreement. Each Party shall notify the other Party in writing of any sub-contractor appointments other than Affiliates. In addition, either Party may audit any sub-contractor appointed by the other Party prior to such sub-contractor being appointed to perform any part of any Co-Development Plan, and on provision of written notice within […***…] of a Party becoming aware of such sub-contractor appointment. Such audit will occur as soon as reasonably practicable and in any event in accordance with any timelines set out in the applicable Co-Development Plan. The Party appointing such sub-contractor will provide reasonable assistance to enable the conduct of such audits (including interacting with such sub-contractors to substantiate the need and right to conduct such audits). To the extent any audit identifies any non-compliance with Applicable Laws (including non-compliance with GMP), the Party appointing such sub-contractor shall use reasonable efforts to procure correction of such non-compliance by sub-contractor or shall use an alternative sub-contractor where correction of such non-compliance is not possible or practicable. Each Party will put in place written Quality Agreements with any subcontractor performing GMP activities prior to them supplying materials or services supporting any relevant GMP activities under any Co-Development Plan. The other Party may request copies of such Quality Agreement to the extent necessary to satisfy its internal standard operating procedures or to satisfy obligations to any Regulatory Authority or under Applicable Laws.

5.3 **Completion of any Co-Development Plan**. The term for a particular Co-Development Plan shall commence on Acceptance, and shall continue, unless earlier terminated in accordance with Article 17, until the completion or waiver of all the tasks set out in the Co-Development Plan (on a Selected Target-by-Selected Target basis, the "**Co-Development Term**"). During the Co-Development Term and subject to reimbursement by the other Party under Clause 10.2, each Party shall be responsible for its own costs associated with the activities it conducts under the Co-Development Plan. The final report for each Co-Development Plan shall (i) identify all relevant data necessary for assessment by the JSC of whether the Candidate criteria have been met by any Joint Selected Candidate and (ii) include such data and research records that have been compiled and which may be required to support an IND filing for any Joint Selected Candidate.

5.4 **Reports; Records; and Inspections**.

5.4.1 **Progress Reports**. Each Party shall keep the other Party regularly informed of its activities (if any) under each Co-Development Plan and shall provide to the other Party's representatives on the JDC regular written summary updates at each JDC meeting. If reasonably necessary for a Party to perform its work under a Co-Development Plan, that Party may request that the other Party provide more detailed information and data regarding the updates it earlier provided, and the other Party shall promptly provide the requesting Party with information and data as is reasonably available and reasonably necessary to conduct a Co-Development Plan, and such other information as the Parties agree. All such reports, information and data provided by a Party shall be considered the providing Party's Confidential Information.

5.4.2 **Development Records**. Each Party shall maintain records of its performance of each, if any, Co-Development Plan (or cause such records to be maintained) in sufficient detail and in good scientific manner as will properly reflect all work done and results achieved by or on behalf of such Party in the performance of such Co-Development Plan. All laboratory notebooks shall be maintained for no less than [...***…] after creation of the relevant notebook entry. All other records shall be maintained by each Party during the applicable Co-Development Term and for a minimum of […***…] thereafter. All such records of a Party shall be considered such Party's Confidential Information. The Party responsible for any Clinical Trial shall also procure that any Third Parties involved in any Clinical Trial or Party itself maintain all records relevant to the Clinical Trial for a minimum of […***…] from completion of relevant Clinical Trial or such longer period required under Applicable Laws and that the other Party is given access to such records as may be reasonably necessary for such other Party to comply with Applicable Laws or perform its obligations hereunder. Records shall not be destroyed by either Party without prior written notification of such destruction being provided to other Party, and other Party being given the opportunity to take over the storage and responsibility for such records.

5.4.3 **Quality**. Each Co-Development Plan shall be performed at all times in accordance with all Applicable Laws including as applicable requirements of GxP. Each Party shall ensure that any manufacture and supply of Joint Selected Candidate for any Clinical Trials is carried out in accordance with cGMPs and applicable Quality Agreements.

5.4.4 **Inspections**. The Parties shall notify each other of any inspections carried out or requested by any Regulatory Authority that relates, and in each case to the extent such inspection or request relates, to any Joint Selected Candidate under any Co-Development Plan or to the facility at which any Joint Selected Candidate is being manufactured or stored or any Clinical Trial site or other Third Party site or facility relevant to any Joint Selected Candidate (including where such sites are managed by a CRO or other Third Party). From and after the initiation of the first Phase III Clinical Trial with respect to a given Therapy that is the subject of such Co-Development Plan, both Parties shall be entitled to be present at such inspections to the extent such inspections relate solely to such Therapy and to the extent reasonably practicable; provided, that the Party who is not in control of the relevant facility (either directly or through a subcontract) shall only be permitted to attend such inspections as a silent observer. Where any inspection identifies any non-compliance with Applicable Laws, then the Party responsible for the facility shall correct any such non-compliance and shall keep the other Party informed of the steps being taken to correct any non-compliance.

5.5 **Research Efforts**. Each Party shall assign such scientific and technical personnel and allocate such other resources as are reasonably necessary for performing the activities as are assigned to it in each Co-Development Plan and shall perform such activities in accordance with all Applicable Laws (including GxPs) in each case to the extent applicable to performance of the relevant Co-Development Plan activities by such Party, the terms and conditions of this Agreement, and within generally accepted professional standards. Each Party shall be solely

responsible for the safety and health of its employees, consultants and visitors, and for compliance with all Applicable Laws related to health, safety and the environment, including providing its employees, consultants and visitors with all required information and training concerning any potential hazards involved in performing such activities and any precautionary measures to protect its employees from any such hazards at its own facilities and as regards its or its subcontractors performance of the Co-Development Plan. Each Party shall use Commercially Reasonable Efforts to train its personnel assigned to perform activities under this Agreement and ensure that any personnel so assigned shall be capable of professionally and competently performing the activities assigned to it in each Co-Development Plan. Each Party may request an on-site visit to the other Party and/or its Affiliates for the purpose of conducting a quality assessment and/or quality audit for any GMP activities, which visit the other Party will promptly accommodate. Each Party shall be entitled to request such on-site visit no more than […***…] in any […***…] (except in the case of any subsequent "for cause" audits) and any visit will be conducted to reasonably minimize interference to the other Party's business.

5.6 **Reserved Activities**. The following activities shall be reserved to Adaptimmune under any Co-Development Plan ("**Adaptimmune Reserved Activities**"):

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…].

The following activities shall be reserved to Bellicum under any Co-Development Plan ("**Bellicum Reserved Activities**"); and as used herein, the term "**Reserved Activities**" means Adaptimmune Reserved Activities and/or Bellicum Reserved Activities, as the context may require:

(a) […***…];

(b) […***…].

For avoidance of doubt, each of the Parties may […***…].

5.7 **Changes to Co-Development Plan.** The Parties acknowledge and agree that each Co-Development Plan will change and develop as the applicable Joint Selected Candidate progresses through development, Clinical Trials and to Regulatory Approval. The JPT will be responsible for amending the Co-Development Plan in relation to any non-material changes. Subject to Clause 2.3.2(b) and Clause 2.3.3 (which references the limitations set forth in Clause 2.2.4), the JDC shall be responsible for reviewing and amending operational aspects and activities under each Co-Development Plan as necessary in relation to any material changes; provided that material changes to a Party's personnel, funding and/or resources necessary for performance of such Co-Development Plan must be mutually agreed by the Parties in writing (i.e., the JDC cannot make such decisions). Material changes will include any changes which

significantly increase the resource requirement, significantly change the timescales for performance or increase the cost of the performance of the Co-Development Plan (as against budgeted costs) or any change of any Joint Selected Candidate. Each Party shall update its part of the budget for any Co-Development Plan on a regular basis and provide an update to such budget at each JDC meeting. Such budget will be discussed at the JDC and approved at the JDC. Any changes to a Co-Development Plan (including to the budget set out in such Co-Development Plan) will be made in good faith and with a bona fide intention that such changes are required for the successful development and commercialisation of any Joint Selected Candidate or Therapy utilising such Joint Selected Candidate. The Parties will also negotiate in good faith any amendments or additional terms required to this Agreement to address changes in scope of the Co-Development Plan as the applicable Joint Selected Candidate or Therapy utilising such Joint Selected Candidate progresses through to Regulatory Approval.

5.8 **Additional HLA Candidates.** Each Co-Development Plan shall initially focus on Candidates for only one HLA Type. Following completion of any Phase II Clinical Trial in relation to any Co-Development Plan, the Parties will discuss and agree whether development of any further Additional HLA Candidates is desirable and if so the terms on which such Additional HLA Candidates will be developed. Any Additional HLA Candidates will be mutually agreed between the Parties, and will require a related Co-Development Plan.

ARTICLE 6 REGULATORY

6.1 **Regulatory Matters**.

6.1.1 As between the Parties, (a) Bellicum shall be responsible for holding and applying for any Regulatory Approvals or MAAs in relation to the Bellicum Candidate and any Therapy comprising the Bellicum Candidate; and (b) Adaptimmune shall be responsible for holding and applying for any Regulatory Approvals or MAAs in relation to the Adaptimmune Candidate and any Therapy comprising the Adaptimmune Candidate.

6.1.2 The Party holding the relevant Regulatory Approval in relation to a Therapy shall be primarily responsible, and act as the sole point of contact, for communications with Regulatory Authorities in connection with the development, commercialisation, and manufacturing of such Therapy. To the extent the other Party is required to provide any information or response to a Regulatory Authority, such response will be discussed with the responsible Party to the extent practicable and responding Party shall provide only such information as is necessary to comply with its legal obligations unless otherwise mutually agreed. The Parties shall copy each other on any material correspondence in relation to a Therapy (or anything which is likely to affect the safety or regulatory approval of any Therapy) received from a Regulatory Authority and where reasonably possible provide the other Party an opportunity to comment on such correspondence. Both Parties shall be entitled to be present at any scheduled meeting, interview or discussion with any Regulatory Authority relating to any Joint Selected Candidate or Therapy utilising such Joint Selected Candidate.

6.1.3 Notwithstanding the foregoing, each Party shall provide such assistance as may reasonably be requested by the other Party relating to regulatory matters (including preparation and filing for any INDs and MAAs and obtaining and maintaining Regulatory Approvals). Such assistance will include, without limitation, a right to [...***…]

*****Confidential Treatment Requested**

[…***…].

6.1.4 Nothing in this Clause 6.1 shall require any Party to breach its obligations to any Regulatory Authority under Applicable Law.

ARTICLE 7 COMMERCIALISATION

7.1 **Commercialisation Generally**. Each of the Parties shall use its Commercially Reasonable Efforts to commercialise and promote any Therapy in accordance with its mutually agreed Co-Commercialisation Agreement and/or a subsequent detailing agreement (as outlined in Exhibit 3 and to be further described in a Co-Commercialization Agreement). Bellicum shall be primarily responsible for commercialisation, manufacture and promotion of the Therapy comprising the Bellicum Candidate, and Adaptimmune shall be primarily responsible for commercialisation, manufacture and promotion of the Therapy comprising the Adaptimmune Candidate.

7.2 **Co-Commercialisation Agreement**. Not later than […***…] after […***…] for any Therapy, the Parties shall negotiate in good faith and agree to commercially reasonable terms of an agreement, or an appropriate amending and restating of this Agreement, covering any co-commercialisation activities (if any) and the profit/loss sharing and governance that will apply to Therapies (such agreement or amended and restated iteration of this Agreement, "**Co-Commercialisation Agreement**"). Such Co-Commercialisation Agreement shall include the principles set out in Exhibit 3, unless otherwise mutually agreed in writing. Activities described in such Co-Commercialization Agreement will not be initiated unless and until the Parties agree regarding the terms and conditions of such Co-Commercialisation Agreement. Where any of the terms of such Co-Commercialization Agreement have not been agreed by the Parties following […***…], then for a Bellicum Therapy, Bellicum shall be entitled to refer resolution of any non-resolved terms and conditions to arbitration in accordance with Clause 18.2, and for an Adaptimmune Therapy, Adaptimmune shall be entitled to refer resolution of any non-resolved terms and conditions to arbitration in accordance with Clause 18.2.

7.3 **Commercialisation Updates**. Each Party shall continue to keep the other Party informed of its commercialisation of any relevant Therapy and will provide regular updates to the JCC. Each Party shall also provide to the other Party, on or about […***…]. Each Party may address questions on the annual reports to the Alliance Managers or JCC following receipt of such written reports.

7.4 **Safety Event Reporting**. Additionally, each Party shall provide to the other Party prompt written notice of any material safety events pertaining to Therapies of which it becomes aware including any SUSARs or other material events which might have general applicability to the use of Candidates, TCRs or Therapies to treat patients. The Parties shall enter into a pharmacovigilance agreement on commercially reasonable terms to facilitate the reporting of such events.

ARTICLE 8 LICENSES

8.1 **Development License**. Commencing on the Effective Date and continuing in full force and effect until completion or termination of all Co-Development Plans, each Party hereby grants to the other Party a royalty-free, non-transferable (except to such other Party's agents performing the POC Plan or Co-Development Plan), non-exclusive license in the Field under such Party's Licensed Intellectual Property solely for the purposes of and to the extent necessary for (a) performing the POC Plan; and (b) performing each Co-Development Plan, including CMC

activities (collectively, the "**Development License**"). The Development License shall be specific to the research and development activities and responsibilities of the licensee Party under the Co-Development Plan and directed to the applicable Selected Target, including any associated diagnostic assays and companion diagnostics developed for a Party's Joint Selected Candidate.

For clarity, the Development License does not include the right for Bellicum to conduct any Adaptimmune Reserved Activities, and does not include the right for Adaptimmune to conduct any Bellicum Reserved Activities.

8.2 **Exclusive License**.

8.2.1 **Exclusive License Grant**. As from the Acceptance Date, each Party grants to the other Party an exclusive license under such Party's Licensed Intellectual Property in each case to (i) make, have made, use, import and have imported Joint Selected Candidates and Therapies, and (ii) sell, have sold and offer for sale Therapies, in each case of sub-Clauses (i) and (ii), in the Field and directed to the corresponding Selected Target (each, an "**Exclusive License**"). Each such Exclusive License shall be subject to the following:

(a) The Exclusive License shall include a grant back to the licensor Party, to the extent applicable, of a right to perform co-development and co-commercialisation activities regarding any Therapy or Joint Selected Candidate as part of any POC Plan, Co-Development Plan or Co-Commercialisation Agreement;

(b) The Exclusive License shall not include the right for Bellicum to conduct any Adaptimmune Reserved Activity or for Adaptimmune to conduct any Bellicum Reserved Activity; and

(c) The Exclusive License shall not include:

(i) any right to modify, improve or otherwise materially alter any Candidate, Joint Selected Candidate or Therapy (save as reasonably necessary to address any requirement from any Regulatory Authority or to address any safety concern). For clarity, modification of any complementarity determining region of any TCR included within any Therapy or the sequence encoding such complementarity determining region shall constitute a material alteration; or

(ii) any right to generate any new TCR or new Candidate to any Selected Target or to any other Target under the Exclusive License; provided that the licensee Party retains the right to use its own technology (obtained independently of this Agreement) to modify, improve or alter its own Candidates, Joint Selected Candidate and Therapies.

8.2.2 **Sublicenses**. Each Party shall have the right to sublicense the licenses and rights granted under Clauses 8.1 and 8.2.1 to its Affiliates and permitted sub-contractors acting on its behalf; provided that in each case such sublicense:

(a) is consistent with the terms and conditions of this Agreement; and

(b) is in writing.

Each Party shall be responsible for all actions and omissions of any Sublicensee including where such actions and omissions result in a breach of the terms of this Agreement. Any other sub-licensing must be prior approved in writing by the licensor Party.

8.3 […***…]. During the term of this Agreement, and subject to the limitations set forth in this Clause 8.3, […***…]

[…***…].

8.4 **No Additional Licenses**. Except as expressly provided in this Agreement, nothing in this Agreement shall grant either Party any right, title or interest in and to the know-how, Patents or other Intellectual Property Rights of the other Party (either expressly or by implication or estoppel).

ARTICLE 9 TECHNOLOGY TRANSFER

9.1 **In** addition to any technology transfer contemplated by any Co-Development Plan, following completion of any Co-Development Plan and as part of any Co-Commercialisation Plan, Adaptimmune will:

(a) reasonably assist Bellicum in establishing a […***…] for any Therapy comprising a Bellicum Candidate, and will allow and enable Bellicum to work with […***…] (to the extent relevant). Such assistance will include […***…]; and

(b) provide ongoing technical assistance in relation to Bellicum's development and manufacturing of the Bellicum Candidates and Therapies comprising a Bellicum Candidate as reasonably requested from time to time and during the Term.

The details of what technical assistance and transfer of technology will be required from Adaptimmune will be agreed upon by the Parties as part of a technology transfer plan to be initially prepared by Bellicum and approved by the JDC. The costs of such technical assistance and transfer shall be considered to be a Development Cost and subject to reimbursement in accordance with Article 10. Any technology transfer obligations and provision of confidential information will be subject to any Third Party restrictions relevant to such technology transfer and provision of confidential information.

9.2 In addition to any technology transfer contemplated by any Co-Development Plan, following completion of any Co-Development Plan and as part of any Co-Commercialisation Plan, Bellicum will:

(a) reasonably assist Adaptimmune in establishing a […***…] for any Therapy comprising an Adaptimmune Candidate, and will allow and enable Adaptimmune to work with […***…] (to the extent relevant). Such assistance will include […***…]; and

(b) provide ongoing technical assistance in relation to Adaptimmune's development and manufacturing of the Adaptimmune Candidates and Therapies comprising an Adaptimmune Candidate as reasonably requested

from time to time and during the Term.

