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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2017

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: 001-35703

PUMA BIOTECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware	**77-0683487**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

10880 Wilshire Boulevard, Suite 2150
Los Angeles, CA 90024
(424) 248-6500
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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 $0.0001 per share	The NASDAQ Stock Market LLC (NASDAQ Global Select 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 ☐

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 ☒

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 ☒ 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 (§ 232.405 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 ☒ 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. ☐

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

The aggregate market value of voting stock held by non-affiliates of the registrant was $2,481,469,190 as of June 30, 2017, based upon the closing price of $87.40 per share of the registrant's common stock on the NASDAQ Global Select Market on Friday, June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter. Shares of common stock held by each executive officer, director and holder of 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes. As of February 20, 2018, there were 37,719,724 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference:

Portions of the Proxy Statement for the registrant's 2018 Annual Meeting of Stockholders, or the 2018 Proxy Statement, are incorporated by reference into Part III of the Form 10-K to the extent stated herein.

TABLE OF CONTENTS

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions, future events or performance are not historical facts and may be forward looking. These forward-looking statements include, but are not limited to, statements about:

- the commercialization of NERLYNX ® (neratinib);
- the development of our drug candidates, including when we expect to undertake, initiate and complete clinical trials of our product candidates;
- the anticipated timing of regulatory filings;
- the regulatory approval of our drug candidates;
- our use of clinical research organizations and other contractors;
- our ability to find collaborative partners for research, development and commercialization of potential products;
- efforts of our licensees to obtain regulatory approval and commercialize NERYLNX in areas outside the United States;
- our ability to market any of our products;
- our history of operating losses;
- our expectations regarding our costs and expenses;
- our anticipated capital requirements and estimates regarding our needs for additional financing;
- our ability to compete against other companies and research institutions;
- our ability to secure adequate protection for our intellectual property;
- our intention and ability to vigorously defend against a securities class action lawsuit, derivative lawsuits and a defamation lawsuit;
- our ability to attract and retain key personnel; and
- our ability to obtain adequate financing.

These statements are often, but not always, made through the use of words or phrases such as “anticipate,” “estimate,” “plan,” “project,” “continuing,” “ongoing,” “expect,” “believe,” “intend” and similar words or phrases. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Discussions containing these forward-looking statements may be found throughout this Annual Report, including the sections entitled “Item 1. Business” in Part I and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II of this Annual Report. These forward-looking statements involve risks and uncertainties, including the risks discussed in the section entitled “Item 1A. Risk Factors” in Part I of this Annual Report, that could cause our actual results to differ materially from those in the forward-looking statements. We undertake no obligation to update the forward-looking statements or to reflect events or circumstances after the date of this document. The risks discussed in this Annual Report should be considered in evaluating our prospects and future financial performance.

P ART I

I TEM 1. BUSINESS

Company Overview

Unless otherwise provided in this Annual Report, references to the "Company," "we," "us," and "our" refer to Puma Biotechnology, Inc., a Delaware corporation formed on April 27, 2007 and formerly known as Innovative Acquisitions Corp., together with its wholly-owned subsidiary, Puma Biotechnology Ltd., and all references to "Former Puma" refer to Puma Biotechnology, Inc., a privately-held Delaware corporation formed on September 15, 2010, that merged with and into us in October 2011. We refer to this transaction as the "Merger."

We are a biopharmaceutical company with a focus on the development and commercialization of innovative products to enhance cancer care. We in-license the global development and commercialization rights to three drug candidates – PB272 (neratinib, oral), PB272 (neratinib, intravenous) and PB357. Neratinib is a potent irreversible tyrosine kinase inhibitor, or TKI, that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. Currently, we are primarily focused on the U.S. commercialization of NERLYNX (neratinib), our first U.S. Food and Drug Administration, or FDA, approved product, and on the further development of the oral version of neratinib for additional indications in the treatment of HER2-positive breast cancer. We believe neratinib has clinical application in the treatment of several other cancers as well, including non-small cell lung cancer and other tumor types that over-express or have a mutation in HER2. Until recently, we have focused our efforts and resources primarily on obtaining regulatory approval for NERLYNX (neratinib) and on acquiring and developing our pharmaceutical technologies, raising capital and recruiting personnel.

On July 17, 2017, we received regulatory approval of our first product, NERLYNX (neratinib), formally known as PB 2727 (neratinib (oral)), for the extended adjuvant treatment of adult patients with early state HER2-overexpressed/amplified breast cancer following adjuvant trastuzumab-based therapy from the FDA. After receiving FDA approval, we commenced commercialization of NERLYNX in the United States using a direct sales force.

Before we can market neratinib in countries outside the United States, we must receive regulatory approval from the appropriate government entities in those countries. We filed a Marketing Authorization Application, or MAA, with the European Medicines Agency, or EMA, in July 2016. We recently announced that the EMA's Committee for Medicinal Products for Human Use, or CHMP, adopted a negative opinion and recommend refusal of our MAA for neratinib for the extended adjuvant treatment of early stage HER2-positive breast cancer. We have 15 days from the date of acknowledgement of receipt of the final opinion package to request a re-examination, and we intend to submit the request within the prescribed timeline. We recently entered into exclusive license agreements with Specialised Therapeutics Asia Pte Ltd., or STA, Medison Pharma Ltd., or Medison, and CANbridgepharma Limited, or CANbridge, to pursue regulatory approval and commercialize NERLYNX, if approved, in South East Asia, Israel and greater China, respectively. We plan to continue to pursue commercialization of NERLYNX in other countries outside the United States, if approved, and will evaluate various commercialization options in those countries, including developing a direct sales force, contracting with third parties to provide sales and marketing capabilities, or some combination of these two options. We expect that our expenses will continue to increase as we continue commercialization efforts.

Breast cancer is the leading cause of cancer death among women worldwide. Studies show that approximately 20% to 25% of breast cancer tumors have an over-expression of the HER2 protein. Women with breast cancer that over-expresses HER2, referred to as HER2-positive breast cancer, are at greater risk for disease progression and death than women whose tumors do not over-express HER2. Therapeutic strategies, such as the use of trastuzumab (marketed as Herceptin), pertuzumab (marketed as Perjeta) and T-DM1 (marketed as Kadcyla), each produced by Genentech, and lapatinib (marketed as Tykerb) produced by Novartis, given either alone or in combination with chemotherapy, have been developed to improve the treatment of this type of breast cancer by binding to the HER2 protein. There are a number of trials ongoing that involve various combinations of these drugs (for example, Perjeta). Based on pre-clinical studies and clinical trials to date, we believe that neratinib may offer an advantage over existing treatments by more potently inhibiting HER2 at a different site and using a different mechanism than these other drugs.

Separately, in February 2013, we reached agreement with the FDA under a Special Protocol Assessment, or SPA for a planned Phase III clinical trial of PB272 in patients with HER2-positive metastatic breast cancer who have failed two or more prior treatments (third-line disease). The EMA has provided follow-on scientific advice, or SA, consistent with that of the FDA regarding our ability to use the trial to support regulatory approval in the European Union. We refer to this trial as PUMA-NER-1301. We initiated this trial in June 2013. We expect to report the top line data from this trial in 2018.

Additionally, in December 2016, we initiated a managed access program for neratinib. Managed access programs provide physicians and patients access to medicines when there are limited or no other t herapeutic options available. Our managed access program for neratinib enables participation from countries outside the United States, including European Union member states, where permitted by applicable rules, procedures and regulatory authorities. The p rogram will provide access to neratinib for the treatment of early stage HER2-positive breast cancer (extended adjuvant setting), HER2-positive metastatic breast cancer and HER2-mutated solid tumors. In order for patients to qualify for our managed access program they must be unable to participate in any ongoing neratinib clinical trial. Patients in the managed access program will be given neratinib and will be instructed to take a prophylaxis during treatment to manage neratinib-related diarrhea, which we expect will consist of high dose loperamide and budesonide. We have partnered with Caligor Opco LLC, which specializes in early access to medicines, to implement and oversee the managed access program for neratinib.

In addition to continuing to follow the patients from the ExteNET trial and continuing the PUMA-NER-1301 trial, we are actively conducting the following trials to evaluate the safety and efficacy of neratinib in various indications:

- a Phase II clinical trial of neratinib for the extended adjuvant treatment of patients with early stage HER2-overexpressed/amplified breast cancer who have received prior adjuvant trastuzumab (Herceptin)-based therapy in which patients are given antidiarrheal prophylaxis including loperamide alone or in combination with budesonide or other agents in order to prevent and reduce the neratinib-related diarrhea;
- a Phase II clinical trial of neratinib in combination with the chemotherapy drug capecitabine in patients with HER2-positive metastatic breast cancer that has metastasized to the brain;
- a Phase II clinical trial of neratinib in combination with the endocrine therapy fulvestrant in the treatment of patients with HER2-negative breast cancer that have a HER2 mutation;
- a Phase II clinical trial of neratinib monotherapy in the treatment of solid tumors that have an activating EGFR exon 18, HER2 of HER4 mutation;
- a Phase II clinical trial in the treatment of HER2-mutated non-small cell lung cancer; and
- a Phase I/II trial of neratinib plus Kadcyla in patients with metastatic HER2-positive breast cancer.

We license the commercial rights to our current drug candidates from Pfizer, Inc., Pfizer or the Licensor, which had previously been responsible for the clinical trials regarding neratinib. Going forward, we expect to augment our product pipeline by acquiring, through license or otherwise, additional drug candidates for research and development, and potential commercialization. In evaluating potential drug candidates, we employ disciplined decision criteria that favor drug candidates that have undergone at least some clinical study. Our decision to acquire a drug candidate will also depend on our evaluation of the scientific merits of the underlying technology, the costs of the transaction and other economic terms of any proposed license, the amount of capital that we anticipate will be required to develop the drug candidate and the economic potential of the drug candidate if approved for commercialization. We believe this strategy minimizes our clinical development risk and allows us to accelerate the development and potential commercialization of current and future drug candidates.