The details of what technical assistance and transfer of technology will be required from Bellicum will be agreed upon by the Parties as part of a technology transfer plan to be initially prepared by Adaptimmune and approved by the JDC. The costs of such technical assistance and transfer shall be considered to be a Development Cost and subject to reimbursement in accordance with Article 10. Any technology transfer obligations and provision of confidential information will be subject to any Third Party restrictions relevant to such technology transfer and provision of confidential information

ARTICLE 10 FINANCIAL TERMS

10.1 **Co-commercialisation Profit/Loss Sharing**. If a Co-Commercialisation Agreement is agreed upon by the Parties, the costs of Co-Commercialisation, manufacture and promotion of any Therapy shall be shared equally between the Parties as set forth in such Co-Commercialisation Agreement. The mechanism for such payments and the calculation of cost, profit and loss share shall be agreed as part of the Co-Commercialisation Agreement and in accordance with Exhibit 3.

10.2 **Reimbursement of Co-Development Costs under any Co-Development Plan**.

10.2.1 The budget established for each Co-Development Plan will control the reimbursable costs incurred by each Party in performing under such Co-Development Plan. The budget and/or the Co-Development Plan may allow for a certain percentage of excess spending over the budgeted amount, and/or may establish a cap on spending that may not be exceeded without amendment of such budget and/or the Co-Development Plan (as applicable). The Parties shall each pay 50% of the costs incurred in accordance with the relevant budget by each of the Parties in performance of the Co-Development Plan, including the costs of Clinical Trials, costs of CMC, costs of manufacture and any sub-contractor costs necessarily incurred in the performance of any Co-Development Plan. Agreed FTE Rates applicable to various levels of employees and agents utilized by a Party in connection with its performance under a Co-Development Plan are set forth in Exhibit B, and such Agreed FTE Rates may be further described in each Co-Development Plan.

10.2.2 The estimated costs and budget for any Co-Development Plan shall be set out in the initial Co-Development Plan prepared in accordance with Clause 5.1.1, and such Co-Development Plan and its budget shall be reviewed, updated and amended as required, in accordance with Clause 5.7. The Co-Development Plan expenses subject to reimbursement by a Party under this Clause 10.2 shall not exceed […***…]% of the expenses set forth in the then-current budget for the other Party's Co-Development Plan, unless the Parties otherwise mutually agree in writing.

10.2.3 No later than the […***…] after the end of each […***…] during the performance of any Co-Development Plan, each Party shall provide to the other Party a list of all costs and expenses reasonably incurred in accordance with the corresponding budget in the performance of the relevant Co-Development Plan ("**Development Costs**"). In addition to the following, each Co-Development Plan may describe in greater detail certain types of expenses, and a calculation of certain expenses, that are permitted within (or excluded from) Development Costs. Such Development Costs shall include […***…]. Development Costs shall not include, for example only, […***…]

[…***…]. Each Party shall provide reasonable evidence supporting any claimed Development Costs on reasonable request from the other Party. Development Costs may be subject to annual increases to account for inflation, but such increases shall be based on a mutually agreed, objective, relevant inflation index (as set forth in the Co-Development Plan or its related budget).

10.2.4 Where Bellicum is owed reimbursement of Development Costs, Bellicum shall invoice Adaptimmune for such sums and Adaptimmune shall pay such invoice within […***…] of receipt of invoice. Where Adaptimmune is owed reimbursement of Development Costs, Adaptimmune shall invoice Bellicum for such sums and Bellicum shall pay such invoice within […***…] of receipt of invoice. Where any part of Development Costs is disputed, reimbursement of the non-disputed part of such Development Costs shall occur in accordance with this Clause 10.2.4 and the Parties shall resolve the dispute as expeditiously as possible in accordance with Clause 10.2.6.

10.2.5 In calculating any Development Costs the following principles will apply:

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…];

(e) […***…];

(f) […***…];

(g) […***…]; and

(h) […***…].

10.2.6 **Audit Right**. Where either Party disputes that any costs are not necessarily incurred in the performance of any Co-Development Plan, the dispute shall first be referred to senior managers in accordance with Clause 18.1. Where the dispute is not resolved within […***…] of such referral, either Party may request that such report be verified by the Party's then-current independent, certified and internationally recognized public accounting firm. Such right to request a verified report shall (i) be limited to the period covered by the disputed Development Costs being claimed; and (ii) not more frequently than once with respect to records covering any specific period of time. Each Party shall, upon timely written request and on at least […***…] advance written notice from Adaptimmune or Bellicum, as applicable, and at a mutually agreeable time during its regular business hours, make its records available for inspection by the relevant accounting firm at such place or places where such records are customarily kept, solely to verify the accuracy of the disputed Development Costs being requested under this Agreement. The accounting firm shall only state factual findings in its audit reports. The draft audit report shall be shared with both Parties at the same time. Following review and approval by all Parties of the draft audit, the final audit report shall be shared with Bellicum and Adaptimmune.

10.2.7 **Underpayment; Overpayment**. After reviewing the audit report delivered under Clause 10.2.6, any discrepancy in Development Costs and reimbursement of such costs shall be corrected by the relevant Party or Parties within […***…] of delivery of audit report under Clause 10.2.6. Any audit shall be at the requesting Party's expense unless such audit shows more than the greater of (a) a […***…] percent and (b) $[...***…], discrepancy in the Development Costs being claimed.

10.2.8 **Payment and Related Matters**. All payments in connection with Development Costs will be handled in accordance with Clauses 11.1 – 11.4 inclusive.

ARTICLE 11 PAYMENTS

11.1 **Mode of Payment**.

11.1.1 All payments hereunder shall be made by wire transfer in immediately available funds to the account listed below (or such other account as the receiving Party shall designate before such payment is due):

If to Adaptimmune:

Payee: Adaptimmune Limited
Bank Name: […***…]
Bank address: […***…]
IBAN: […***…]
SWIFT/BIC: […***…]

If to Bellicum:

Beneficiary's Bank: […***…]
Bank Address: […***…]
Bank Phone: […***…]

Beneficiary Name: Bellicum Pharmaceuticals, Inc.
Beneficiary Account Number: […***…]
Swift Code: […***…]
ABA Routing Number: […***…]

11.1.2 The Party paying any sum under this Agreement will be responsible for any bank costs or charges associated with any transfer of sums or reimbursement of costs including any currency conversion costs or transfer costs.

11.2 **Currency of Payments**. All payments under this Agreement shall be made in US dollars, unless otherwise expressly provided in this Agreement.

11.3 **Taxes**. Each Party shall comply with Applicable Laws regarding filing and reporting for tax purposes. Neither Party shall treat their relationship under this Agreement as a pass through entity for tax purposes. If any payments made by the Parties under this Agreement are subject to withholding taxes under Applicable Laws of any state, federal, provincial or foreign government, each Party shall be authorised to withhold such taxes as are required under such Applicable Laws, pay such taxes to the appropriate government authority, and remit the balance due to the other Party net of such taxes. The Party paying the taxes to the government authority shall secure and deliver to the other Party an official receipt for taxes paid. The Parties will fully cooperate with each other to enable each Party to more accurately determine its own tax liability and to minimize such liability to the extent legally permissible and administratively reasonable. Each Party shall provide and make available to the other Party any exemption certificates, resale certificates, information regarding out of state or out of country sales or use of equipment, materials or services, and any other information reasonably requested by the other Party to support the provisions of this Clause 11.3, including the appropriate organization of invoice formats and supporting documents to allow maximization of reclamation of VAT and other transaction taxes.

11.4 **Late Payment**. In relation to any undisputed amount required to be paid by a Party hereunder which is not paid by the payment date due, the other Party may charge interest at a monthly rate equal to […***…] percent ([…***…]%); provided, however, that in no event will such rate exceed the maximum legal interest rate then in effect. Such interest shall be computed on the basis of a month of 30 days for the actual number of days such payment is overdue.

ARTICLE 12 INTELLECTUAL PROPERTY; OWNERSHIP

12.1 **Disclosure; Ownership; Inventorship; Assignment and Cooperation**.

12.1.1 **Disclosure**. During the Term, each Party shall promptly disclose to the other Party in writing any registerable or potentially registerable Foreground IP (whether or not patentable) conceived or reduced to practice by or for the disclosing Party in the course of performance of this Agreement. Disclosure will be made via designated patent representatives for each Party.

12.1.2 **Ownership**. As between the Parties:

(a) Adaptimmune shall solely own any Foreground IP which primarily relates to the Adaptimmune Technology including any Foreground IP which claims or Covers any improvement to the Adaptimmune Technology ("**Adaptimmune Foreground IP**");

(b) Bellicum shall solely own any Foreground IP which primarily relates to the Bellicum Technology including any Foreground IP which claims or Covers any improvement to the Bellicum Technology ("**Bellicum Foreground IP**"); and

(c) The Parties shall jointly own any Foreground IP other than that set out in clause 12.1.2 (a) and (b) ("**Joint IP**").

In relation to any inventions, existence and ownership of inventions shall be determined in accordance with the laws of the United States. Without limiting the foregoing, each Party retains an undivided one-half interest in and to the Joint IP (including Patents therein). Subject to the licenses granted in Article 8, (i) each Party may exploit fully the Joint IP, in any field, and may grant licenses under the Joint IP, without obtaining consent from the other Party, and (ii) may transfer or encumber its ownership interest in any of the Joint IP, subject to obtaining the prior written consent of the other Party (which consent will not be unreasonably withheld, conditioned or delayed), in each case of sub-clauses (i) and (ii), without accounting to the other Party.

In the event of any dispute as to whether any Foreground IP primarily relates to either the Adaptimmune Technology or Bellicum Technology under Clauses 12.1.2(a) or 12.1.2(b) and where such dispute is not resolved by reference to senior executives in accordance with Clause 18.1, an independent patent expert ("**Patent Expert**") shall be appointed by the Parties to resolve such dispute. The decision of the Patent Expert shall be binding on the Parties in the absence of manifest error or fraud. The Patent Expert shall be mutually agreed between the Parties in writing within […***…] of expiry of the […***…] resolution period in Clause 18.1. Where the Parties cannot agree such Patent Expert, the Patent Expert shall be appointed by the American Arbitration Association under its Supplementary Rules for the Resolution of Patent Disputes. Any Patent Expert shall be a patent attorney and have at least 20 years' experience in relation to pharmaceutical or biotechnology patent matters. The fees of the Patent Expert shall be shared equally between the Parties and the Parties shall use reasonable efforts to ensure resolution occurs as quickly as possible after referral to such Patent Expert. The Parties shall reasonably cooperate with the Patent Expert, including providing such information as may reasonably be required by the Patent Expert to reach a decision.

Nothing in this clause shall affect or impact any ownership of either Party in relation to such Party's Background IP.

12.1.3 **Assignment; Cooperation**. Each Party shall execute such further documentation as may be necessary or appropriate, and provide reasonable assistance and cooperation, to implement the provisions of this Article 12. Each Party shall to the extent legally practicable and possible under relevant national or local laws use Commercially Reasonable Efforts to cause all of its employees, Affiliates and any Third Parties working pursuant to this Agreement on its behalf, to assign (or otherwise convey rights) to such Party any Patents and Know-How or other Foreground IP discovered, conceived or reduced to practice by such employee, Affiliate or Third Party, and to cooperate with such Party in connection with obtaining patent protection therefore.

12.2 **Patent Prosecution**.

12.2.1 **Adaptimmune Controlled Prosecution and Maintenance**.

(a) Adaptimmune shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Adaptimmune Background IP.

(b) Adaptimmune shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Adaptimmune Foreground IP, to the extent such Patents do not include any claim Covering (i) a Selected Target, or (ii) the composition of matter of a Candidate or Therapy. Without limiting the foregoing, in the event that Adaptimmune elects not to Prosecute and Maintain any Patents under this Clause 12.2.1(b), Adaptimmune shall not grant any Third Party the right to do so.

(c) Adaptimmune shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Foreground IP, to the extent such Patents include any claim Covering (i) an Adaptimmune Selected Target; or (ii) the composition of matter of an Adaptimmune Candidate or Therapy comprising such Adaptimmune Candidate. Without limiting the foregoing, in the event that Adaptimmune elects not to Prosecute and Maintain any Patents under this Clause 12.2.1(c), Adaptimmune shall not grant any Third Party the right to do so.

12.2.2 **Bellicum Controlled Prosecution and Maintenance**.

(a) Bellicum shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Bellicum Background IP.

(b) Bellicum shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Bellicum Foreground IP, to the extent such Patents do not include any claim Covering (i) a Selected Target, or (ii) the composition of matter of a Candidate or Therapy. Without limiting the foregoing, in the event that Bellicum elects not to Prosecute and Maintain any Patents under this Clause 12.2.2(b), Bellicum shall not grant any Third Party the right to do so.

(c) Bellicum shall, at its sole discretion and expense, have the right (but not the obligation) to Prosecute and Maintain Patents within the Foreground IP to the extent such Patents include any claim Covering (i) a Bellicum Selected Target, or (ii) the composition of matter of a Bellicum Candidate or Therapy comprising a Bellicum Candidate. Without limiting the foregoing, in the event that Bellicum elects not to Prosecute and Maintain any Patents under this Clause 12.2.2(c), Bellicum shall not grant any Third Party the right to do so.

12.3 **Jointly Controlled Prosecution and Maintenance**:

12.3.1 In relation to any Joint IP not Prosecuted and Maintained by either Adaptimmune or Bellicum under Clauses 12.2.1 and 12.2.2, the Parties shall mutually agree upon which Party shall have the right to Prosecute and Maintain such Patents.

12.4 **Failure to Prosecute**. If the Prosecuting Party elects not to Prosecute and Maintain any Patents under Clauses 12.2.1, 12.2.2 or 12.3.1, the Prosecuting Party shall provide at least […***…] written notice to Non-Prosecuting Party describing with specificity such election. Thereafter, Non-Prosecuting Party shall have the right, but not the obligation, to Prosecute and Maintain any such notified Patents, at […***…] and in its sole discretion. Prosecuting Party will provide reasonable cooperation and assistance to Non-Prosecuting Party in relation to transferring such Prosecution and Maintenance. Clause 12.4 shall continue to apply in relation to ongoing Prosecution and Maintenance of any transferred Patents.

12.5 **Comments from Non-Prosecuting Party.** The Prosecuting Party will provide the Non-Prosecuting Party with copies of any filed patent application, filings and other material correspondence with applicable governmental authorities relating to any Foreground IP, and will keep the Non-Prosecuting Party reasonably informed of the status of such Prosecution and Maintenance, including providing Non-Prosecuting Party with copies of all communications received from or filed in patent offices within a reasonable period of time after receipt by Prosecuting Party. Prosecuting Party shall also consult with Non-Prosecuting Party regarding such activities and shall reasonably consider Non Prosecuting Party's input with respect thereto. The Prosecuting Party shall be responsible for the fees of Prosecution and Maintenance of the Foreground IP for which it is responsible.

12.6 **Enforcement Rights for Infringement by Third Parties**.

12.6.1 **Notice**. Each Party shall promptly notify, in writing, the other Party upon learning of any actual or suspected infringement of the Patents within the Background IP or Foreground IP to the extent such actual or suspected infringement is relevant to any Selected Target, Candidate or a Therapy, or, of any claim of invalidity, unenforceability, or non-infringement of any Patents within the Background IP (to the extent relevant to any Selected Target, Candidate or Therapy) or Foreground IP (each an "**Infringement**").

12.6.2 **Enforcement Actions**.

(a) The Parties shall consult in good faith as to potential strategies to terminate suspected or potential Infringement, and shall mutually agree on which Party shall have primary responsibility for any enforcement action, provided, that where the Parties cannot reach agreement within […***…] of the date of notification of any actual or suspect Infringement (or any applicable shorter period of time before enforcement rights lapse), the Prosecuting Party in relation to the relevant Patent or Party owning or Controlling the relevant intellectual property right in the case of other Foreground IP or Background

IP shall have the first right, but not the obligation, to seek to abate any actual or suspected Infringement by a Third Party, or to file suit against any Third Party for Infringement. If the Prosecuting Party or owning or Controlling Party does not, within […***…] of receipt of a notice under Clause 12.4.1, take steps to abate the Infringement, or to file suit to enforce against such Infringement, then Non-Prosecuting Party shall have the right, but not the obligation, to take action to enforce against such Infringement; provided that if Prosecuting Party is diligently pursuing ongoing settlement discussions at the end of such […***…] period then Non-Prosecuting Party shall not be permitted to exercise such right unless such settlement discussions cease without reaching settlement or Prosecuting Party ceases to pursue such discussions diligently.

(b) The non-controlling Party shall reasonably cooperate with the Party controlling any such action to abate or enforce pursuant to this Clause 12.6.2 (as may be reasonably requested by the controlling Party and at the controlling Party's expense), including, if necessary, by being joined as a party; provided that the non-controlling Party shall be reimbursed by the controlling Party as to any costs or expenses incurred, and shall have the right to be represented by its own counsel at its own expense. The Party controlling any such action shall keep the other non-controlling Party updated with respect to any such action, including providing copies of all documents received or filed in connection with any such action.

12.6.3 **Settlement**. The Party controlling any such enforcement action described in Clause 12.6.2 (a "**Enforcement**"), at its sole discretion, may take reasonable actions to terminate any alleged infringement without litigation; provided, that if any such arrangement would adversely affect the non-controlling Party's rights under this Agreement or impose any obligation or requirement on the non-controlling Party, then that arrangement is subject to the non-controlling Party's prior written consent, which consent shall not to be unreasonably withheld, conditioned or delayed.

12.6.4 **Costs and expenses**. The Party controlling any Enforcement shall bear all of its costs and expenses, including litigation expenses, related to such Enforcement actions, except to the extent agreed otherwise in the Co-Commercialisation Agreement.

12.6.5 **Damages**. Unless otherwise mutually agreed by the Parties in writing, and subject to the respective indemnity obligations of the Parties set forth in Article 16, all damages, amounts received in settlement (including royalty, milestone or other payments), judgment or other monetary awards recovered in Enforcement with respect to activities of the Third Party that occurred prior to the effective date of such award shall be shared as follows:

(a) first, to reimburse the controlling Party for costs and expenses incurred under Clause 12.4.4; and

(b) second, shall be apportioned […***…]% to the controlling Party and […***…]% to the other (non-controlling) Party.