Strategy

Our primary objective is to build neratinib into a significant oncology franchise as a single agent, and potentially in combination with other therapies. The following elements comprise the strategy to achieve this objective:

- *Seek regulatory approval and commence commercialization of neratinib in regions outside the United States* . Before we can market neratinib outside the United States for any indication, including the FDA-approved indication associated with NERLYNX, we must obtain regulatory approval in those countries. We recently entered into exclusive license agreements with STA, Medison, and CANbridge pursuant to which each will develop and commercialize NERLYNX in South East Asia, Israel, and greater China, respectively. Pursuant to these agreements we receive upfront and milestone payments and will receive royalties on sales once commercialized. In June 2016, we submitted an MAA to the EMA for neratinib for the extended adjuvant treatment of patients with early-stage HER2-overexpressed/amplified breast cancer who have received prior adjuvant trastuzumab-based therapy. The MAA submission was based upon the results of the ExteNET trial, which reached its primary endpoint whereby neratinib demonstrated a statistically significant reduction of risk of invasive disease recurrence or death versus placebo. The CHMP recently recommended refusal of our MAA for neratinib for the extended adjuvant treatment of early stage HER2-positive breast cancer but allowed us to request a re-examination, which we intend to do. We are continuing to also evaluate potential commercialization options for the extended adjuvant setting in additional countries outside the United States, including developing a direct sales force, contracting with third parties to provide sales and marketing capabilities, some combination of these two options or other strategic options.

- *Continue to advance the development of neratinib for the treatment of other HER2-positive or HER2 mutated breast cancer indications .* We are primarily focused on developing neratinib for the treatment of patients with HER2-p ositive breast cancer, HER2-negative breast cancer with a HER2 mutation or other solid tumors with an activating mutation in HER2, or patients with HER2-mutated non-small cell lung cancer. In addition to our completed ExteNET trial, we have several ongoin g clinical trials focused on the treatment of patients with HER2-positive breast cancer. In June 2013, we commenced a Phase III clinical trial of neratinib in patients with HER2-positive metastatic breast cancer who have failed two or more prior treatment s (third-line disease). We also have several ongoing Phase I and Phase II clinical trials evaluating the use of neratinib in combination with various other drugs, including Kadcyla, Xeloda, Paclitaxel and Torisel, to treat patients with HER2-positive meta static breast cancer and HER2-positive metastatic breast cancer that has metastasized to the brain.
- *Expand our product pipeline by pursuing additional applications of neratinib.* We believe there are additional applications for neratinib in the treatment of HER2-mutated non-small cell lung cancer, which we also believe may be underserved by current treatment alternatives; in the treatment of patients with HER2-negative breast cancer who have a HER2 mutation; and in tumor types where HER2 is over-expressed or mutated. We intend to further evaluate the safety and efficacy of neratinib for treating these cancers.
- *Build a sustainable product pipeline by employing multiple therapeutic approaches and disciplined decision criteria based on clearly defined proof of principal goals.* We seek to build a sustainable product pipeline by employing multiple therapeutic approaches and by acquiring drug candidates belonging to known drug classes. In addition, we employ disciplined decision criteria to assess drug candidates, favoring drug candidates that have undergone at least some clinical study. Our decision to license a drug candidate will also depend on the scientific merits of the technology; the costs of the transaction and other economic terms of the proposed license; the amount of capital required to develop the technology; and the economic potential of the drug candidate, should it be commercialized. We believe this strategy minimizes our clinical development risk and allows us to accelerate the development and potential commercialization of current and future drug candidates. We intend to pursue regulatory approval for a majority of our drug candidates in multiple indications.
- *Evaluate the commercialization strategies on a product-by-product basis in order to maximize the value of each.* We are currently commercializing NERLYNX using a direct sales force in the United States and using out-licenses in certain countries outside of the United States. As we move additional drug candidates through development toward regulatory approval, we plan to evaluate several options for each drug candidate's commercialization strategy. These options include building our own internal sales force; entering into a joint marketing partnership with another pharmaceutical or biotechnology company, whereby we jointly sell and market the product; and out-licensing our product, whereby another pharmaceutical or biotechnology company sells and markets our product and pays us a royalty on sales. Our decision may be different for each product that reaches commercialization and will be based on a number of factors including capital necessary to execute on each option, size of the market to be addressed and terms of potential offers from other pharmaceutical and biotechnology companies.

Breast Cancer Overview

Breast cancer is the leading cause of cancer death among women worldwide, with approximately 1 million new cases reported each year and more than 400,000 deaths per year. Approximately 20% to 25% of breast cancer tumors show over-expression of the HER2 protein. Women with breast cancer that over-expresses HER2 are at greater risk for disease progression and death than women whose tumors do not over-express HER2. Therapeutic strategies have been developed to block HER2 in order to improve the treatment of this type of breast cancer.

Trastuzumab, pertuzumab, lapatinib and T-DM1 are all drugs that bind to the HER2 protein and thereby cause the cells to cease reproducing. Today, these drugs are used as single agents, in combination with other drugs and in combination with chemotherapy to treat patients with HER2-positive breast cancer at various stages.

Currently, the only treatment approved by the FDA for the treatment of neoadjuvant (newly diagnosed) HER2-positive breast cancer is the combination of pertuzumab plus trastuzumab and taxane chemotherapy. The FDA-approved therapy for the adjuvant treatment of HER2-positive early stage breast cancer is the combination of trastuzumab and chemotherapy. In addition, the combination of pertuzumab plus trastuzumab and chemotherapy was recently approved as adjuvant treatment of patients with HER2-positive early breast cancer at high risk of recurrence based on the results of the APHINITY trial. We are also aware of the KAITLIN trial, which is comparing trastuzumab plus pertuzumab plus taxane following anthracyclines versus T-DM1 plus pertuzumab following anthracyclines as an adjuvant therapy.

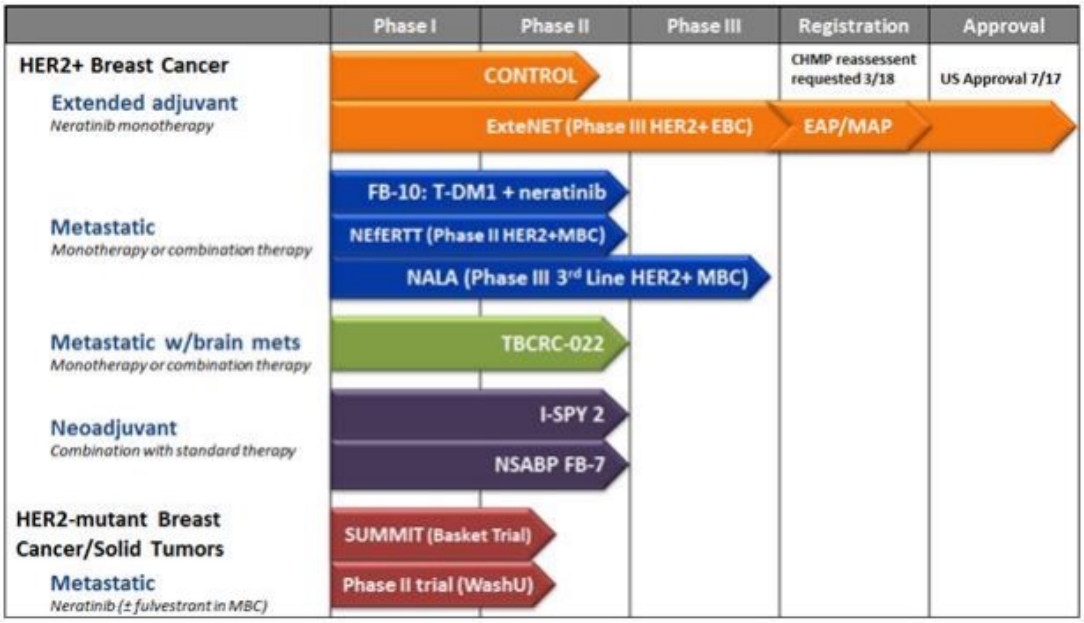
Trastuzumab and pertuzumab given in combination with taxane chemotherapy is the current first-line standard of ca re for HER2-positive metastatic breast cancer. Lapatinib (Tykerb), given in combination with the chemotherapy drug capecitabine, is also FDA-approved for the treatment of patients who have failed prior treatments. In a Phase II clinical trial, lapatinib d emonstrated a median progression free survival of 8 to 9 weeks and a response rate of 5 – 7%. In a Phase III clinical trial, patients with HER2-positive metastatic breast cancer who received the combination of lapatinib plus capecitabine demonstrated a me dian progression free survival of 27.1 weeks and a response rate of 23.7%. In the Phase III EMILIA trial, the combination of lapatinib plus capecitabine demonstrated a median progression free survival of 25.6 weeks and a response rate of 30.8%. T-DM1 is approved by the FDA for the treatment of patients with HER2-positive metastatic breast cancer who previously received first line trastuzumab-based therapy. Unfortunately, the disease eventually progresses for most patients with HER2-positive breast cancer while on these treatments. For these reasons, there is a need for alternatives to block HER2 signaling in patients who fail treatment with prior HER2 directed treatments. Neratinib is an orally active small molecule that inhibits HER2 at a different site and uses a different mechanism than trastuzumab. As a result, we believe that neratinib may have utility in patients with HER2-positive metastatic breast cancer who have failed treatment with trastuzumab.

We believe that there are approximately 36,000 patients in the United States and 34,000 patients in the European Union, or the EU, with newly diagnosed HER2-positive breast cancer. Based on our internal estimates, we believe that the worldwide Herceptin adjuvant revenue was approximately $4.5 to $5.0 billion in 2015. We also believe that there are between 5,000 and 6,000 patients in the United States with third-line or later HER2-positive metastatic breast cancer. The number of patients with third line or later HER2 positive metastatic breast cancer may decrease in future years as the introduction of new neoadjuvant, adjuvant and extended adjuvant treatments may reduce the number of patients with recurrence of HER2 positive breast cancer and therefore reduce the number of patients with HER2 positive metastatic breast cancer. In 2013, worldwide sales of Tykerb for this indication were approximately $325 million.