12.7 **Third Party Infringement Claims**.

12.7.1 **Notice**. In the event that a Third Party shall make any claim, give notice, or bring any suit or other inter parties proceeding against Bellicum or Adaptimmune, or any of their respective Affiliates, subcontractors or customers, for infringement or misappropriation of any Intellectual Property Rights with respect to the research, development, making, using, selling, offering for sale, import or export of any Candidate or Therapy or with respect to any Selected Target ("**Third Party Infringement Claim**"), in each case, the Party receiving notice of a Third Party Infringement Claim shall promptly notify the other Party in writing and provide all evidence in its possession pertaining to the claim or suit that it is entitled to disclose.

12.7.2 **Defense**. The Parties shall consult as to potential strategies to defend against any Third Party Infringement Claim, consistent with the overall goals of this Agreement, including by being joined as a party. The Parties shall cooperate with each other in all reasonable respects in the defense of any Third Party Infringement Claim or raising of any counterclaim related thereto. Subject to the respective indemnity obligations of the Parties set forth in Article 16, (a) Bellicum shall be primarily responsible for defending such Third Party Infringement Claim including selection of counsel, venue, and directing all aspects, stages, motions, and proceedings of litigation to the extent such Third Party Infringement Claim relates to a Bellicum Candidate, Therapy comprising a Bellicum Candidate or the Bellicum Target; and (b) Adaptimmune shall be primarily responsible for defending such Third Party Infringement Claim including selection of counsel, venue, and directing all aspects, stages, motions, and proceedings of litigation to the extent such Third Party Infringement Claim relates to an Adaptimmune Candidate, Therapy comprising an Adaptimmune Candidate or the Adaptimmune Target. If the Party with primary responsibility does not, within […***…] of receipt of a notice under Clause 12.5.2, take steps to defend the Third Party Infringement Claim, then to the extent that such Third Party Infringement Claim is brought against the other Party, the other Party shall have the right, but not the obligation, to take action to enforce or defend against such Third Party Infringement Claim; provided that if the Party with primary responsibility is diligently pursuing ongoing settlement discussions at the end of such […***…] period, then other Party shall not be permitted to exercise such right unless such settlement discussions cease without reaching settlement or such responsible Party ceases to pursue such settlement discussions diligently. At the controlling Party's request and expense, the non-controlling Party shall cooperate with the controlling Party in connection with any such defense and counterclaim, provided that the non-controlling Party shall be reimbursed by the controlling Party as to any reasonable and documented costs or expenses, and shall have the right to be represented by its own counsel at its own expense. Any counterclaim or other similar action by a Party, to the extent such action involves any enforcement of rights under the Licensed Intellectual Property, Foreground IP or Joint IP, will be treated as an Enforcement subject to Clause 12.6. Nothing in this Clause 12.7 shall prevent any Party from complying with the terms of any court order relating to or arising out of any Third Party Infringement Claim.

12.7.3 **Settlement**. If any such defense under Clause 12.7.2 would adversely affect the other Party's rights under this Agreement or impose a financial obligation upon the other Party or grant rights in respect, or affect the validity or enforceability, of the other Party's Patents or any Foreground IP, then any settlement, consent judgment or other voluntary final disposition of such Third Party Infringement Claim shall not be entered into without the consent of the other Party (such consent not to be unreasonably withheld, conditioned or delayed).

12.7.4 **Costs and Expenses**. The Party controlling the defense of any Third Party Infringement Claim shall bear all costs and expenses, including litigation expenses, to defend against any Third Party Infringement Claim.

ARTICLE 13 CONFIDENTIALITY

13.1 **Non-use and Non-disclosure of Confidential Information**. During the Term, and for the longer of (a) a period of […***…] from the Effective Date, or (b) […***…] after the date of expiration or termination of this Agreement, a Party shall (i) except to the extent permitted by this Agreement or otherwise agreed to by the Parties in writing, keep confidential and not disclose to any Third Party any Confidential Information of the other Party; (ii) except in connection with activities contemplated by, the exercise of rights permitted by or in order to further the purposes of, this Agreement or otherwise agreed to by the Parties in writing, not use for any purpose any Confidential Information of the other Party; and (iii) take all reasonable precautions to protect the Confidential Information of the other Party (including all precautions a Party employs with respect to its own confidential information of a similar nature).

13.2 **Exclusions Regarding Confidential Information**. Notwithstanding anything set forth in this Article 13 to the contrary, the obligations of Clause 13.1 above shall not apply to the extent that the Party seeking the benefit of the exclusion from the obligations set forth in Clause 13.1 (the receiving Party) can demonstrate that the Confidential Information of the other Party:

(a) was already known to the receiving Party, other than under an obligation of confidentiality, at the time of receipt by the receiving Party;

(b) was generally available to the public or otherwise part of the public domain at the time of its receipt by the receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its receipt by the receiving Party other than through any act or omission of the receiving Party or those to whom the receiving Party discloses in breach of this Agreement;

(d) was received by the receiving Party without an obligation of confidentiality from a Third Party having the right (to the knowledge of the receiving Party) to disclose such information without restriction;

(e) was independently developed by or for the receiving Party without use of or reference to the Confidential Information of the other Party; or

(f) was released from the restrictions set forth in this Agreement and imposed on the receiving Party by express prior written consent of the other Party.

13.3 **Authorised Disclosures of Confidential Information**. Notwithstanding the foregoing, a receiving Party may use and disclose the Confidential Information of the other Party as follows:

(a) if required by law, rule or governmental regulation or by judicial order, including as may be required in connection with any filings made with, or by the disclosure policies of, a major stock exchange; provided that the receiving Party seeking to disclose the Confidential Information of the other Party (i) uses all reasonable efforts to inform the other Party of such requirement in writing prior to making any such disclosures and cooperates with the other Party's efforts to avoid or limit disclosure, or to seek a protective order, confidential treatment or other appropriate remedy (including redaction) and (ii) whenever possible, requests confidential treatment of such information that is disclosed;

(b) to the extent such use and disclosure is reasonably required in the Prosecution and Maintenance of a Patent within the Foreground IP in accordance with this Agreement; provided that such proposed disclosure is provided to the other Party in writing in advance and the other Party approves such disclosure;

(c) as reasonably necessary to obtain or maintain any Regulatory Approval, including to conduct preclinical studies and Clinical Trials and for pricing approvals, for any Therapies, provided, that, the disclosing Party shall take all reasonable steps to limit disclosure of the Confidential Information outside such Regulatory Agency and to otherwise maintain the confidentiality of the Confidential Information;

(d) to take any lawful action that it deems necessary to protect its interest under, or to enforce compliance with the terms and conditions of, this Agreement; or

(e) to the extent necessary, to permitted Sublicensees, collaborators (including collaborators, and potential collaborators, relating to use of Therapies in combination with other Therapies), vendors, consultants, agents, attorneys, contractors and clinicians under written agreements of confidentiality at least as restrictive as those set forth in this Agreement (or as restrictive as reasonably possible), who have a need to know such information in connection with such Party performing its obligations or exercising its rights under this Agreement. Further the receiving Party may disclose Confidential Information

to existing or potential acquirers, merger partners, permitted sub-contractors and professional advisors only to the extent strictly necessary for the relevant transaction with such Third Parties, and provided in each case that such Third Parties agree to maintain the Confidential Information under written agreements of confidentiality at least as restrictive as those set forth in this Agreement.

13.4 **Terms of this Agreement**. The Parties agree that this Agreement and the terms hereof will be considered Confidential Information of both Parties.

13.5 **No License**. As between the Parties, Confidential Information disclosed hereunder shall remain the property of the disclosing Party. Disclosure of Confidential Information to the other Party shall not constitute any grant, option or license to the other Party, beyond those licenses expressly granted under Articles 8 and 17, under any patent, trade secret or other rights now or hereinafter held by the disclosing Party.

13.6 **Change of Control**. In the event of a Change of Control of a Party, and prior to any termination of the Agreement in accordance with Clause 17.5.4, the Party undergoing such Change of Control will adopt reasonable procedures to (i) prevent use of the other Party's Confidential Information by Acquiring Third Party or in any clinical or commercial program of such Acquiring Third Party; (ii) otherwise ensure compliance with the confidentiality obligations set out in this Clause 13; and (iii) keep the other Party's Confidential Information separate from any information relating to Acquiring Third Party's […***…]. The Party undergoing such Change of Control shall require Acquiring Third Party to agree to terms of non-disclosure and non-use that are at least as restrictive as those set out in this Article 13, prior to disclosure of any of the other Party's Confidential Information to such Acquiring Third Party. Any right to disclose such Confidential Information of the other Party (excluding terms of this Agreement) to the Acquiring Third Party shall only apply after expiry of a period of […***…] from the date of such Change of Control or, if earlier, confirmation in writing from the other Party that it will not terminate the Agreement under Clause 17.5.4.

ARTICLE 14 PUBLICITY; PUBLICATIONS; USE OF NAME

14.1 **Publicity**. The Parties shall agree and issue a joint press release, as set out in Exhibit 5, concerning the execution of this Agreement on or within fourteen (14) days of the Effective Date. The text of any other press releases, public announcements or PowerPoint presentations concerning this Agreement, the subject matter hereof, or the research, development or commercial results of Therapies hereunder (a "**Release**") shall be addressed pursuant to Clauses 14.2 - 14.5, inclusive, as applicable.

14.2 **Releases during any Co-Development Plan**. Subject to Clause 14.3, and during the Co-Development Term, neither Party may issue a Release without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned or delayed, and any consent or refusal shall be provided within […***…] of request for such consent. In the absence of any reply to a request for consent (where delivery of such request has been confirmed) within such […***…] period, consent shall be deemed given. Releases related to any activities under the Co-Commercialisation Agreement will be addressed in the Co-Commercialisation Agreement.

14.3 **Releases required by Law or Regulation**. Each Party may issue any Release it is required to issue by Applicable Law (including requirements of any law or rule imposed by the US Securities and Exchange Commission or any securities exchange). For clarification, where any Party reasonably believes, after consultation with outside legal counsel or General Counsel, that any Release is required in order for it to comply with any securities exchange requirement, including a required release of any material information or an obligation to correct any market misstatement, such Party shall be entitled to issue such Release in accordance with such reasonable belief, without providing the other Party with any prior notification of such Release.

14.4 **Publications**. Notwithstanding Clauses 14.2 and 14.3, both Parties recognise that the publication or disclosure of papers, presentations, abstracts or any other written or oral

presentations regarding results of and other information regarding the Candidates and Therapies may be beneficial to both Parties, provided that such publications or presentations are subject to reasonable controls to protect Confidential Information, the patentability of inventions and other commercial considerations. Accordingly, the following shall apply:

14.4.1 Any proposed paper, presentation, or other public disclosure regarding any Candidate or Therapy ("**Publication**") by either Party ("**Publishing Party**") shall be provided to the other Party ("**Non-Publishing Party**") for review. The Non-Publishing Party shall review such proposed Publication within […***…] of receipt and may comment on and/or object to any content of the proposed Publication.

14.4.2 The Parties shall work together to resolve any comments and objections of the Non-Publishing Party on a timely basis and neither Party shall unreasonably withhold its consent to any proposed Publication, save that a Non-Publishing Party may request deletion of any of its Confidential Information from any such proposed Publication.

14.4.3 No Publication shall be made unless the contents of such Publication are mutually agreed between the Parties.

14.5 **No Use of Names**. Except as expressly provided herein, no right, express or implied, is granted by the Agreement to use in any manner the name of "Adaptimmune" or "Bellicum" or any of their Affiliates, or any other trade name, symbol, logo or trademark of the other Party or its Affiliates, in connection with the performance of this Agreement.

ARTICLE 15 REPRESENTATIONS

15.1 **Mutual Representations and Warranties**. Each Party represents and warrants to the other Party that as of the Effective Date:

15.1.1 it is validly organized under the laws of its jurisdiction of incorporation;

15.1.2 it has obtained all necessary consents, approvals and authorizations of all governmental authorities and other persons or entities required to be obtained by it in connection with this Agreement;

15.1.3 the execution, delivery and performance of this Agreement have been duly authorised by all necessary corporate action on its part;

15.1.4 it has the legal right and power to enter into this Agreement and to fully perform its obligations hereunder;

15.1.5 the performance of its obligations under this Agreement will not conflict with such Party's charter or incorporation documents or any Third Party agreement, contract or other arrangement to which such Party is a party;

15.1.6 it will comply with all Applicable Laws in the performance of this Agreement;

15.1.7 it has not received any written letter threatening infringement or alleging any infringement in relation to any Background IP which to its actual knowledge will be required for performance of the POC Plan or any Co-Development Plan;

15.1.8 it will not use in the performance of this Agreement any person or personnel (whether directly or through a subcontractor) that has been debarred or otherwise prevented or restricted from performing any clinical research or has been convicted of any offence related to any Clinical Trial in any jurisdiction or otherwise prevented from performing any Clinical Trial by any Regulatory Authority; and

15.1.9 it has the legal right and power to extend the rights and licenses granted to the other Party hereunder.

15.2 **Disclaimers**. EXCEPT AS OTHERWISE EXPRESSLY STATED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND WITH RESPECT TO PATENTS, KNOW-HOW, MATERIALS OR CONFIDENTIAL INFORMATION SUPPLIED BY IT TO THE OTHER PARTY HEREUNDER, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IN PARTICULAR BOTH PARTIES ACCEPT THAT, GIVEN THE NATURE OF THE CANDIDATES AND THERAPIES BEING GENERATED UNDER THIS AGREEMENT, THERE CAN BE NO GUARANTEE THAT ANY CANDIDATE CAN BE SUCCESSFULLY GENERATED OR THAT IF GENERATED, THE CANDIDATE OR ASSOCIATED THERAPY WILL BE CAPABLE OF OBTAINING REGULATORY APPROVAL.

ARTICLE 16 INDEMNIFICATION

16.1 **Indemnification by Adaptimmune**. Subject to Clause 16.3, Adaptimmune shall indemnify, defend and hold Bellicum, its Affiliates, their Sublicensees and their respective directors, officers, and employees and the successors and assigns of any of the foregoing harmless from and against any and all liabilities, damages, settlements, penalties, fines, costs or expenses (including reasonable attorneys' fees and other reasonable expenses of litigation) (collectively, "**Loss**" or "**Losses**") to the extent arising out of or in connection with any Third Party claims, suits, actions, demands or judgments ("**Third Party Claims**") relating to (a) the negligence or willful misconduct of Adaptimmune or its Affiliates, Sublicensees or any of its or their sub-contractors; and (b) any breach of Applicable Laws by Adaptimmune or its Affiliates, Sublicensees or any of its or their sub-contractors except, in each case, to the extent caused by the negligence or willful misconduct of Bellicum or its Affiliates or breach of this Agreement by Bellicum or its Affiliates.

16.2 **Indemnification by Bellicum**. Subject to Clause 16.3, Bellicum shall indemnify, defend and hold Adaptimmune, its Affiliates and their respective directors, officers, and employees and the successors and assigns of any of the foregoing harmless from and against any and all Losses to the extent arising out of or in connection with any Third Party Claims relating to (a) the negligence or willful misconduct of Bellicum, its Sublicensees or any sub-contractor of Bellicum (including its Affiliates); and (b) any breach of Applicable Laws by Bellicum, its Affiliates, Sublicensees or sub-contractors except, in each case, to the extent caused by the negligence or willful misconduct of Adaptimmune or its Affiliates or breach of this Agreement by Adaptimmune or its Affiliates.

16.3 **Procedure**. If a Party intends to claim indemnification under this Agreement (the "**Indemnitee**"), it shall promptly notify the other Party (the "**Indemnitor**") in writing of such alleged Loss and the Third Party Claim. The Indemnitor shall have the right to control the defense thereof with counsel of its choice as long as such counsel is reasonably acceptable to Indemnitee. Any Indemnitee shall have the right to retain its own counsel at its own expense for any reason in connection with such Third Party Claim, provided, however, that if the Indemnitee shall have reasonably concluded, based upon a written opinion from outside legal counsel, that there is a conflict of interest between the Indemnitor and the Indemnitee in the defense of such action, the Indemnitor shall pay the fees and expenses of one law firm serving as counsel for the Indemnitee in relation to such Third Party Claim. The Indemnitee, its employees and agents, shall reasonably cooperate with the Indemnitor and its legal representatives in the investigation of any Third Party Claims covered by this Agreement. The obligations of this Article 16 shall not apply to any settlement of any Third Party Claims if such settlement is effected without the consent of both Parties, which shall not be unreasonably withheld or delayed. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any such action, to the extent prejudicial to its ability to defend such action, shall relieve the Indemnitor of any obligation to the Indemnitee under this Clause 16.3. It is understood that only Bellicum and Adaptimmune may claim indemnity under this Agreement (on its own behalf or on behalf of its Indemnitees), and other Indemnitees may not directly claim indemnity hereunder.

16.4 **Insurance**.

16.4.1 **Insurance Coverage**. Each Party shall obtain and maintain comprehensive general liability insurance customary in the industry for companies of similar size conducting similar business.

16.4.2 **Evidence of Insurance**. No earlier than […***…] after signing this Agreement, each Party shall provide, upon request therefor, the other Party with its certificate of insurance evidencing the insurance coverage set forth Clause 16.4.1.

16.4.3 **Therapy / Clinical Trial Liability Insurance**. Commencing not later than first patient enrolment in a Clinical Trial using the first Therapy comprising the Bellicum Candidate, Bellicum shall have and maintain such type and amounts of Therapies / clinical trial liability insurance covering the development of Therapies as is normal and customary in the industry generally for parties similarly situated, but, in any event, with a minimum combined single limit per occurrence for clinical trials liability as follows: a minimum limit of […***…] US dollars ($[…***…]) for any period during which Bellicum or any of its Sublicensees is conducting a clinical trial(s) with any Therapy(s) or as otherwise required in order to comply with Applicable Laws. Commencing not later than first patient enrolment in a Clinical Trial using the first Therapy comprising the Adaptimmune Candidate, Adaptimmune shall have and maintain such type and amounts of Therapies / clinical trial liability insurance covering the development of Therapies as is normal and customary in the industry generally for parties similarly situated, but, in any event, with a minimum combined single limit per occurrence for clinical trials liability as follows: a minimum limit of […***…] US dollars ($[…***…]) for any period during which Adaptimmune or any of its Sublicensees is conducting a clinical trial(s) with any Therapy(s) or as otherwise required in order to comply with Applicable Laws. Such insurance policies of each Party shall be primary insurance.

16.5 **Limitation of Damages**. NEITHER PARTY HERETO WILL BE LIABLE FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, INCLUDING LOST PROFITS, ARISING FROM OR RELATING TO THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF SUCH DAMAGES, EXCEPT IN RESPECT OF ANY BREACH OF (1) A PARTY'S OBLIGATIONS UNDER ARTICLE 12 OR 13, OR (2) INDEMNIFICATION OBLIGATIONS UNDER THIS ARTICLE 16 FOR THIRD PARTY CLAIMS. FOR THE AVOIDANCE OF DOUBT, NOTHING IN THIS CLAUSE SHALL LIMIT OR EXCLUDE ANY LIABILITY TO A THIRD PARTY FOR FRAUD BY ANY PARTY OR ANY LIABILITY ARISING AS A RESULT OF PERSONAL INJURY OR DEATH CAUSED BY NEGLIGENCE OF ANY PARTY. NOTHING IN THIS CLAUSE 16.5 SHALL LIMIT EITHER PARTY'S RIGHT TO PURSUE AND OBTAIN EQUITABLE RELIEF.

16.6 **Therapy Recall**. Bellicum shall be responsible for investigating any SUSAR or other complaint in relation to any Therapy comprising a Bellicum Candidate. Adaptimmune shall be responsible for investigating any SUSAR or other complaint in relation to any Therapy comprising an Adaptimmune Candidate. The responsible Party shall report its finding to the JDC or JCC, as relevant, once it has identified the reason for such complaint, SUSAR or has identified any requirement to recall any Therapy or any batch of Therapy. The responsible Party shall be responsible for carrying out any Therapy recall but shall keep the JDC or JCC, as relevant, informed of the status and process for such recall including any material correspondence with any Regulatory Authority. Where such recall is during the performance of any POC Plan or Co-development Plan, the costs associated with such recall will be shared between the Parties in the same way as other Co-Development Plan costs unless (a) such recall is due to any failure of responsible Party arising out of the manufacture or supply of Therapy or any part of the Therapy; or (b) any such costs are covered by applicable insurance policies. The costs associated with any recall during commercialisation of any Therapy and after Completion of the relevant Co-Development Plan shall be shared in accordance with the terms of the Co-Commercialisation Agreement or if none, Exhibit 3.

ARTICLE 17 TERM AND TERMINATION

17.1 **Term**. The term of this Agreement (the "**Term**") shall commence on the Effective Date and, unless sooner terminated as provided in this Article 17, shall continue in full force and effect, on a country-by-country and Therapy-by-Therapy basis until such Therapy ceases being commercialized by either Party, at which time this Agreement shall expire with respect to such Therapy in such country (except for such provisions of this Agreement as continue beyond its natural expiration). The Term shall expire on the date this Agreement has expired in its entirety with respect to all Therapies in all countries in the world.

17.2 **Opt-out Rights**. Following the start date of any Co-Development Plan of the other Party or the start date of any Co-Commercialisation Agreement, and without prejudice to the termination rights set out in Clauses 17.3 - 17.5 below, a Party ("**Notifying Party**") may notify the other Party ("**Non-notifying Party**") in writing that it wishes to opt-out of its funding obligation under any such Co-Development Plan or Co-Commercialisation Agreement, as appropriate ("**Opt-out Notice**"). Any Opt-out Notice shall be subject to the following:

17.2.1 Any Opt-out Notice may only be provided by the Notifying Party in relation to, in the case of Adaptimmune, any Bellicum Candidate or Bellicum Therapy, and in the case of Bellicum, any Adaptimmune Candidate or Adaptimmune Therapy (such Candidate or Therapy in relation to which the Opt-out Notice has been provided, the "**Opt-Out Candidate/ Therapy**").

17.2.2 The Opt-out Notice shall take effect on the date notified by the Notifying Party in the Opt-out Notice, such date to be no earlier than […***…] from date of receipt of Opt-out Notice by Non-notifying Party ("**Opt-out Date**"). During such period between delivery of the Opt-out Notice and the Opt-out Date, the Non-notifying Party may only incur expenses in accordance with the then-current budget for such Opt-Out Candidate/ Therapy, and the Notifying Party shall continue to bear its share of expenses for such Opt-Out Candidate/ Therapy in accordance with Article 10.

17.2.3 From and after the Opt-out Date:

(a) The Notifying Party (including its Affiliates) shall have no further obligation to reimburse the costs arising under the Co-Development Plan for such Opt-Out Candidate/ Therapy, save that the obligation to reimburse under Section 10.2 shall continue in relation to any costs and expenses incurred prior to the Opt-out Date.

(b) The Notifying Party shall have no further license under the Non-notifying Party's intellectual property rights in such Opt-Out Candidate/ Therapy, save as required for any remaining performance under Section 17.2.3(g) below.

(c) The Notifying Party shall have no further right to commercialize or develop (including conducting any clinical trials) such Opt-Out Candidate/ Therapy.

(d) The Notifying Party shall have no right or obligation to share in any profit or loss, respectively, arising from sale of such Opt-Out Candidate/ Therapy, save that any right or obligation to share in any profit or loss arising from the sale of such Opt-Out Candidate/ Therapy prior to the Opt-out Date shall continue as provided under this Agreement or under the Co-Commercialisation Agreement (if separate).

(e) The Non-notifying Party shall continue to be licensed and entitled to proceed with the development or commercialisation of such Opt-Out Candidate/ Therapy in accordance with Article 8 of this Agreement.

(f) The continuing Non-notifying Party shall be fully responsible for the remaining development and commercialization of such Opt-Out Candidate/ Therapy, save as provided in Section 17.2.3(g) below;

(g) The Non-notifying Party may request that the Notifying Party continue to perform certain of its obligations under the Co-Development Plan for such Opt-Out Candidate/ Therapy, particularly to the extent such obligations relate to any Reserved Activity of the Notifying Party, or to the Adaptimmune Technology or Bellicum Technology, as applicable to the Notifying Party, or to any safety reporting by the Notifying Party that has relevance to such Opt-Out Candidate/ Therapy. At the Non-notifying Party's sole expense (for resources expended by the Notifying Party, including payments for personnel on an FTE basis, at the FTE rates set forth in Exhibit 2), the Notifying Party shall perform its obligations under the Co-Development Plan, including with respect to such Reserved Activities and/or to the Adaptimmune Technology or Bellicum Technology, as applicable to the Notifying Party, as reasonably and specifically requested by the Non-notifying Party in writing, and in each case as reasonably necessary for the further development and commercialization of such Opt-Out Candidate/ Therapy. The Notifying Party shall ensure that it transfers to the Non-notifying Party, at the Non-notifying Party's expense, any items and rights controlled by the Notifying Party that are necessary for the Non-notifying Party to advance such Opt-Out Candidate/ Therapy on its own through development and commercialization; provided that (a) this obligation does not include […***…]; and (b) this obligation does not include […***…]. Performance of activities (excluding co-funding activities) by the Notifying Party pursuant to this Clause 17.2.3(g) shall continue to be made in accordance with the provisions of this Agreement and the applicable Co-Development Plan.

(h) Provisions of this Agreement as are applicable to the continuing rights and activities of either Party following the Opt-out Date, for any Candidate or Therapy of a Party in relation to which no Opt-out Notice has been provided, shall continue in full force and effect, including in relation to any Opt-Out Candidate/ Therapy, and shall include Article 5, Article 6, Article 8 (as amended in this Clause 17.2.3), Article 9, Article 11 (in relation to any payments which remain due and owing or are payable under Clause 17.2.4 below), Article 12, Article 13, and Article 16. The provisions of Article 2, to the extent they relate to an Opt-Out Candidate/ Therapy, shall cease to apply, save that Clause 2.9 shall continue and survive.

17.2.4 Non-notifying Party will pay to Notifying Party […***…] for its use of the Notifying Party's Licensed Intellectual Property in relation to an Opt-Out Candidate/ Therapy. The […***…] shall be […***…] until […***…]. For clarity, such […***…] shall be payable […***…].

If the Parties enter into a related agreement that includes non-financial terms and conditions regarding use of the Notifying Party's Licensed Intellectual Property (which shall be consistent with the terms and conditions of this Agreement), the

[…***…] set forth above (but no other financial terms) shall be incorporated into such agreement.

17.3 **Termination by Either Party for Material Breach**. Either Party may terminate this Agreement (i) in its entirety, (ii) with respect to any Exclusive License granted by such Party, (iii) with respect to a given Selected Target (and Candidates directed to such Selected Target), or (iv) on a country-by-country basis, by written notice delivered to the other Party for any material breach of this Agreement by the other Party if, in the case of remediable breach, such material breach is not cured within sixty (60) days (thirty (30) days for payment defaults) after the breaching Party receives written notice of such breach from the non-breaching Party describing such breach and demanding its cure; provided, that if such breach is not capable of being cured within such 90-day (or 30-day) period, the cure period shall be extended for such amount of time that the Parties may agree in writing is reasonably necessary to cure such breach, so long as (1) the breaching Party is making Commercially Reasonable Efforts to do so, and (2) the Parties agree on an extension within such 90-day (or 30-day) period. For clarity, this Agreement may be terminated in its entirety under this Clause 17.3 only if the material breach affects the fundamental purpose of this Agreement. Notwithstanding anything to the contrary herein, if the allegedly breaching Party in good faith either disputes (a) whether a breach is material or has occurred or (b) the alleged failure to cure or remedy such material breach, and provides written notice of that dispute to the other Party within the above time periods, then the matter will be addressed under the dispute resolution provisions in Article 18, and the notifying Party may not so terminate this Agreement until it has been determined under Article 18 that the allegedly breaching Party is in material breach of this Agreement, and such breaching Party further fails to cure such breach within 90-days (or such longer period as determined by the arbiter of such dispute resolution) after the conclusion of that dispute resolution procedure.

17.4 **Termination by Either Party for Insolvency or Bankruptcy**. Either Party may terminate this Agreement effective ten (10) business days after delivery of written notice to the other Party upon the liquidation, dissolution, winding-up, insolvency, bankruptcy, or filing of any petition therefor, appointment of a receiver, custodian or trustee, or any other similar proceeding, by or of the other Party where such petition, appointment or similar proceeding is not dismissed or vacated within ninety (90) calendar days. All rights and licenses granted pursuant to this Agreement are, for purposes of Clause 365(n) of Title 11 of the United States Code or any foreign equivalents thereof (as used in this Clause 20.3, "**Title 11**"), licenses of rights to "intellectual property" as defined in Title 11. Each Party in its capacity as a licensor hereunder agrees that, in the event of the commencement of bankruptcy proceedings by or against such bankrupt Party under Title 11, (a) the other Party, in its capacity as a licensee of rights under this Agreement, shall retain and may fully exercise all of such licensed rights under this Agreement (including as provided in this Clause 17.4) and all of its rights and elections under Title 11, and (b) the other (licensee) Party shall be entitled to a complete duplicate of all embodiments of such intellectual property, and such embodiments, if not already in its possession, shall be promptly delivered to the other (licensee) Party (i) upon any such commencement of a bankruptcy proceeding, unless the bankrupt Party elects to continue to perform all of its obligations under this Agreement, or (ii) if not delivered under (i), immediately upon the rejection of this Agreement by or on behalf of the bankrupt Party.

17.5 **Termination by Either Party, or Automatically Under Clause 3.5**

17.5.1 Bellicum may terminate:

(a) the Exclusive License granted by Adaptimmune relating to any Bellicum Candidate at any time by providing written notice to Adaptimmune, such termination to be effective ninety (90) days after provision of such notice; and

(b) the Exclusive License relating to any particular Adaptimmune Candidate at any time after start of Phase II Clinical Trials for such Adaptimmune Candidate by providing written notice to Adaptimmune, where Adaptimmiune has materially ceased the commercialisation or development of such Adaptimmune Candidate or Adaptimmune Therapy comprising such Adaptimmune Candidate, and such cessation is not due to significant safety or efficacy concerns with the relevant Adaptimmune

Therapy, such termination to be effective ninety (90) days after provision of such notice.

17.5.2 Adaptimmune may terminate

(a) the Exclusive License granted by Bellicum relating to any Adaptimmune Candidate at any time by providing written notice to Bellicum; such termination to be effective ninety (90) days after provision of such notice; and

(b) the Exclusive License relating to any particular Bellicum Candidate at any time after start of Phase II Clinical Trials for such Bellicum Candidate by providing written notice to Bellicum, where Bellicum has materially ceased the commercialisation or development of such Bellicum Candidate or Bellicum Therapy comprising such Bellicum Candidate, and such cessation is not due to significant safety or efficacy concerns with the relevant Bellicum Therapy, such termination to be effective ninety (90) days after provision of such notice.

17.5.3 Either Party (in the case of the following clauses (a) and (b)), and the licence-granting Party (in the case of the following clause (c)) may terminate

(a) Any Exclusive License granted to it, and such Party's associated Co-Development Plan, where it believes that continuing with the applicable Candidate and Therapy comprising such Candidate causes or is likely to cause significant safety or efficacy concerns, and following written notification of such concerns to the other Party. Any termination under this Clause 17.5.3(a) shall be effective ninety (90) days after the other Party's receipt of such notice;

(b) The Agreement in accordance with Clause 3.4, on provision of 30 days written notice to the other Party; and

(c) The Exclusive Licence under which a licence has been granted to the other Party to use any of such Party's Licensed Intellectual Property, if the other Party or its Affiliates or Sublicensees commences proceedings (whether before a regulatory or administrative body or a court) anywhere in the world, or voluntarily assists any Third Party in commencing or participating in such proceedings (whether before a regulatory or administrative body or a court) alleging that any claim in any Patent within such Licensed Intellectual Property that is licensed to the other Party by such Party (including the Adaptimmune Background IP or Bellicum Background IP, as applicable) is invalid, unenforceable or otherwise not patentable, and such proceedings are not withdrawn within thirty (30) days after receipt of a written notice to withdraw. Notwithstanding the foregoing, a licence-granting Party shall have no right to terminate any Exclusive License pursuant to this Clause 17.5.3(c) if any proceedings are brought as a defense (including an affirmative defense) in relation to a claim of infringement brought against the other Party or its Affiliates or Sublicensees.

17.5.4 A Party may terminate the Exclusive License(s) granted to the Party undergoing a Change of Control (the "**CoC Party**"), such termination being subject to the following: (a) provision of written notice to such Party by the CoC Party within fourteen (14) days after the Change of Control is consummated; and (b) provision by such Party to the CoC Party of written notice of termination of such Exclusive License(s) granted by such Party within thirty (30) days of becoming notified of the Change of Control of the CoC Party; provided that such termination right will apply only with respect to any Candidate(s) that has not been designated as a Joint Selected Candidate of the CoC Party (i.e., a Candidate that has not been selected by the JDC for advancement to pre-clinical and clinical development) at the date of consummation of the Change of Control. For clarity, and with respect to Joint

Selected Candidates of the CoC Party that exist at the date of consummation of the Change of Control, any Exclusive Licenses granted to the CoC Party for its existing Joint Selected Candidates shall remain in full force and effect after such Change of Control. To the extent the Party that is not the CoC Party determines earlier than expiry of the period of thirty (30) days from being notified of such Change of Control that it will not terminate the Exclusive License(s) granted by it, it will notify the CoC Party accordingly in writing, and such right to terminate the Exclusive License(s) granted to the CoC Party for such Change of Control shall cease on receipt of such written notice by the CoC Party.

17.5.5 Termination of the Agreement will also occur automatically in accordance with Clause 3.5.

17.6 **Accrued Rights and Obligations**. Expiration or termination of this Agreement in its entirety, or with respect to a particular Exclusive License, a given Therapy or Candidate, or a given country for any reason, shall not release either Party hereto from any liability which, as of the effective date of such expiration or termination, had already accrued to the other Party or which is attributable to a period prior to such termination, nor preclude either Party from pursuing any rights and remedies it may have hereunder or at law or in equity which accrued or are based upon any event occurring prior to the effective date of such expiration or termination.

17.7 **Effects of Termination**. The effects of termination set forth in this Clause 17.7 shall apply either with respect to this Agreement in its entirety, if the Agreement is terminated in its entirety, or only with respect to a specific Therapy, Candidate or Exclusive License or country, if this Agreement is only terminated with respect to a specific Therapy, Candidate or Exclusive License or country, in all cases as applicable. For clarity, this Clause 17.7 shall not apply to any given Therapy and country with respect to which the Term naturally expires.

17.7.1 **Termination of Licenses**.