We believe that approximately 2% of all newly diagnosed breast cancer patients have mutation in HER2 kinase (approximately 4,000 to 5,000 patients in the United States) and that approximately 4 – 5% of all metastatic breast cancer patients have mutation in HER2 kinase (approximately 8,000 to 10,000 patients in the United States). We believe that this mutation occurs mostly in patients with hormone receptor-positive disease.

Product Development Pipeline

The following chart shows each of our current drug candidates and their clinical development stage.



Neratinib

Neratinib is a potent irreversible tyrosine kinase inhibitor, or TKI, that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. Based on pre-clinical studies and clinical trials to date, we believe that neratinib may offer an advantage over existing treatments that are used in the treatment of patients with HER2-positive metastatic breast cancer who have failed prior treatments, including treatment with trastuzumab, pertuzumab, and T-DM1. Currently, the treatment of metastatic breast cancer patients involves treatment with these agents either alone or in combination with chemotherapy. We believe that by more potently inhibiting HER2 at a different site and acting via a mechanism different from other agents, neratinib may have therapeutic benefits in patients who have failed these existing treatments, most notably due to its increased selectivity and irreversible inhibition of the HER2 target enzyme.

In addition, we believe neratinib has clinical application in the treatment of other cancers, including non-small cell lung cancer and other tumor types that over-express or have a mutation in HER2.

Our initial focus is on the development of the oral formulation of neratinib. We are also evaluating for potential development an intravenous formulation of neratinib and PB357, a back-up compound to neratinib.

PB272 (neratinib oral)—Early Stage Breast Cancer

Extended Adjuvant Breast Cancer

Two-Year ExteNET Data. In July 2014, we announced top line results from the Phase III clinical trial of neratinib for the extended adjuvant treatment of early stage HER2-positive breast cancer (ExteNET Trial). The data from this trial was presented in an oral presentation at the American Society of Clinical Oncology (ASCO) 2015 Annual Meeting in June 2015 and was published online in *The Lancet Oncology* in February 2016. The ExteNET trial is a double-blind, placebo-controlled, Phase III trial of neratinib versus placebo after adjuvant treatment with Herceptin in women with early stage HER2-positive breast cancer. More specifically, the ExteNET trial enrolled 2,840 patients in 41 countries with early stage HER2-positive breast cancer who had undergone surgery and adjuvant treatment with trastuzumab. After completion of adjuvant treatment with trastuzumab, patients were randomized to receive extended adjuvant treatment with either neratinib or placebo for a period of one year. Patients were then followed for recurrent disease, ductal carcinoma in situ (DCIS), or death for a period of two years after randomization in the trial.

The safety results of the study showed that the most frequently observed adverse event for the neratinib-treated patients was diarrhea, with approximately 39.9% of the neratinib-treated patients experiencing grade 3 or higher diarrhea (1 patient, 0.1%, had grade 4 diarrhea). Patients who received neratinib in this trial did not receive any prophylaxis with antidiarrheal agents to prevent the neratinib-related diarrhea. Puma's previously reported clinical data from several trials have demonstrated that the use of high dose prophylactic loperamide may greatly reduce the rate of grade 3 diarrhea with neratinib, with grade 3 diarrhea rates ranging from 0-17% in studies in which high dose loperamide prophylaxis was used. We are currently conducting an international, open-label, Phase II study investigating the use of antidiarrheal prophylaxis with loperamide alone or with other agents in the prevention and reduction of neratinib-associated diarrhea and, more specifically, grade 3 diarrhea. The interim results of this trial (data cut-off of November 2016) showed that the incidence of grade 3 diarrhea for the total 135 patients who received the loperamide prophylaxis was 28.1% and that the incidence of grade 3 diarrhea was 15.0% for the 40 patients who received the combination of loperamide plus budesonide. In all of its current ongoing studies Puma is instituting the use of antidiarrheal prophylaxis for the first cycle of treatment in order to continue to reduce the neratinib-related diarrhea. See "– *Safety Database* " for additional information.

The primary endpoint of the trial was invasive disease-free survival (DFS). The results of the trial demonstrated that treatment with neratinib resulted in a 33% reduction of risk of invasive disease recurrence or death versus placebo (hazard ratio = 0.67, p = 0.009). The 2-year DFS rate for the neratinib arm was 93.9% and the 2-year DFS rate for the placebo arm was 91.6%. The secondary endpoint of the trial was disease-free survival including ductal carcinoma in situ (DFS-DCIS). The results of the trial demonstrated that treatment with neratinib resulted in a 37% reduction of risk of disease recurrence including DCIS or death versus placebo (hazard ratio = 0.63, p = 0.002). The 2-year DFS-DCIS rate for the neratinib arm was 93.9% and the 2-year DFS-DCIS rate for the placebo arm was 91.0%.

As an inclusion criteria for the ExteNET trial, patients needed to have tumors that were HER2-positive using local assessment. In addition, as a pre-defined subgroup in the trial, patients had centralized HER2 testing performed on their tumor as well. At the time the 2-year data was compiled, centralized HER2 testing had been performed on 1,704 (60%) of the patients in the ExteNET trial and further central testing on available samples was currently ongoing. For the 1,463 patients whose tumors were HER2-positive by central confirmation, the results of the trial demonstrated that treatment with neratinib resulted in a 49% reduction of risk of invasive disease recurrence or death versus placebo (hazard ratio = 0.51, p = 0.002). The 2-year DFS rate for the centrally confirmed patients in the neratinib arm was 94.7% and the 2-year DFS rate for the centrally confirmed patients in the placebo arm was 90.6%. For the patients in the trial whose tumors were HER2-positive by central confirmation, the results of the trial demonstrated that treatment with neratinib resulted in a 51% reduction of risk of disease recurrence including DCIS or death versus placebo (hazard ratio = 0.49, p < 0.001). The 2-year DFS-DCIS rate for the centrally confirmed patients in the neratinib arm was 94.7% and the 2-year DFS rate for centrally confirmed patients in the placebo arm was 90.2%.

For the pre-defined subgroup of patients with hormone receptor positive disease, the results of the trial demonstrated that treatment with neratinib resulted in a 49% reduction of risk of invasive disease recurrence or death versus placebo (hazard ratio = 0.51, p = 0.001). The 2- year DFS rate for the neratinib arm was 95.4% and the 2-year DFS rate for the placebo arm was 91.2%. For the patients in the trial whose tumors were HER2-positive by central confirmation, the results of the trial demonstrat ed that treatment with neratinib resulted in a 75% reduction of risk of invasive disease recurrence or death (hazard ratio = 0.25, p < 0.001). The 2-year DFS rate for the centrally confirmed patients in the neratinib arm was 97.0% and the 2-year DFS rate f or centrally confirmed patients in the placebo arm was 88.4%.

Based on the results from the ExteNET trial, in June and July 2016, we submitted an MAA with the EMA and filed an NDA with the FDA, respectively, for regulatory approval of neratinib in the extended adjuvant setting.

Five-Year ExteNET Data. In September 2017, we presented updated data from the ExteNET trial at the European Society of Medical Oncology (ESMO) 2017 Congress in Madrid, Spain. The data represented a predefined 5-year invasive disease free survival (iDFS) analysis as a follow-up to the primary 2-year iDFS analysis of the Phase III ExteNet trial. The results of the trial demonstrated that after a median follow up of 5.2 years, treatment with neratinib resulted in a 27% reduction of risk of invasive disease recurrence or death versus placebo (hazard ratio = 0.73, p = 0.008). The 5-year iDFS rate for the neratinib arm was 90.2% and the 5-year iDFS rate for the placebo arm was 87.7%. The secondary endpoint of the trial was invasive disease free survival including ductal carcinoma in situ (iDFS-DCIS). The results of the trial demonstrated that treatment with neratinib resulted in a 29% reduction of risk of disease recurrence, including DCIS or death versus placebo (hazard ratio = 0.71, p = 0.004). The 5-year iDFS-DCIS rate for the neratinib arm was 89.7% and the 5-year iDFS-DCIS rate for the placebo arm was 86.8%.

For the pre-defined subgroup of patients with hormone receptor positive disease, the results of the trial demonstrated that treatment with neratinib resulted in a 40% reduction of risk of invasive disease recurrence or death versus placebo (hazard ratio = 0.60, p = 0.002). The 5-year iDFS rate for the neratinib arm was 91.2% and the 5-year iDFS rate for the placebo arm was 86.8%. For the pre-defined subgroup of patients with hormone receptor negative disease, the results of the trial demonstrated that treatment with neratinib resulted in a hazard ratio of 0.95 (p = 0.762).

The safety results were unchanged from the primary 2-year iDFS analysis of the study that showed the most frequently observed adverse event for the neratinib-treated patients was diarrhea, with approximately 39.9% of the neratinib-treated patients experiencing grade 3 or higher diarrhea (1 patient (0.1%) had grade 4 diarrhea). Patients who received neratinib in this trial did not receive any prophylaxis with antidiarrheal agents to prevent the neratinib-related diarrhea.

Neoadjuvant Breast Cancer

At the 2010 CTRC-AACR San Antonio Breast Cancer Symposium, the results of the Neoadjuvant Lapatinib and/or Trastuzumab Treatment Optimisation Study, or the Neo-ALTTO study, were presented. In this trial, patients with HER2-positive breast cancer were randomized to receive either the combination of paclitaxel plus trastuzumab, the combination of paclitaxel plus lapatinib or the combination of paclitaxel plus trastuzumab plus lapatinib, as a neoadjuvant (preoperative) therapy. The results of the trial demonstrated that patients who received the combination of paclitaxel plus trastuzumab demonstrated a pathological complete response rate, or pCR, of 27.6% in the breast and lymph nodes, the patients who received paclitaxel plus lapatinib had a pCR of 20.0% and the patients who received the combination of paclitaxel plus trastuzumab plus lapatinib had a pCR of 46.8%.

Also at the 2010 CTRC-AACR San Antonio Breast Cancer Symposium, the results of the Neo-Sphere study were presented. In this trial, patients with HER2-positive breast cancer were randomized to receive either the combination of docetaxel plus trastuzumab, the combination of docetaxel plus pertuzumab, the combination of trastuzumab plus pertuzumab or the combination of docetaxel plus trastuzumab plus pertuzumab, as a neoadjuvant (preoperative) therapy. The results of the trial demonstrated that the patients who received the combination of docetaxel plus trastuzumab had a pCR of 21.5%in the breast and lymph nodes, the patients who received docetaxel plus pertuzumab had a pCR of 17.7%, the patients who received pertuzumab plus trastuzumab had a pCR of 11.2% and the patients who received the combination of docetaxel plus trastuzumab plus pertuzumab had a pCR of 39.3%.