(a) Upon termination of a particular Exclusive License granted by Adaptimmune pursuant to Clause 17.3, Clause 17.5, such Exclusive License and the related Development License to any Selected Target, Therapy or Candidate covered by such Exclusive License shall terminate as of the effective date of such termination. Bellicum shall ensure that it transfers to Adaptimmune all items and rights necessary for Adaptimmune to advance on its own, through development and commercialization, the Candidate/ Therapy that was the subject of the terminated Exclusive License. The exclusivity to the relevant Target under Clause 4.1.2 shall also cease as of the effective date of such termination;

(b) Upon termination of a particular Exclusive License granted by Bellicum pursuant to Clause 17.3, Clause 17.5, such Exclusive License and the related Development License to any Selected Target, Therapy or Candidate covered by such Exclusive License shall terminate as of the effective date of such termination. Adaptimmune shall ensure that it transfers to Bellicum all items and rights necessary for Bellicum to advance on its own through development and commercialization the Candidate/ Therapy that was the subject of the terminated Exclusive License. The exclusivity to the relevant Target under Clause 4.1.2 shall also cease as of the effective date of such termination; and

(c) Upon termination of the Agreement in its entirety by either Party pursuant to Clause 17.3, Clause 17.4, Clause 17.5.4 or Clause 17.5.3(b), or an automatic termination of the Agreement as described in Clause 17.5.5, all licenses and options granted under this Agreement shall terminate as of the effective date of such termination.

17.7.2 **Clinical Trials**. The Parties shall ensure that where termination of any Exclusive License or this Agreement occurs during any Clinical Trial, that any such Clinical Trial shall be wound down in accordance with the protocol for such Clinical Trial and in such a way as to minimize any patient harm and at all times in accordance with all Applicable Laws.

17.7.3 **Return of Confidential Information**. Following expiry or any early termination of this Agreement, the Party that has Confidential Information of the other Party shall to the extent reasonably possible destroy (at such Party's written request) or put beyond use all such Confidential Information in its possession as of the effective date of expiration or termination (with the exception of one copy of such Confidential Information, which may be retained by the legal department of the Party that received such Confidential Information solely for purposes of ensuring compliance with confidentiality obligations), provided that each Party may retain and continue to use such Confidential Information of the other Party to the extent necessary to exercise any surviving rights, licenses or obligations under this Agreement or any obligation under Applicable Laws. This clause shall not require return or destruction of any Confidential Information which is held on back-up servers or archive systems, provided such back-ups have been made as part of the routine business of a Party and such back-ups are not accessible other than by members of the IT team at such Party. Any retained Confidential Information will continue to be subject to the confidentiality provisions of this Agreement.

17.7.4 **Inventory at Termination**. Subject to Clause 17.7.5, upon termination of this Agreement or any Exclusive License under Clause 17.3, Clause 17.4, Clause 17.5.1(b) or Clause 17.5.2(b), and for a period of […***…] months following such termination, any non-breaching Party and its permitted Affiliates and Sublicensee/s shall have the right to sell or otherwise dispose of all inventory of Therapies in all countries then in its stock, subject to payment of its share of co-commercialisation receipts due under this Agreement, and any other applicable provisions of this Agreement, and the other Party covenants not to sue such non-breaching Party or its permitted Sublicensee/s for infringement under, or misappropriation of, any of the Licensed Intellectual Property that were licensed by other Party to non-breaching Party immediately prior to such termination with respect to such activities conducted by non-breaching Party or its permitted Sublicensee/s pursuant to this Clause 17.7.4. To the extent any continuing requirement to supply exists after such termination, the Parties may mutually agree that the non-breaching Party can continue to supply to the breaching Party to fulfill any such continuing supply requirement.

17.7.5 **Right to take over Manufacture, Sell and Supply**. On termination of any Exclusive License where such termination is for a material breach by the other Party under Clause 17.3 or in the event of insolvency under Clause 17.4 or under Clause 17.5.1(b) or Clause 17.5.2(b) or under Clause 17.5.3(c), and upon the Parties' negotiation and execution of a corresponding written agreement containing mutually agreed, commercially reasonable terms and conditions pursuant to Clause 17.7.6, the terminating Party shall be entitled to take over the manufacture, supply and development of the relevant Joint Selected Candidate and any Therapy utilising the Joint Selected Candidate that are the subject of the terminated Exclusive License. The other (terminated) Party shall provide to the terminating Party reasonable assistance, documentation (including manufacturing process information) as may be reasonably required by the terminating Party for the ongoing manufacture and supply of the relevant (terminated) Joint Selected Candidate or Therapy (to the extent that the terminated Party can do so without violating its obligations to Third Parties), at terminating Party's sole cost and expenses (subject to […***…] as set out below). Such assistance shall include, to the extent relevant and depending on the stage of research and development of the relevant (terminated) Therapy or Joint Selected Candidate:

(a) transfer of any INDs and Regulatory Approvals regarding the terminated Therapy or Joint Selected Candidate held by other (terminated) Party to the terminating Party (which terminating Party shall promptly accept);

(b) provision of all CMO and CRO details and other sub-contractor details regarding the terminated Therapy or Joint Selected Candidate, where not already known to terminating Party, and where reasonably possible transfer of all related sub-contractor agreements (to the extent such transfer is requested by terminating Party), subject where relevant to the consent of any relevant

Third Party;

(c) provision of all master drug files and records or documentation regarding the terminated Therapy or Joint Selected Candidate and required by terminating Party to continue with any Clinical Trials or Regulatory Approvals of such terminated Therapy or Joint Selected Candidate or as may otherwise be required in order to comply with Applicable Laws in this regard;

(d) transfer of sponsorship for any Clinical Trials and transfer of any Third Party agreements associated with such Clinical Trials regarding the terminated Therapy or Joint Selected Candidate, subject where relevant to the consent of any relevant Third Party;

(e) provision of all reasonable assistance and technical training as may be reasonably required by terminating Party to enable transfer of manufacture, ongoing Clinical Trials and supply of the terminated Therapy or Joint Selected Candidate to the terminating Party as soon as reasonably possible; and

(f) provision of any documentation relating to any associated diagnostics and diagnostic assays regarding the terminated Therapy or Joint Selected Candidate, to the extent not covered by any transfer of a Third Party agreement to terminating Party.

17.7.6 On termination of any Exclusive License and transfer of the terminated Therapy or Joint Selected Candidate under Clause 17.7.5 pursuant to a written agreement containing commercially reasonable terms and conditions that are negotiated and executed by the Parties on a timely basis, and where such termination occurs after completion of the Co-Development Phase, the Parties shall negotiate and agree, in good faith, upon appropriate […***…]. The terminating Party shall have no rights to take over the manufacture, sale and supply of any Joint Selected Candidate or Therapy utilizing such Joint Selected Candidate under Clause 17.7.5 unless and until such agreement is executed by the Parties. Such agreement between the Parties shall also include terms relating to the transfer of manufacture, supply and development of such terminated Joint Selected Candidate or Therapy. Neither Party shall unreasonably delay negotiation of such agreement, and any negotiations shall be in good faith at all times. Where any agreement terms have not been finalised within ninety (90) days of the effective date of termination, such unresolved terms may be forwarded to the respective officers of the Parties set out in Clause 18.1 for resolution. Where such respective officers remain unable to resolve any unresolved terms within a further sixty (60) days of the date of referral to such respective officers, then (i) in relation to any unresolved terms that relate to the compensation which breaching Party should receive under such agreement, then such unresolved terms shall be determined by arbitration in accordance with Clause 18.2. The Parties shall incorporate the […***…] terms, once agreed upon by the Parties or determined through arbitration, in such agreement.

17.8 **Survival**. In addition to any provisions specified in this Agreement as surviving under the applicable circumstances, the following provisions shall survive: Articles 6, 10 (to the extent any reimbursement of any shared costs remains outstanding), 11, 12, 13, 14, 15, 16, 18, 19, 20, 21 and Clauses 5.4.2, 7.4, 10.2.6, 10.2.7, 17.6, 17.7, and 17.8. In addition to those provisions specifically referenced in this Clause 17.8, those provisions which by their nature are intended to survive, as well as any other provisions necessary to interpret or implement any other surviving provisions (including, to the extent applicable, the definitions in Article 1), shall survive.

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ARTICLE 18 DISPUTE RESOLUTION

18.1 **Disputes**. Adaptimmune and Bellicum recognize that a dispute, controversy or claim of any nature whatsoever arising out of or relating to this Agreement, or the breach, termination or invalidity thereof (each, a "**Dispute**"), may from time to time arise during the Term. Unless otherwise specifically recited in this Agreement, such Disputes between Adaptimmune and Bellicum will be resolved as recited in this Article 18. In the event of the occurrence of such a Dispute, the Parties shall first refer such Dispute to their respective Alliance Managers for attempted resolution by such Alliance Managers within […***…] after such referral. If such Dispute is not resolved within such […***…] period, either Adaptimmune or Bellicum may, by written notice to the other, have such Dispute referred to their respective officers designated below, or their respective designees, for attempted resolution within […***…] after such notice is received. Such designated officers are as follows:

For Bellicum – Chief Executive Officer

For Adaptimmune – Chief Executive Officer

In the event the designated officers, or their respective designees, are not able to resolve such Dispute, and if resolution of such Dispute is not explicitly provided for herein through any other means, then within […***…] of such other Party's receipt of such written notice, either Party may initiate the dispute resolution procedures set forth in Clause 18.2.

18.2 **Arbitration**.

18.2.1 **Rules**. Except as otherwise expressly provided in this Agreement (including under Clause 18.3 with respect to Patent-related matters), the Parties agree that any Dispute not resolved internally by the Parties pursuant to Clause 18.1 shall be resolved through binding arbitration conducted by the International Chamber of Commerce in accordance with the then prevailing Rules of Arbitration of the International Chamber of Commerce (for purposes of this Article 18, the "**Rules**"), except as specifically modified in this Agreement, applying the substantive law specified in Clause 21.1.

18.2.2 **Arbitrators; Location**. Each Party shall select one (1) arbitrator, and the two (2) arbitrators so selected shall choose a third arbitrator. All three (3) arbitrators shall serve as independent arbitrators and have at least ten (10) years of (a) dispute resolution experience (including judicial experience) and/or (b) legal or business experience in the biotech or pharmaceutical industry. In any event, at least one (1) arbitrator shall satisfy the foregoing experience requirement under Clause (b). If a Party fails to nominate its arbitrator, or if the Parties' arbitrators cannot agree on the third, the necessary appointments shall be made in accordance with the Rules. Once appointed by a Party, such Party shall have no ex parte communication with its appointed arbitrator. The arbitration proceedings shall be conducted in New York, New York. The arbitration proceedings and all pleadings and written evidence shall be in the English language. Any written evidence originally in another language shall be translated into English and accompanied by the original or a true copy thereof.

18.2.3 **Procedures; Awards**. Each Party agrees to use reasonable efforts to make all of its current employees available to the arbitrators, if reasonably needed, and agrees that the arbitrators may determine any person as necessary. The arbitrators shall be instructed and required to render a written, binding, non-appealable resolution and award on each issue that clearly states the basis upon which such resolution and award is made. The written resolution and award shall be delivered to the Parties as expeditiously as possible, but in no event more than […***…] after conclusion of the hearing, unless otherwise agreed by the Parties. Judgment upon such award may be entered in any competent court or application may be made to any competent court for judicial acceptance of such an award and order for enforcement. Each Party agrees that, notwithstanding any provision of Applicable Law or of this Agreement, it will not request, and the arbitrators shall

have no authority to award, punitive or exemplary damages against any Party. All information disclosed and generated in the course of such arbitration proceeding shall be treated as confidential information by each of the Parties.

18.2.4 **Costs**. The prevailing Party, as determined by the arbitrators, shall be entitled to (a) its share of fees and expenses of the arbitrators and (b) its reasonable attorneys' fees and associated costs and expenses. In determining which Party "prevailed," the arbitrators shall consider (i) the significance, including the financial impact, of the claims prevailed upon and (ii) the scope of claims prevailed upon, in comparison to the total scope of the claims at issue. If the arbitrators determine that, given the scope of the arbitration, neither Party "prevailed," the arbitrators shall order that the Parties (1) share equally the fees and expenses of the arbitrators and (2) bear their own attorneys' fees and associated costs and expenses.

18.2.5 **Interim Equitable Relief**. Notwithstanding anything to the contrary in this Clause 18.2, in the event that a Party reasonably requires relief on a more expedited basis than would be possible pursuant to the procedure set forth in this Article 18, such Party may seek a temporary injunction or other interim equitable relief in a court of competent jurisdiction pending the ability of the arbitrators to review the decision under this Clause 18.2. Such court shall have no jurisdiction or ability to resolve Disputes beyond the specific issue of temporary injunction or other interim equitable relief.

18.2.6 **Protective Orders; Arbitrability**. At the request of either Party, the arbitrators shall enter an appropriate protective order to maintain the confidentiality of information produced or exchanged in the course of the arbitration proceedings. The arbitrators shall have the power to decide all questions of arbitrability.

18.3 **Subject Matter Exclusions**. Notwithstanding the provisions of Clause 18.2, any Dispute not resolved internally by the Parties pursuant to Clause 18.1 that involves the validity or infringement of a Patent Covering a Therapy or Candidate shall be brought before an appropriate regulatory or administrative body in the country in which such Patent is granted or applied for, and the Parties hereby consent to the jurisdiction and venue of such courts and bodies.

18.4 **Continued Performance**. Provided that this Agreement has not terminated, the Parties agree to continue performing under this Agreement in accordance with its provisions, pending the final resolution of any Dispute.

ARTICLE 19 ANTI-BRIBERY

19.1 **Anti-Bribery**.

19.1.1 "Anti-Corruption Laws" means all anti-corruption and anti-bribery laws and regulations, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the United Kingdom Bribery Act 2010, as amended, and any other applicable anti-corruption laws and laws for the prevention of fraud, racketeering, money laundering or terrorism.

19.1.2 "Government Official" means any person employed by or acting on behalf of a government, government-controlled entity or public international organization; any political party, party official or candidate; any person who holds or performs the duties of an appointment, office or position created by custom or convention; and any person who holds himself out to be the authorised intermediary of any of the foregoing.

19.1.3 The Parties agree, on behalf of themselves and their respective officers, directors and employees, that in connection with this Agreement, it shall not directly or indirectly pay, offer or promise to pay, or authorise the payment of any money, or

give, offer or promise to give, or authorise the giving of anything else of value, to (i) any Government Official in order to influence official action; (ii) any person (whether or not a Government Official) (a) to influence such person to act in breach of a duty of good faith, impartiality or trust, (b) to reward such person for acting improperly, or (c) where such person would be acting improperly by receiving the money or other thing of value; (iii) any other person while knowing or having reason to know that all or any portion of the money or other thing of value will be paid, offered, promised or given to, or will otherwise benefit a Government Official in order to influence official action for or against any party in connection with the matters that are the subject of this agreement; or (iv) any person to reward that person for acting improperly or to induce that person to act improperly.

19.1.4 The Parties agree, on behalf of themselves and their respective officers, directors and employees that work in connection with this Agreement that they shall not, directly or indirectly, solicit, receive or agree to accept any payment of money or anything else of value in violation of the Anti-Corruption Laws. In connection with the performance of the services hereunder, the Parties undertake to comply with the Anti-Corruption Laws and shall not take any action that will, or would reasonably be expected to, cause it to be in violation of any such laws to the extent applicable to either Party.

19.1.5 Each Party shall promptly provide the other Party with written notice of (i) becoming aware of any breach or violation by the relevant Party or its sub-contractors or its or their respective officers, directors, employees, of any of the representation, warranty or undertaking set forth in this Clause 22.1 or (ii) upon receiving a formal notification that it is the target of a formal investigation by any governmental authority for any breach of Anti-Corruption Laws in connection with the performance of this Agreement.

ARTICLE 20 DATA PROTECTION

For the purposes of this Article**, Personal Data** shall have the meaning given to it in the Data Protection Act 1998.

a) To the extent applicable, the Parties will comply with all applicable national and international laws, regulations and guidelines relating to protection of the personal information of study subjects, including the European Commission Directive 95/46/IC as it relates to the protection of the personal information of EU/EEA persons, and the Standards for Privacy of Individually Identifiable Health Information (Privacy Rule) under the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

b) The Parties shall process the Personal Data only to the extent, and in such a manner, as is necessary for the purposes of performing their respective obligations under this Agreement and for other lawful purposes. In addition any Personal Data shall only be processed in accordance with any informed consents.

c) The Parties shall not disclose the Personal Data to any person except as required or permitted by this Agreement or with the written consent of the other Party.

d) The Parties shall implement appropriate technical and organisational measures to protect the Personal Data against accidental or unlawful destruction or accidental loss, unauthorised disclosure, access, use, modification, alteration, copying and all other unlawful forms of Processing.

ARTICLE 21 MISCELLANEOUS

21.1 **Applicable Law**. This Agreement (including the arbitration provisions of Article 21.2) shall be

governed by and interpreted in accordance with the laws of England and Wales, without reference to the principles of conflicts of laws. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to the transactions contemplated by this Agreement.

21.2 **Notices**. Except as otherwise expressly provided in the Agreement, any notice required under this Agreement shall be in writing and shall specifically refer to this Agreement. Notices shall be sent via one of the following means and will be effective (a) on the date of delivery, if delivered in person; or (b) on the date of receipt, if sent by private express courier or by first class certified mail, return receipt requested. Notices shall be sent to the other Party at the addresses set forth below. Either Party may change its addresses for purposes of this Clause 21.2 by sending written notice to the other Party.

If to Bellicum: Bellicum Pharmaceuticals, Inc.
Attn: General Counsel
2130 W. Holcombe Blvd., Suite 800
Houston, Texas USA
77030

If to Adaptimmune: Adaptimmune Limited
Attn: COO and General Counsel
101 Park Drive
Abingdon, Oxfordshire, UK
OX14 4RX

21.3 **Assignment**. Neither Party may assign or otherwise transfer, in whole or in part, this Agreement without the prior written consent of the non-assigning Party, such approval not to be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, either Party may assign this Agreement to (i) an Affiliate or (ii) any purchaser of all or substantially all of the assets of such Party that relate to the performance of this Agreement, or of all of its capital stock, or to any successor corporation or entity resulting from any merger or consolidation or re-organization of such party with or into such corporation or entity, provided that the Party to which this Agreement is assigned expressly agrees in writing to assume and be bound by all obligations of the assigning Party under this Agreement. Subject to the foregoing, this Agreement will benefit and bind the Parties' successors and permitted assigns. Any assignment not in accordance with Clause 21.3 shall be null and void.

21.4 **Non-solicit**. Neither Party shall (except with the prior written consent of the other Party) knowingly solicit for employment or entice away (or attempt to solicit or entice away) from the employment of the other Party any person employed in the provision of such other Party's obligations under any POC Plan or Co-Development Plan during the course of any Co-Development Plan or POC Plan and for a further period of […***…] from expiry, termination or completion of such Co-Development Plan or POC Plan; provided that this Clause 21.4 shall not apply to advertisements of a general nature placed in newspapers, trade publications or online or if such employee initiates the contact.

21.5 **Independent Contractors**. The Parties hereto are independent contractors and nothing contained in this Agreement shall be deemed or construed to create a partnership, joint venture, employment, franchise, agency or fiduciary relationship between the Parties.

21.6 **Entire Agreement**. Except to the extent expressly provided herein, this Agreement constitutes the entire agreement between the Parties relating to the subject matter of this Agreement and supersedes all previous oral and written communications between the Parties with respect to the subject matter of this Agreement. Both Parties confirm that in entering into this Agreement that have not relied on any representation or statement from the other Party that is not explicitly stated as a warranty or representation under this Agreement. Nothing in this Clause 21.6 shall exclude any liability for fraud or fraudulent misrepresentation or exclude any remedy for such.

21.7 **Amendment; Waiver**. Except as otherwise expressly provided herein, no alteration of or modification to this Agreement shall be effective unless made in writing and executed by an

authorised representative of both Parties. No course of dealing or failing of either Party to strictly enforce any term, right or condition of this Agreement in any instance shall be construed as a general waiver or relinquishment of such term, right or condition. The observance of any provision of this Agreement may be waived (either generally or any given instance and either retroactively or prospectively) only with the written consent of the Party granting such waiver.

21.8 **Further Assurance**. Each Party shall and shall use all Commercially Reasonable Efforts to procure that any necessary Third Party shall promptly execute and deliver such further documents and do such further acts as may be required for the purpose of giving full effect to this Agreement.

21.9 **Severability**. The Parties do not intend to violate any public policy or statutory or common law. However, if any sentence, paragraph, section, clause or combination or part thereof of this Agreement is in violation of any law or is found to be otherwise unenforceable, such sentence, paragraph, section, clause or combination or part of the same shall be deleted and the remainder of this Agreement shall remain binding, provided that such deletion does not alter the basic purpose and structure of this Agreement.

21.10 **No Third Party Rights**. The Parties do not intend that any term of this Agreement should be enforceable by any person who is not a Party.

21.11 **Interpretation**. The captions and headings to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless context otherwise clearly requires, whenever used in this Agreement: (a) the words “include” or “including” shall be construed as incorporating “but not limited to” or “without limitation”; (b) the words “hereof,” “herein,” “hereby” and derivative or similar words refer to this Agreement, including the Exhibits; (c) the word “law” or “laws” means any applicable, legally binding statute, ordinance, resolution, regulation, code, guideline, rule, order, decree, judgment, injunction, mandate or other legally binding requirement of a governmental authority (including a court, tribunal, agency, legislative body or other instrumentality of any (i) government or country or territory, (ii) any state, province, county, city or other political subdivision thereof, or (iii) any supranational body); (d) all references to the word “will” are interchangeable with the word “shall” and shall be understood to be imperative or mandatory in nature; (f) the singular shall include the plural and vice versa; and (g) the word “or” has the inclusive meaning represented by the phrase “and/or”. All references to days, months, quarters or years are references to calendar days, calendar months, calendar quarters, or calendar years.

21.12 **Other Activities**. The Parties acknowledge that each of them may now or in the future engage in research, manufacturing, development or commercialisation activities that utilize technologies similar to or involve therapies or pharmaceutical products competitive with those contemplated by this Agreement. Except as may be expressly provided in this Agreement, nothing in this Agreement, including any obligation to use Commercially Reasonable Efforts to promote Therapies or any restriction on the use of Confidential Information, shall create any obligation not to research, manufacture, develop or commercialize any Therapy or any obligation to utilize a separate sales force for Therapies. Neither Party shall be prevented from using any publicly available research results or other information (including any publicly available information of the other Party) to the same extent as Third Parties generally are legally permitted to do so. Each Party agrees to inform its key personnel assigned to perform activities hereunder of the limitations on use of Confidential Information contained in this Agreement, instruct such personnel to comply with such restrictions, and where appropriate, impose firewalls or other appropriate measures to minimize the potential for misuse of information. However, each Party has limited resources, and as a result it is anticipated that personnel assigned to activities hereunder may also participate in other activities that may utilize technologies similar to or involve therapies or pharmaceutical products competitive with those contemplated by this Agreement. In particular, it is anticipated that personnel in sales, marketing, clinical and regulatory functions, regardless of level, will participate in multiple programs and that management personnel will by nature of their leadership positions participate in multiple programs.

21.13 **Counterparts**. This Agreement may be executed in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

For purposes hereof, a facsimile copy, or email with attached pdf copy, of this Agreement, including the signature pages hereto, will be deemed to be an original.

[Signature page follows – the rest of this page intentionally left blank.]

IN WITNESS WHEREOF, duly authorised representatives of the Parties have executed this Agreement as of the Effective Date.

ADAPTIMMUNE LIMITED

By: /s/ Helen Tayton-Martin

Name: Helen Tayton-Martin

Title: Chief Operating Officer

BELLICUM PHARMACEUTICALS, INC.

By: /s/ Thomas J. Farrell

Name: Thomas J. Farrell

Title: President and CEO

EXHIBIT 1 – POC Plan

Background:

[…***…]

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[…***…]

[…***…]

[…***…]

EXHIBIT 2- FTE RATES

A weighted average FTE hourly rate will be calculated prior to the start of a Co-Development Plan taking into account the following standard internal costs:

[…***…]

The FTE hourly rates below will be agreed as part of agreement of the Co-Development Plan under clause 5.1 of this Agreement.

The FTE Rate will be inflated on an annual basis in accordance with the index agreed at the same time as Co-Development Plan is agreed.

	job level	Example of Titles	Agreed FTE Rate
Level 1			
Level 2			
Level 3			

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EXHIBIT 3 – CO-COMMERCIALISATION AGREEMENT PRINCIPLES

Co-commercialisation Therapy		Therapies containing a Bellicum Candidate or Adaptimmune Candidate, the "Bellicum Therapy" and "Adaptimmune Therapy" respectively
Co-promotion Territory		Any of the […***…] or […***…] or other territories mutually agreed between the Parties.
[…***…]		[…***…]
Responsibility for manufacture		[…***…]
Promotion rights		Bellicum will have sole promotion rights in relation to the Bellicum Therapy. Adaptimmune will have sole promotion rights in relation to the Adaptimmune Therapy.
Booking of sales		Bellicum shall book all sales for the Bellicum Therapy and shall be responsible for all contracts of sale. Adaptimmune shall book all sales for the Adaptimmune Therapy and shall be responsible for all contracts of sale.
Marketing Plan		The JCC will be responsible for overseeing the marketing plan for each Therapy and its performance. Bellicum shall be primarily responsible for the Marketing Plan for the Bellicum Therapy and Adaptimmune shall be primarily responsible for the Marketing Plan for the Adaptimmune Therapy.

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Marketing materials	The JCC shall approve all marketing and advertising materials, which shall also be subject to each Party's internal review process, if any.
Distribution Channel	Each Therapy will be distributed through distribution channels of the Party responsible for booking of sales of such Therapy.
Compliance requirements	Co-Commercialisation Agreement, as and to the extent necessary and appropriate, will set out the compliance responsibilities for both Parties, including standard provisions relating to compliance.
Reporting Obligations	Parties to report regularly to JCC on their respective Therapy sales and progress of commercialisation.
Adverse events	The Co-Commercialisation Agreement, as and to the extent necessary and appropriate, will set out a notification process related to adverse events and reporting of other safety information and will refer such matter to a safety/regulatory agreement to be negotiated by the Parties contemporaneously with execution of the Co-Commercialisation Agreement.
[…***…]	[…***…]

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EXHIBIT 4 – TECHNOLOGY DESCRIPTIONS

Adaptimmune Technology

The Adaptimmune Technology for the purposes of this Agreement comprises the following:

[…***…]

Bellicum Technology

The Bellicum Technology for the purposes of the Agreement comprises the following:

- the iCasp9 Technology; and
- the iMC Technology

EXHIBIT 5 – PRESS RELEASE

Adaptimmune and Bellicum Pharmaceuticals Enter a Strategic Collaboration to Evaluate Next-Generation T-Cell Therapies

PHILADELPHIA, PA, OXFORD, UK, and HOUSTON, TX – December XX, 2016 – Adaptimmune Therapeutics plc (Nasdaq: ADAP), a leader in T-cell therapy to treat cancer, and Bellicum Pharmaceuticals, Inc. (Nasdaq: BLCM), a leader in developing novel, controllable cellular immunotherapies for cancers and orphan inherited blood disorders, today announced that they have entered into a staged collaboration to evaluate, develop, and commercialize next-generation T-cell therapies.

Under the agreement, the companies will evaluate Bellicum's GoTCR technology (inducible MyD88/CD40 co-stimulation, or iMC) with Adaptimmune's affinity-optimized SPEAR™ T-cells for the potential to create enhanced TCR product candidates. Depending on results from the preclinical proof-of-concept phase, the companies expect to progress to a two-target co-development and co-commercialization phase.

"We are committed to advancing our clinical pipeline of proprietary cell therapies and to entering strategic collaborations that can further leverage the unique potential of our controllable T-cell technologies," commented Tom Farrell, President and Chief Executive Officer of Bellicum. "We're looking forward to working with the Adaptimmune team to create and advance potentially best-in-class TCR therapies."

"As we advance our deep pipeline of second- and third-generation SPEAR T-cell therapies, we are excited by the potential of Bellicum's iMC switch to complement the activity of our affinity enhanced T-cell therapies, as part of our continuing initiative to assess novel cell therapy enhancement technologies," said James Noble, Adaptimmune's Chief Executive Officer. "This is an innovative field that requires broad, industry-wide collaborations, such as our relationship with Bellicum and its strong leadership position in switch technology."

About Bellicum's iMC Technology
Bellicum's Chemical Induction of Dimerization (CID) technology platform was designed to address the challenges of current cellular immunotherapies by enabling control over cellular activities and functions, such as growth, activation, proliferation, persistence and survival. Bellicum's CID platform consists of molecular switches—modified forms of signaling proteins—which are triggered inside the patient by infusion of small molecule rimiducid, instead of by natural upstream signals. Current product candidates incorporate either the CaspaCIDeâ safety switch, or iMC activation switch. After rimiducid is administered, CaspaCIDe is designed to trigger programmed cell death, or apoptosis, and iMC is designed to drive proliferation, activation and/or persistence of T cells.

About Adaptimmune's TCR Technology
Adaptimmune's proprietary SPEAR™ (Specific Peptide Enhanced Affinity Receptor) T-cell receptor (TCR) technology enables the Company to genetically optimize TCRs in an effort to equip them to recognize and bind cancer antigens that are presented in small quantities on the surface of a cancer cell, whether of intracellular or extracellular origin, thus initiating cell death. The Company's differentiated, proprietary

technology allows it to reliably generate parental TCRs to naturally presented targets, affinity optimize its TCRs to bind cancer proteins from solid and hematologic cancers that are generally unavailable to naturally occurring TCRs, and to significantly reduce the risk of side effects resulting from off-target binding of healthy tissues.

About Bellicum Pharmaceuticals
Bellicum is a leader in developing novel, controllable cellular immunotherapies for cancers and orphan inherited blood disorders. Bellicum is using its proprietary Chemical Induction of Dimerization (CID) technology platform to engineer and control components of the immune system. Bellicum is developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including hematopoietic stem cell transplantation (HSCT), and CAR T and TCR cell therapies. More information can be found at www.bellicum.com

About Adaptimmune
Adaptimmune is a clinical stage biopharmaceutical company focused on novel cancer immunotherapy products based on its SPEAR (Specific Peptide Enhanced Affinity Receptor) T-cell platform. Established in 2008, the Company aims to utilize the body's own machinery - the T-cell - to target and destroy cancer cells by using engineered, increased affinity TCRs as a means of strengthening natural patient T-cell responses. Adaptimmune's lead program is a SPEAR T-cell therapy targeting the NY-ESO cancer antigen. Its NY-ESO SPEAR T-cell therapy has demonstrated signs of efficacy and tolerability in Phase 1/2 trials in solid tumors and in hematologic cancer types, including synovial sarcoma and multiple myeloma. Adaptimmune has a strategic collaboration and licensing agreement with GlaxoSmithKline for the development and commercialization of the NY-ESO TCR program. In addition, Adaptimmune has a number of proprietary programs. These include SPEAR T-cell therapies targeting the MAGE-A10 and AFP cancer antigens, which both have open INDs, and a further SPEAR T-cell therapy targeting the MAGE-A4 cancer antigen that is in pre-clinical phase with IND acceptance targeted for 2017. The Company has identified over 25 intracellular target peptides preferentially expressed in cancer cells and is currently progressing 12 through unpartnered research programs. Adaptimmune has over 250 employees and is located in Oxfordshire, U.K. and Philadelphia, USA. For more information: http://www.adaptimmune.com

Forward-Looking Statements
Bellicum and Adaptimmune may, in some cases, use terms such as "predicts," "believes," "potential," "proposed," "continue," "designed," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our intentions regarding our collaboration and the development and commercialization of products pursuant to the collaboration; and the timing and success of our collaboration. Various factors may cause differences between our expectations and actual results as discussed in greater detail under the heading "Risk Factors" in Bellicum's and Adaptimmune's filings with the Securities and Exchange Commission, including without limitation, Bellicum's annual report on Form 10-K for the year ended December 31, 2015; and Adaptimmune's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2016. Any forward-looking statements that we make in this press release speak only as of

the date of this press release. Neither Bellicum nor Adaptimmune assume any obligation to update our forward-looking statements whether as a result of new information, future events or otherwise, after the date of this press release.

Bellicum Contacts

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EXHIBIT 6 – CO-DEVELOPMENT RESPONSIBILITIES

The responsibilities for performance of any Co-Development Plan will be agreed prior to the start of such Co-Development Plan. The following is intended as an illustrative guide as to which Party may have which responsibility – exact responsibilities will depend on activities required for any program.

Co-development activity	**Adaptimmune Responsibility**	**Bellicum Responsibility**
[…***…]		

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EXHIBIT 7 – DESIGNATION CRITERIA

Designation criteria will be agreed between the Parties dependent on the Co-Development Plan. Initial designation criteria for progression of a candidate into pre-clinical development are set out below. These criteria will be amended and refined as part of the progression of the Co-Development Plan.

Criteria	Suggested metrics
[…***…]	

Exhibit 10.42

January 25, 2017

VIA EMAIL AND HAND DELIVERY

Thomas J. Farrell

Dear Tom:

This letter sets forth the substance of our agreement (the "***Agreement***") regarding your transition and separation from Bellicum Pharmaceuticals, Inc. (the "***Company***"). This Agreement will become effective only upon the Effective Date specified in Section 12 below.

1. Separation. Your employment from any and all employment and officer positions you hold or have held shall cease effective January 30, 2017 (the "***Separation Date***"), which will be your last day of employment with the Company. Your service on the Company's Board of Directors (the "***Board***") shall also cease as of the Separation Date. Pursuant to the terms of your Third Amended & Restated Employment Agreement with the Company dated November 17, 2014 (the "***Employment Agreement***"), and provided that the Effective Date occurs, the Company will provide you with the involuntary termination benefits specified in Section 7(b) of your Employment Agreement, which include, for the avoidance of doubt (i) continued payment of your base salary for twelve (12) months (the "***Severance Period***"), (ii) a lump sum amount equal to your pro-rated target performance bonus for 2017 and (iii) payment of COBRA premiums for up to twelve (12) months, each as further described in Section 7(b) of your Employment Agreement (collectively, the "***Separation Benefits***"). The Separation Benefits will be paid in the forms and at the times specified in the Employment Agreement. Your receipt of the Separation Benefits is expressly conditioned upon your continuing to comply with your obligations under the Employment Agreement, including Sections 8 through 11 thereof, and the Effective Date.