I-SPY 2 TRIAL. In 2010, the Foundation for the National Institutes of Health initiated the I-SPY 2 TRIAL (Investigation of Serial Studies to Predict Your Therapeutic Response with Imaging And moLecular Analysis 2). The I-SPY 2 TRIAL is a randomized Phase II clinical trial for women with newly diagnosed Stage 2 or higher (tumor size at least 2.5 cm) breast cancer that addresses whether adding investigational drugs to standard chemotherapy in the neoadjuvant setting is better than standard chemotherapy. The primary endpoint was pCR in the breast and the lymph nodes at the time of surgery. The goal of the trial was to match investigational regimens with patient subsets on the basis of molecular characteristics, referred to as biomarker signatures, that benefit from the regimen.

The I-SPY 2 TRIAL involved an adaptive trial design based on Bayesian predictive probability that a regimen will be shown to be statistically superior to standard therapy in an equally randomized 300-patient confirmato ry trial. Regimens that have a high Bayesian predictive probability of showing superiority in at least one of 10 predefined signatures graduate from the trial. Regimens are dropped for futility if they show a low predictive probability of showing superiori ty over standard therapy in all 10 signatures. A maximum total of 120 patients can be assigned to each experimental regimen. A regimen can graduate early and at any time after having 60 patients assigned to it.

In April 2014, we announced the results for the neratinib-containing regimen of the I-SPY 2 TRIAL. The neratinib-containing regimen (neratinib plus paclitaxel followed by doxorubicin and cyclophosphamide) graduated from the I-SPY 2 TRIAL based on having a high probability of success in Phase III with a signature of HER2 positive/HR negative. In this group, treatment with the neratinib-containing regimen resulted in an estimated pCR rate of 55.6% compared to the control arm (standard neoadjuvant chemotherapy: paclitaxel in combination with trastuzumab followed by doxorubicin and cyclophosphamide), which had an estimated pCR rate of 32.6%. The Bayesian probability of superiority for the neratinib-containing regimen (compared to standard therapy) is 94.9%, which is analogous to a p-value of 0.051. In addition, the Bayesian predictive probability of showing statistical superiority in a 300-patient Phase III randomized trial of paclitaxel plus neratinib versus paclitaxel plus trastuzumab, both followed by doxorubicin/cyclophosphamide, is 79.1%.

For the 65 patients in the trial who were HER2 positive (including those who were either hormone receptor positive or negative), treatment with the neratinib-containing regimen resulted in an estimated pCR rate of 39.4% compared to the control arm, which demonstrated an estimated pCR rate of 22.8%. The Bayesian probability of superiority for the neratinib-containing regimen is 95.4%, which is analogous to a p-value of 0.046. In addition, the Bayesian predictive probability of showing statistical superiority in a 300-patient Phase III randomized trial of paclitaxel plus neratinib versus paclitaxel plus trastuzumab is 72.7%.

Patients in the I-SPY 2 TRIAL were screened using the MammaPrint 70-gene signature test to determine if they had a heightened risk of breast cancer recurrence. The median MammaPrint score from the patients in the previous I-SPY 1 TRIAL who fit the eligibility criteria for I-SPY 2 was used as a predefined stratification factor for the I-SPY 2 TRIAL. Patients in I-SPY 2 were stratified as either MammaPrint High (below the median from I-SPY 1) or MammaPrint Ultra High (above the median from I-SPY 1). For the 41 neratinib treated patients in the trial who were MammaPrint Ultra High (80.5% of whom were HER2 negative), treatment with the neratinib-containing regimen resulted in an estimated pCR rate of 47.5% compared to the control arm, which demonstrated an estimated pCR rate of 29.4%. The Bayesian probability of superiority for the neratinib-containing regimen is 93.3%, which is analogous to a p-value of 0.067. In addition, the Bayesian predictive probability of showing statistical superiority in a 300-patient Phase III randomized trial of paclitaxel plus neratinib versus paclitaxel alone for HER2-negative patients, or in combination with trastuzumab for the HER2-positive patients, is 71.8%.

The results of the I-SPY2 TRIAL with neratinib were published in *The New England Journal of Medicine* in July 2016.

FB-7 Trial. In 2010, Pfizer, in collaboration with the National Surgical Adjuvant Breast and Bowel Project, or NSABP, a clinical trials cooperative group supported by the National Cancer Institute, or NCI, initiated the FB-7 study to investigate the use of neratinib as a neoadjuvant therapy for newly diagnosed HER2-positive breast cancer. In this trial, a total of 126 patients are randomized to receive neratinib plus the chemotherapy drug paclitaxel or trastuzumab plus paclitaxel prior to having surgery to remove their tumors. The purpose of this study is to test whether adding neratinib to paclitaxel chemotherapy is better than trastuzumab plus paclitaxel chemotherapy before having surgery. This trial was modified in 2012 to include a third treatment arm where patients will receive the combination of neratinib plus trastuzumab plus paclitaxel prior to having surgery to remove their tumors.