2. Consultancy. The Company agrees to retain you as a consultant, and you agree to provide consulting services, under the terms specified below.

a. Consulting Period. The consulting relationship shall commence on the Separation Date and continue until the earlier of: (i) the date that is eighteen (18) months from the Separation Date; (ii) in the event you breach your Post-Employment Obligations (as defined in Section 2(e) below), the date of any such breach; or (iii) a date mutually agreed between you and the Board (the "***Consulting Period***").

b. Consulting Services. You agree to make yourself available to provide consulting services consistent with your expertise and experience, at the request of the Board, up to a maximum of ten (10) hours per month (the "***Consulting Services***"). You agree to exercise the highest degree of professionalism and utilize your expertise and creative talents to the fullest in performing the Consulting Services. Your relationship with the Company during the Consulting Period will be that of an independent contractor, and nothing in this Agreement is intended to, or should be construed to, create a partnership, agency, joint venture or employment relationship after the Separation Date.

c. Consulting Compensation. You will be paid at the rate of $5,000 per month for your Consulting Services during the Consulting Period (the "***Consulting Fees***"). The Consulting Fees shall be payable in equal monthly installments on the first payroll date following each month and, because you will be providing the Consulting Services as an independent contractor, the Company will not withhold any amount for taxes, social security or other payroll deductions from the Consulting Fees. In addition, in exchange for your Consulting Services and promises in this Agreement, the Company will extend the Severance Period for purposes of your continued base salary payments under the Employment Agreement for an additional six (6) months, paid over the Company's regular payroll schedule and subject to all applicable taxes as may be required to be withheld pursuant to any applicable law or regulation.

d. Protection of Confidential and Proprietary Information, Non-Compete Period. You acknowledge your obligations and promises to the Company under Sections 8 (Confidential Information), Section 9 (Non-Competition; Non-Solicitation; etc.), Section 10 (Injunction) and Section 11 (Inventions) of the Employment Agreement (the "***Post-Employment Obligations***") and you agree that such Post-Employment Obligations shall continue to apply in full force and effect during the Consulting Period; for the avoidance of doubt, the length of the Non-Compete Period (as defined in the Employment Agreement) extends through the Consulting Period and your continued receipt of the Consulting Fees and Separation Benefits during the Consulting Period is contingent on your compliance with the Post-Employment Obligations. Any and all work product you create in connection with the Consulting Services will be the sole and exclusive property of the Company. You hereby assign to the Company all right, title, and interest in all inventions, techniques, processes, materials, and other intellectual property developed in the course of performing the Consulting Services.

e. Authority and Facilities Usage During Consulting Period. After the Separation Date, you will have no authority, in the absence of the express written consent of the Board or the Company's Chief Executive Officer (the "***CEO***"), to bind the Company (or to represent that you have authority to bind the Company) to any contractual obligations, whether written, oral or implied. You hereby agree that after the Separation Date, you will not represent or purport to represent the Company in any manner whatsoever to any third party unless authorized to do so in writing by the Board or CEO. Access to and use of Company facilities or equipment to perform the Consulting Services will be coordinated through the Board or CEO.

f. Breach of Obligations. If you breach your Post-Employment Obligations or the nondisparagement obligations under this Agreement during the Consulting Period, the Company's obligation to pay you Consulting Compensation and your severance under the Employment Agreement will cease immediately. Nothing in this Paragraph waives the Company's right to pursue other action against you for any breach of your obligations under this Agreement or the Employment Agreement.

3. Accrued Salary and Vacation. On the Separation Date, the Company shall pay you all accrued salary, and all accrued and unused vacation, earned through the Separation Date, subject to standard payroll deductions and withholdings. You are entitled to these payments by law.

4. Equity Awards. The stock options to purchase Company common stock that you hold as of your Separation Date (the "***Options***") and the restricted stock units to be issued to you

in Company common stock that you hold as of your Separation Date (the "***RSUs***" and, collectively with the Options, the "***Equity Awards***") will continue to vest during the Consulting Period. All terms, conditions, and limitations applicable to your Equity Awards will remain in full force and effect pursuant to the applicable Equity Award agreements between you and the Company, the applicable equity incentive plan documents, and any other documents applicable to the Equity Awards (the "***Equity Documents***"). Pursuant to the Equity Documents, you will be eligible to exercise any vested Options for up to a period of three (3) months immediately following the conclusion of the Consulting Period and you will immediately forfeit any unvested RSUs upon conclusion of the Consulting Period. Pursuant to tax rules, any Options that you hold which are "incentive stock options" under Section 422 of the Internal Revenue Code of 1986, as amended, shall cease to qualify as "incentive stock options" on the date three (3) months following your Separation Date. You are advised by the Company to seek independent legal advice with respect to tax and securities law issues regarding your Options and any sale of Company stock you may make.

5. Other Compensation or Benefits. You acknowledge that, except as expressly provided in this Agreement, you will not receive any additional compensation, severance or benefits after the Separation Date. For the avoidance of doubt, you and the Company acknowledge that you have been paid your annual performance bonus for 2016, based on the extent to which the goals previously established for such bonus were achieved, as determined by the Board in its sole discretion. Because your relationship with the Company during the Consulting Period will be that of an independent contractor, other than the severance benefits set forth in this Agreement, you will not be entitled to any of the benefits that the Company may make available to its employees, including but not limited to, group health or life insurance, equity or option vesting, profit-sharing or retirement benefits, and you acknowledge and agree that your relationship with the Company during the Consulting Period will not be subject to the Fair Labor Standards Act or other laws or regulations governing employment relationships.

6. Expense Reimbursement. You agree that, no later than thirty (30) days following the Separation Date, you will submit your final documented employee expense reimbursement statement reflecting all business expenses you incurred through the Separation Date, if any, for which you seek reimbursement. You will also be reimbursed for reasonable and appropriate expenses you incur in performing the Consulting Services. All claims for reimbursement shall be submitted by documented business expense report upon Company-approved forms and shall include receipts. The Company will reimburse you for these expenses pursuant to its regular business practice.

7. Return of Company Property. You hereby represent that you have returned to the Company all Company documents (and all copies thereof) and other Company property in your possession or control, including, but not limited to, Company files, correspondence, memoranda, notes, notebooks, drawings, books and records, plans, forecasts, reports, proposals, studies, agreements, financial information, personnel information, sales and marketing information, research and development information, systems information, specifications, computer-recorded information, tangible property and equipment, credit cards, entry cards, identification badges and keys; and any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof in whole or in part) ("***Company Property***"); provided, however, that the foregoing shall not apply to information and documentation you received solely in your capacity as a member of the Board, or as a stockholder, option holder or restricted stock

unit holder of the Company. You also represent that you have performed a good faith search to ensure that you are no longer in possession or control of any Company Property.

8. Nondisparagement. Both you and the Company (and its officers and directors) agree not to disparage the other party, and the other party's officers, directors, employees, shareholders and agents, to any third party in any manner likely to be harmful to them or their business, business reputation or personal reputation; provided that both you and the Company may respond accurately and fully to any question, inquiry or request for information when required by legal process.

9. Release. In exchange for the consideration provided to you by this Agreement that you are not otherwise entitled to receive, you hereby generally and completely release the Company and its directors, officers, employees, shareholders, members, partners, agents, attorneys, predecessors, successors, parent and subsidiary entities, insurers, affiliates, and assigns from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring prior to your signing this Agreement. This general release includes, but is not limited to: (1) all claims arising out of or in any way related to your employment with the Company or the termination of that employment; (2) all claims related to your compensation or benefits from the Company, including, but not limited to, salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership interests in the Company; (3) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (4) all tort claims, including, but not limited to, claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (5) all federal, state, and local statutory claims, including, but not limited to, claims for discrimination, harassment, retaliation, attorneys' fees, or other claims arising under the federal Civil Rights Act of 1964 (as amended), and the federal Americans with Disabilities Act of 1990, the federal Age Discrimination in Employment Act of 1967 (as amended) ("***ADEA***"). The claims described above that you are releasing do not include: (1) any rights which cannot be waived as a matter of law; or (2) any claims arising from breach of this Agreement. Nothing in this Agreement prevents you from filing a charge or complaint with the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal, state or local governmental agency or commission (collectively, the "***Government Agencies***"). You understand this Agreement does not limit your ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, to maximum extent permitted by law, you are otherwise waiving any and all rights you may have to individual relief based on any claims that you have released and any rights you have waived by signing this Agreement.

10. ADEA Waiver. You acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under ADEA, and that the consideration given for the waiver and release in the preceding paragraph is in addition to anything of value to which you were already entitled. You further acknowledge that you have been advised by this writing that: (a) your waiver and release do not apply to any rights or claims that may arise after the execution date of this

Agreement; (b) you should consult with an attorney prior to executing this Agreement; (c) you have twenty-one (21) days after the date of your receipt of this Agreement to consider this Agreement (although you may choose to voluntarily execute this Agreement earlier); (d) you have seven (7) days following the execution of this Agreement by the parties to revoke the Agreement; and (e) this Agreement will not be effective until the date upon which the revocation period has expired without your having revoked (the "***Effective Date***"), and you will not receive the benefits specified by this Agreement unless and until it becomes effective.

11. Disputes. Any dispute or controversy between you and the Company, arising out of or relating to this Agreement, the breach of this Agreement, your employment or consulting to the Company, or otherwise, shall be settled by binding arbitration conducted by and before a single arbitrator in Houston, Texas administered by the American Arbitration Association in accordance with its Employment Arbitration Rules (the "***AAA Rules***") then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. Both you and the Company hereby waive the right to a trial by jury or judge, or by administrative proceeding, for any covered claim or dispute. To the extent the AAA Rules conflict with any provision or aspect of this Agreement, this Agreement shall control. 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 you. All claims, disputes, or causes of action under this Agreement, whether by you or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. This Agreement is made under the provisions of the Federal Arbitration Act (9 U.S.C., Sections 1-14) ("***FAA***") and will be construed and governed accordingly. It is the parties' intention that both the procedural and the substantive provisions of the FAA shall apply. **Questions of arbitrability (that is whether an issue is subject to arbitration under this agreement) shall be decided by the arbitrator.** Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. However, where a party already has initiated a judicial proceeding, a court may decide procedural questions that grow out of the dispute and bear on the final disposition of the matter. 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, unless such award is prohibited by applicable law. Notwithstanding the foregoing, you and the Company shall each have the right to resolve any dispute or cause of action involving trade secrets, proprietary information, or intellectual property (including, without limitation, inventions assignment rights, and rights under patent, trademark, or copyright law) by court action instead of arbitration.

12. Miscellaneous. This Agreement, together with the continuing obligations under the Employment Agreement described herein, constitutes the complete, final and exclusive embodiment of the entire agreement between you and the Company with regard to this subject matter. It is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and an authorized member of the Board. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. The failure to enforce any breach of this Agreement shall not be deemed to be a waiver of any other or subsequent breach. For purposes of construing this Agreement, any ambiguities shall not be construed against either party as the drafter. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified so as to be rendered enforceable in a manner consistent with the intent of the parties insofar as possible. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the State of Texas as applied to contracts made and to be performed entirely within Texas. This Agreement may be executed in counterparts or with facsimile signatures, which shall be deemed equivalent to originals.

If this Agreement is acceptable to you, please sign below and return one original to me.

I wish you all the best in your future endeavors.

Sincerely,

Bellicum Pharmaceuticals, Inc.

By: /s/ Jon P. Stonehouse
Jon P. Stonehouse
Chairman of the Compensation Committee
of the Board of Directors

AGREED AND ACCEPTED:

/s/ Thomas J. Farrell	January 25, 2017
Thomas J. Farrell	Date

BELLICUM PHARMACEUTICALS, INC.

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT, dated as of January 25, 2017, is by and between Bellicum Pharmaceuticals, Inc. a Delaware corporation (the "**Company**"), having an office at 2130 West Holcombe Boulevard, Suite 800, Houston, Texas 77030 and Richard A. Fair (the "**Executive**").

WHEREAS, the Company wishes to employ Executive as its President and Chief Executive Officer and provide Executive with certain compensation and benefits in return for Executive's services, and Executive agrees to be employed by the Company in such capacity and to receive the compensation and benefits on the terms and conditions set forth herein;

WHEREAS, the Company and Executive desire to enter into this Employment Agreement (the "**Agreement**") to become effective, subject to Executive's signature below, upon the date set forth above (the "**Effective Date**") in order to memorialize the terms and conditions of Executive's employment by the Company upon and following the Effective Date;

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 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. **At-Will Employment**. The Company and Executive acknowledge that either party has the right to terminate Executive's employment with the Company at any time for any reason whatsoever, with or without cause, subject to the provisions of Section 6 and 7 herein. This at-will employment relationship cannot be changed except in a writing signed by both Executive and the Board of Directors of the Company (or a duly authorized committee thereof, if applicable) (the "**Board**"). Any rights of Executive to additional payments or other benefits from the Company upon any such termination of employment shall be governed by Section 7 of this Agreement.

2. **Position**. Upon commencement of Executive's employment with the Company, which will occur on January 30, 2017 (the "**Start Date**"), 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, 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.

Executive acknowledges that he shall be appointed to the Board and Executive agrees to continue to serve as a director of the Company, if requested by the Board, for so long as he remains employed in the position of President and CEO of the Company, subject to election by the stockholders of the Company and in accordance with the Bylaws of the Company. If Executive ceases to serve as President and CEO of the Company for any reason, then Executive will resign from his position as a member of the Board, if and as requested by the Board.

3. **Commitment**. Executive will devote substantially all of his business time and best efforts to the performance of his duties hereunder; provided, however, that Executive shall be allowed, to the extent that such activities do not interfere in any material respect 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. Notwithstanding the foregoing, 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 Executive's employment with the Company, the Company shall pay Executive a base salary at the annual rate of five hundred thirty-five thousand dollars ($535,000.00), less payroll deductions and withholdings, which shall be payable in accordance with the standard payroll practices of the Company. Executive's base salary shall be subject to periodic review and adjustment by the Board from time to time in the discretion of the Board.

(b) Signing Bonus. The Company shall pay Executive a lump sum cash signing bonus of three hundred thousand dollars ($300,000) (the "**Signing Bonus**"), less payroll deductions and withholdings, within forty-five (45) days of the Start Date. If Executive's service with the Company ceases due to a termination with Cause or Executive's resignation other than Good Reason (as such terms are defined in Section 6 below) at any time within the first twelve (12) months following the Start Date, Executive shall be required to repay the Signing Bonus to the Company within thirty (30) days of such termination.

(c) Annual Performance Bonus. For each calendar year, Executive shall be eligible to receive an annual performance bonus ("**Annual Performance Bonus**") from the Company, with the target amount of such bonus equal to fifty percent (50%) of Executive's annual base salary. The Annual Performance Bonus will be based on achievement of Company goals which are established by the Board in its sole discretion at the beginning of each calendar year. Following the close of each calendar year, the Board will determine whether Executive has earned an Annual Performance Bonus, and the amount of any such bonus. Payment of the Annual Performance Bonus shall be expressly conditioned upon Executive's employment with the Company on the date that the Annual Performance Bonus is paid, except as provided in Section 7(b) and Section 7(c) below. The Annual Performance Bonus shall be paid within ninety (90) days after the end of the calendar year for which it relates, except as provided in Section 7(b) and Section 7(c) below. Executive's target Annual Performance Bonus will be subject to periodic review and adjustment (but only for increases) by the Board from time to time.

(d) Equity Awards. As an inducement material to Executive entering into employment with the Company, on the Start Date, the Company will grant Executive an option (the **"Option"**) to purchase up to five hundred thousand (500,000) shares of the Company's common stock. The Option will be granted under the Company's 2014 Equity Incentive Plan (the **"Plan"**), and pursuant to the "inducement grant" exception provided under NASDAQ Listing Rule 5635(c)(4). The Option will be a nonstatutory stock option, have an exercise price per share equal to the Fair Market Value (as defined in the Plan) of the Company's common stock on the Start Date, and vest with respect to one-forth ($1/4^{th}$) of the shares subject to the Option upon the one (1) year anniversary of the Start Date and the remainder of the shares will vest in equal monthly increments over the three year period following such one (1) year anniversary of the Start Date, subject to Executive's Continuous Services (as defined in the Plan) with the Company. Executive will be eligible to participate in and receive additional stock option or equity award grants under the Company's equity incentive plans from time to time in the discretion of the Board, and in accordance with the terms and conditions of such plans.

(e) 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, including but not limited to (i) reimbursement of up to $5,000 for the attorneys' fees that Executive incurs in connection with the negotiation and preparation of this Agreement; and (ii) Executive's reasonable travel costs from San Francisco to Houston and reasonable accommodation costs in Houston related to the Executive's work for the Company.

5. **Benefits.** 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 from time to time, subject to plan terms and generally applicable Company policies. Executive is entitled to participate in personal time off and holiday benefits in accordance with Company policy from time to time for its senior executives.

6. **Termination**.

(a) Termination. The employment of Executive under this Agreement shall terminate upon the earliest to occur of any of the following events:

(i) the death of Executive;

(ii) the termination of Executive's employment by the Company due to Executive's Disability pursuant to Section 6(b) hereof;

(iii) the termination of Executive's employment by Executive other than for Good Reason (as hereinafter defined);

(iv) the termination of Executive's employment by the Company without Cause;

(v) the termination of Executive's employment by the Company for Cause pursuant to Section 6(c) after providing the Notice of Termination for Cause, if applicable, as described in Section 6(c) and Section 6(d);

(vi) the termination by Executive of Executive's employment for Good Reason (as hereinafter defined) pursuant to Section 6(e); or

(vii) the termination of Executive's employment upon mutual agreement in writing between the Company and Executive.

(b) Disability. For purposes of this Agreement, "**Disability**" means that Executive has been unable after taking into account and providing (as applicable) any reasonable accommodations that do not cause an undue burden on the Company, 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 reasonably 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. 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 within thirty (30) days after a written direction is provided to Executive; (iii) the failure by 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) within thirty (30) days after a written demand for substantial performance is delivered to Executive by the Board which specifically identifies the manner in which it is believed that Executive has failed to attempt to perform his duties hereunder; (iv) 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) 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) Executive's material breach of this Agreement unless corrected by Executive within thirty (30) days of the Company's written notification to Executive of such breach, provided that notice and cure shall only apply if such breach is reasonably capable of being cured; or, (vii) Executive's failure to comply in any material respect with the Company's written policies and/or procedures, unless corrected by Executive within thirty (30) days of the Company's written notification to Executive of such breach, provided that notice and cure shall only apply if such breach is reasonably capable of being cured.

(d) Notice of Termination for Cause. Notice of Termination for Cause shall mean a notice to Executive 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 Executive for Good Reason. Executive may terminate Executive's employment with the Company by resigning from employment with the Company for Good Reason. The term "**Good Reason**" shall mean the occurrence, without Executive's prior written consent, of any one or more of the following: (i) a material reduction in Executive's base salary (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated senior executives not to exceed 10%); (ii) a material reduction in Executive's authority, duties or responsibilities; (iii) a relocation of Executive's primary office of more than forty (40) miles away from San Francisco, California; or (iv) any other action or inaction that constitutes a material breach by the Company (or its successor, if applicable) of any material provision of this Agreement.

No resignation for Good Reason shall be effective unless (1) Executive provides written notice, within sixty (60) days after the first occurrence of the event giving rise to Good Reason, to the Chairman of the Board setting forth in reasonable detail the material facts constituting Good Reason and the reasonable steps Executive believes necessary to cure, (2) the Company has had thirty (30) business days from the date of such notice to cure any such occurrence otherwise constituting Good Reason, and (3) if such event is not reasonably cured within such period, Executive must resign from all positions Executive then holds with the Company (including any position as a member of the Board) effective not later than thirty (30) days after the expiration of the cure period.

7. **Consequences of Termination of Employment**.

(a) General. If Executive's employment is terminated for any reason or no reason, the Company shall pay to Executive or to Executive's legal representatives, if applicable: (i) any base salary and any Annual Performance Bonus earned, but unpaid as of the date of the termination of Executive's employment; and, (ii) any unreimbursed business expenses payable pursuant to Section 4 hereof and any accrued but unused personal time off benefits and any other payments or benefits required by applicable law (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. Other than the Accrued Amounts and any continuing rights Executive may have to indemnification under the Indemnification Agreement, the Company's bylaws or certificate of incorporation, or applicable law, Executive or Executive's legal representatives shall not be entitled to any additional compensation or benefits if Executive's employment is terminated for any reason other than by reason of Executive's Involuntary Termination (as defined in Section 7(b) below). If Executive's employment terminates due to an Involuntary Termination, Executive will be eligible to receive the additional compensation and benefits described in Section 7(b) and 7(c), as applicable.

(b) Involuntary Termination. If (1) Executive's employment with the Company is terminated by the Company without Cause (and other than as a result of Executive's death or Disability) or (2) Executive terminates employment for Good Reason, and provided in any case such termination constitutes a "separation from service", as defined under Treasury Regulation Section 1.409A-1(h)) (a "**Separation from Service**") (such termination described in (i) or (ii), an "**Involuntary Termination**"), in addition to the Accrued Amounts, Executive shall be entitled to receive the severance benefits described below in this Section 7(b), subject in all events to Executive's compliance with Section 7(d) below:

(i) Executive shall receive continued payment of Executive's Base Salary (as defined below) for the first twelve (12) months after the date of such termination (the "**Severance Period**"), paid over the Company's regular payroll schedule.

(ii) Executive shall receive a lump sum amount equal to (x) Executive's target Annual Performance Bonus for the year of termination, pro rated based on the ratio that the number of days from the beginning of the calendar year in which such termination occurs through the date of termination bears to 365 (the "**Severance Bonus**") plus (y) if Executive has not yet been paid Executive's Annual Performance Bonus for the year prior to the year of the Involuntary Termination, the amount, if any, of Executive's Annual Performance Bonus for the year prior to the Involuntary Termination, based on actual achievement of Company goals for such bonus and year, as determined by the Board (the "**Unpaid Performance Bonus**") (collectively the Severance Bonus and the Unpaid Performance Bonus, if applicable, the "**Bonus Payment**").

(iii) If Executive's Involuntary Termination occurs on or before the six (6) month anniversary of the Start Date, twelve and one half percent (12.5%) of the Option shall accelerate and be deemed fully vested as of the date of Executive's Involuntary Termination.

(iv) If Executive's Involuntary Termination occurs after the six (6) month anniversary of the Start Date and before the one (1) year anniversary of the Start Date, a percentage of the Option shall accelerate and be deemed fully vested as of the date of Executive's Involuntary Termination, and such percentage shall be determined by dividing the number of full months that Executive was employed by the Company and dividing it by forty-eight (48).

(v) If Executive's Involuntary Termination occurs on or after the one (1) year anniversary of the Start Date, fifty percent (50%) of Executive's outstanding stock options and other equity awards that are subject to time-based vesting requirements that are unvested as of the date of such termination of employment shall accelerate and be deemed fully vested as of the date of Executive's Involuntary Termination.

(vi) An extended deadline of up to one year from the date of Executive's Involuntary Termination to exercise any vested stock options, including but not limited to the options subject to accelerated vesting pursuant to Section 7(b)(iii), (iv) or (v) above (or, as applicable Section 7(c)(iii) below), subject to earlier termination upon the original latest termination date of such stock options (ignoring the Involuntary Termination) or upon a Change in Control or Corporate Transaction, as specified in the plan documents underlying such vested stock options.

(vii) If Executive is eligible for and timely elects to continue the health insurance coverage under the Company's group health plans under the Consolidated Omnibus Budget Reconciliation Act of 1985 or the state equivalent ("**COBRA**") following Executive's termination date, the Company will pay the COBRA group health insurance premiums for Executive and Executive's eligible dependents until the earliest of (A) the close of the Severance Period, (B) the expiration of Executive's eligibility for the continuation coverage under COBRA, or (C) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment. For purposes of this Section, references to COBRA premiums shall not include any amounts payable by Executive under a Section 125 health

care reimbursement plan under the Internal Revenue Code of 1986, as amended and the treasury regulations thereunder (the "**Code**"). Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot pay the COBRA premiums without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then regardless of whether Executive elects continued health coverage under COBRA, and in lieu of providing the COBRA premiums, the Company will instead pay Executive on the last day of each remaining month of the Severance Period, a fully taxable cash payment equal to the COBRA premiums for that month, subject to applicable tax withholdings (such amount, the "**Health Care Benefit Payment**"). The Health Care Benefit Payment shall be paid in monthly installments on the same schedule that the COBRA premiums would otherwise have been paid and shall be equal to the amount that the Company would have otherwise paid for COBRA premiums, and shall be paid until the earlier of (i) expiration of the Severance Period or (ii) the date Executive voluntarily enrolls in a group health insurance plan offered by another employer or entity.

(c) Involuntary Termination in Connection with a Change in Control. In the event that Executive's Involuntary Termination during the period commencing thirty (30) days before and ending twelve (12) months following the consummation of a Change in Control (as defined below) and subject in all events to Executive's compliance with Section 7(d) below, then Executive shall be entitled to the benefits provided above in Section 7(b), except that:

(i) the Severance Period for purposes of continued salary and COBRA benefits shall be eighteen (18) months, rather than twelve (12) months;

(ii) the Severance Bonus shall equal the Executive's full target Annual Performance Bonus for the year of termination, rather than the pro-rated target bonus; and

(iii) the vesting of all of Executive's outstanding stock options and other equity awards that are subject to time-based vesting requirements shall accelerate in full such that all such equity awards shall be deemed fully vested as of the date of Executive's Involuntary Termination.

For the avoidance of doubt, in no event shall Executive be entitled to benefits under both Section 7(b) and this Section 7(c). If Executive is eligible for benefits under both Section 7(b) and this Section 7(c), Executive shall receive the benefits set forth in this Section 7(c) and such benefits will be reduced by any benefits previously provided to Executive under Section 7(b).

(d) Conditions and Timing for Severance Benefits. The severance benefits set forth in Section 7(b) and Section 7(c) above are expressly conditioned upon: (i) Executive continuing to comply with Executive's obligations under this Agreement, including Sections 8 through 11; and (ii) Executive signing and not revoking a general release of legal claims in a form provided by the Company (the "**Release**") within the applicable deadline set forth therein and permitting the Release to become effective in accordance with its terms, which must occur no later than the Release Deadline (as defined in Section 14 below). The salary continuation payments described in Sections 7(b) and 7(c) will be paid in substantially equal installments on the Company's regular payroll schedule and subject to standard deductions and withholdings over the Severance Period following termination; *provided, however,* that no payments will be made prior to the effectiveness of the Release. On the

effective date of the Release, the Company will pay Executive the salary continuation payments that Executive would have received on or prior to such date in a lump sum under the original schedule but for the delay while waiting for the effectiveness of the Release, with the balance of the payments being paid as originally scheduled. Bonus Payments described in Section 7(b) and 7(c) will be paid in a lump sum cash payment on the first regular payroll date of the Company following the effective date of the Release, but in no event later than March 15 of the year following the year in which Executive's termination of employment occurred. All severance benefits described in this Section 7 will be subject to all applicable standard required deductions and withholdings.

(e) Definitions.

(i) **"Base Salary"** means Executive's annual base salary in effect immediately prior to Executive's termination, excluding any reduction which forms the basis for Executive's right to resign for Good Reason.

(ii) "**Change in Control**" means a "Change in Control" as defined in the Company's 2014 Equity Incentive Plan.

8. **Confidential Information**. "**Confidential Information**" as used in this Agreement, includes non-public confidential information provided by or on behalf of the Company to Executive, including but not limited to, specialized training; products already developed or that will be developed by the Company, including but not limited to, products in the field of cancer immunotherapy, including 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 such confidential 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 Executive, any third party; b) becomes known to Executive through disclosure by sources other than the Company and its Affiliates and in the course of Executive's service to the Company, said sources being under no obligation of confidentiality to the Company with respect to such Confidential Information; c) is approved by the Company for release; or d) has been independently developed by Executive without benefit of the Confidential Information and on Executive's own time and without use of Company resources.

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 this Agreement and continued employment of Executive.

(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. 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 Executive shall not provide to the Company, either directly or indirectly, 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 Executive's employment with the Company and for a period of twelve (12) months following the termination of his employment with the Company ("**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 therapies for the treatment of cancer, including both hematological and solid tumors, graft-versus-host-disease and other blood disorders; and (B) other genetically modified cell therapies and immunotherapies for which the Company has an active development program during Executive's employment with the Company (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, and provided further that for purposes of this Agreement, an "active development program" shall be considered to be (x) any ongoing clinical trial against a specific biologic target, or (y) any Phase 2 or 3 clinical trial with registrational intent in any specific clinical indication.

(ii) Geographic Limitation. The geographic limitation for the Non-Compete Obligations is North America, Europe and Japan; and

(iii) During Executive's employment with the Company and for a period of twelve (12) months immediately thereafter, 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:

Adaptimmune Limited	101 Park Drive, Milton Park, Abingdon, Oxfordshire OX14 4RY UK
bluebird bio, Inc.	150 2nd Street Cambridge, MA 02141
Celgene Corporation	86 Morris Avenue Summit, NJ 07901
Cellectis	8 rue de la Croix Jarry 75013 Paris France
Cell Medica Limited	1 Canal Side Studios, 8-14 St Pancras Way London, NW1 0QG UK
Immune Design Corp.	1616 Eastlake Ave. E., Suite 310 Seattle, WA 98102
Intrexon Corporation	1872 Pratt Drive Blacksburg, VA 24060
Juno Therapeutics, Inc.	307 Westlake Avenue North Suite 300 Seattle, WA 98109
Kiadis Pharma B.V.	Entrada 231-234 1114 AA Amsterdam-Duivendrecht The Netherlands
Kite Pharma, Inc.	2225 Colorado Avenue Santa Monica, CA 90404
Lion Biotechnologies, Inc.	112 W. 34th Street, 18th Floor New York, NY 10120
Medigene AG	Lochhamer Str. 11 82152 Planegg/Martinsried Germany
MolMed S.p.A.	Via Olgettina, 58 20132 Milan Italy
Pfizer Inc.	235 East 42nd Street New York, NY 10017
Precision Biosciences, Inc.	302 East Pettigrew St., Suite A-100 Durham, NC 27701
Unum Therapeutics, Inc.	200 Cambridge Park Drive Suite 3100 Cambridge, MA 02140

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 Executive and the Company have used the correct legal name, address, 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 that competes with the Company's Business, 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 Confidential Information).

(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, to terminate such individual's employment or service with the Company or any of its Affiliates or (ii) 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 provided 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 A, 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 A. 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, the Company's employment of Executive, or otherwise, shall be settled by binding arbitration conducted by and before a single arbitrator in San Francisco, California who is licensed to practice law in Texas, administered by the American Arbitration Association in accordance with its Employment Arbitration Rules (the "AAA Rules") then in effect and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. Both Employee and the Company hereby waive the right to a trial by jury or judge, or by administrative proceeding, for any covered claim or dispute. To the extent the AAA Rules conflict with any provision or aspect of this Agreement, this Agreement shall control. 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. All claims, disputes, or causes of action under this Agreement, whether by Employee or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. This Agreement is made under the provisions of the Federal Arbitration Act (9 U.S.C., Sections 1-14) ("FAA") and will be construed and governed accordingly. It is the parties' intention that both the procedural and the substantive provisions of the FAA shall apply. **Questions of arbitrability (that is whether an issue is subject to arbitration under this agreement) shall be decided by the arbitrator.** Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. However, where a party already has initiated a judicial proceeding, a court may decide procedural questions that grow out of the dispute and bear on the final disposition of the matter. 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 to the extent provided by applicable law. Notwithstanding the foregoing, Executive and the Company shall each have the right to resolve any dispute or cause of action involving trade secrets, proprietary information, or intellectual property (including, without limitation, inventions assignment rights, and rights under patent, trademark, or copyright law) by court action instead of arbitration. Either party may seek provisional injunctive relief in a court of competent jurisdiction to ensure that the relief sought in any arbitration is not rendered ineffectual by interim harm.

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 party 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:

2130 West Holcombe Boulevard, Suite 800
Houston, Texas 77030
Attention: Chairman of the Board of Directors

with a copy (which shall not constitute notice) to:

Cooley LLP
4401 Eastgate Mall
San Diego, California 92121
Attention: Julie Robinson

If to Executive, to Executive's address on file with the Company

14. **Tax Provisions**.

(a) Section 409A. Notwithstanding anything in this Agreement to the contrary, the following provisions apply to the extent severance benefits provided herein are subject to the provisions of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively **"Section 409A"**). Severance benefits shall not commence until Executive's Separation from Service. Each installment of severance benefits is a separate "payment" for purposes of Treasury Regulations Section 1.409A-2(b)(2)(i), and the severance benefits are intended to satisfy the exemptions from application of Section 409A provided under Treasury Regulations Sections 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9). However, if such exemptions are not available and Executive is, upon Separation from Service, a "specified employee" for purposes of Section 409A, then, solely to the extent necessary to avoid adverse personal tax consequences under Section 409A, the timing of the severance benefits payments shall be delayed until the earlier of (i) six (6) months and one day after Executive's Separation from Service, or (ii) Executive's death. Executive shall receive severance benefits only if Executive executes and returns to the Company the Release within the applicable time period set forth therein and permits such Release to become effective in accordance with its terms, which date may not be later than sixty (60) days following the date of Executive's Separation from Service (such latest permitted date, the **"Release Deadline"**). If the severance benefits are not covered by one or more exemptions from the application of Section 409A and the Release could become effective in the calendar year following the calendar year in which Executive's Separation from Service occurs, the Release will not be deemed effective any earlier than the Release Deadline. None of the severance benefits will be paid or otherwise delivered prior to the effective date of the Release. Except to the minimum extent that payments must be delayed because Executive is a "specified employee" or until the effectiveness of the Release, all amounts will be paid as soon as practicable in accordance with the schedule provided herein and in accordance with the Company's normal payroll practices.

The severance benefits are intended to qualify for an exemption from application of Section 409A or comply with its requirements to the extent necessary to avoid adverse personal tax consequences under Section 409A, and any ambiguities herein shall be interpreted accordingly.

(b) Section 280G. If any payment or benefit Executive will or may receive from the Company or otherwise (a "**280G Payment**") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), then any such 280G Payment pursuant to this Agreement or otherwise (a "**Payment**") shall be equal to the Reduced Amount. The "**Reduced Amount**" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "**Reduction Method**") that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "**Pro Rata Reduction Method**").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A that would not otherwise be subject to taxes pursuant to Section 409A, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for Executive as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A.

Unless Executive and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change in control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive's right to a 280G Payment becomes reasonably

likely to occur (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

If Executive receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 14(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Executive shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 14(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 14(b), Executive shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

15. **Indemnification**. The Company and Executive shall enter into the Indemnification Agreement attached hereto as Exhibit B, which the Company represents and warrants is the standard form of indemnification agreement provided to the Company's Board members.

16. **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 Effective Date and supersede any prior written or oral agreements or promises 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 not be assignable by Executive.

(e) Representation. Executive represents that Executive's employment by the Company and the performance by 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 perform services for any other party or to refrain from competing, directly or indirectly, with the business of any other party. 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 shall withhold from any and all compensation, severance and other amounts payable under this Agreement such Federal, state, local or other 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 8 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/ Jon P. Stonehouse
Name: Jon P. Stonehouse
Title: Chairman of the Compensation Committee of the Board of Directors

/s/ Richard A. Fair
Richard A. Fair

EXHIBIT A

INVENTIONS

Exhibit A

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-201036) pertaining to the 2006 Stock Option Plan, 2011 Stock Option Plan, 2014 Equity Incentive Plan and to the 2014 Employee Stock Purchase Plan of Bellicum Pharmaceuticals, Inc., and

(2) Registration Statement (Form S-3 No. 333-209012) of Bellicum Pharmaceuticals, Inc.

of our report dated March 13, 2017, with respect to the financial statements of Bellicum Pharmaceuticals, Inc. included in this Annual Report (Form 10-K) of Bellicum Pharmaceuticals, Inc. for the year ended December 31, 2016.

/s/ Ernst & Young LLP

Houston, Texas
March 13, 2017

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard A. Fair, certify that:

1. I have reviewed this Annual Report on Form 10-K of Bellicum Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2017

/s/Richard A. Fair
Richard A. Fair
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Alan A. Musso, certify that:

1. I have reviewed this Annual Report on Form 10-K of Bellicum Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2017

/s/ Alan A. Musso
Alan A. Musso
Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard A. Fair, Chief Executive Officer of Bellicum Pharmaceuticals, Inc. (the "Registrant"), do hereby certify in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, based upon my knowledge:

(1) this Annual Report on Form 10-K of the Registrant, to which this certification is attached as an exhibit (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: March 13, 2017

/s/ Richard A. Fair

Richard A. Fair

President and Chief Executive Officer

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

Exhibit 32.2

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Alan A. Musso, Chief Financial Officer and Treasurer of Bellicum Pharmaceuticals, Inc. (the "Registrant"), do hereby certify in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, based upon my knowledge:

(1) this Annual Report on Form 10-K of the Registrant, to which this certification is attached as an exhibit (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: March 13, 2017

/s/ Alan A. Musso

Alan A. Musso

Chief Financial Officer and Treasurer

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.