Data from this trial were presented at the 2015 CTRC-AACR San Antonio Breast Cancer Symposium. Patients were randomly assigned to trastuzumab (T) or neratinib (N) or the combination (T+N) with weekly paclitaxel (P) followed by standard doxorubicin and cyclophosphamide chemotherapy (AC) administered prior to surgery. 126 U.S., Canadian, and European patients were randomly assigned to Arm 1 (T+P followed by AC), Arm 2 (N+P followed by AC) or Arm 3 (T+N+P followed by AC). The primary endpoint of the trial was pathological complete response rate (pCR) in the breast and lymph nodes. Tumor tissue was collected on patients at the time of diagnosis. This tissue will be analyzed for several biomarkers including AKT, cMET, EGFR, ESR-alpha, HER2, HER3, HER4, p95 HER2 and PI3K and intrinsic subtypes. A key secondary endpoint of this trial is the molecular and genetic correlates of response for each of these biomarkers.

For the intent-to-treat patient population (hormone receptor positive (HR+) and hormone receptor negative (HR-)), the pCR rate for Arm 1 was 38.1%, for Arm 2 was 33.3% and for Arm 3 was 50.0%. For the HR+ patients, the pCR rate for Arm 1 was 29.6%, for Arm 2 was 27.6% and for Arm 3 was 30.4%. For the HR- patients, the pCR rate for Arm 1 was 57.1%, for Arm 2 was 46.2% and for Arm 3 was 73.7%.

The most frequently observed severe adverse event in the two neratinib treated arms of the trial (Arm 2 and Arm 3) was diarrhea. In the fi rst 19 patients treated in Arm 2 of the trial, high dose loperamide (16 mg per day initially) as primary prophylaxis was not given to prevent the neratinib-related diarrhea. In this subset of patients the grade 3 diarrhea rate was 42% (8/19). In the next 1 0 patients treated in Arm 2 and the first 20 patients treated in Arm 3, high dose primary prophylaxis (16 mg per day initially) with loperamide was given during the initial two weeks of the first cycle of treatment. Using two weeks of intensive loperamide prophylactically, the grade 3 diarrhea rate in Arm 2 was 30% (3/10) and the grade 3 diarrhea rate in Arm 3 was 35% (7/20). In the next 13 patients in Arm 2 and 22 patients in Arm 3, high dose prophylaxis (16 mg per day initially) was given for the entire f irst cycle of treatment (4 weeks). The grade 3 diarrhea rate was 15% (2/13) in Arm 2 and 23% (5/22) in Arm 3.

In December 2016, a biomarker analysis of the FB-7 trial was presented at the 2016 CTRC-AACR San Antonio Breast Cancer Symposium . Pre-treatment core biopsy samples (n=59) and post treatment surgical samples (n=17) were obtained from a subset of patients treated in the FB-7 trial. pCR data were available for 51 patients from the biomarker cohort. After excluding low tumor content non-evaluable samples, correlative biomarker analysis was performed in 42 patients.

Expression levels and the activation status of EGFR/HER2 signaling proteins were investigated. The results of the phosphorylated HER2 (phosphoHER2) showed that median levels of phosphoHER2 were higher in the patients who achieved a pCR with neratinib (n=7) than in the patients who did not achieve a pCR who received either trastuzumab (n=8, p=0.07) or the combination of trastuzumab plus neratinib (n=4, p=0.035). There was not a significant difference in the median levels of phosphoHER2 in the patients who achieved a pCR with neratinib (n=7), trastuzumab (n=8, p=0.16) or the combination of trastuzumab plus neratinib (n=4, p=0.10).

The truncated form of HER2 known as p95HER2 was measured by the proprietary assay of Pierian Bioscience. p95HER2 represents a truncated form of the HER2 receptor that lacks the extracellular trastuzumab binding domain. It is believed to represent a mechanism of trastuzumab resistance. Median p95HER2 levels were higher in samples from patients who achieved a pCR with neratinib than in the patients who did not achieve a pCR and who received either trastuzumab (p=0.027) or the combination of trastuzumab plus neratinib (p=0.009). There was not a significant difference in the median levels of p95HER2 in the patients who achieved a pCR with neratinib (n=7), trastuzumab (n=8, p=0.16) or the combination of trastuzumab plus neratinib (n=4, p=0.35).

The MammaPrint assay was performed on 59 samples to determine if there was any imbalance between arms. This assay is a genomic test that analyzes the activity of 70 genes and then calculates a recurrence score that is either low risk or high risk. The results of the MammaPrint showed that the patients in all three arms of the FB-7 trial were balanced with the median MammaPrint risk score being similar across arms. There were only three patients with a MammaPrint low score.

PB272 (neratinib, oral)—Metastatic Breast Cancer

Trials of Neratinib as a Single Agent . In 2009, Pfizer presented data at the CTRC-AACR San Antonio Breast Cancer Symposium from a Phase II trial of neratinib administered as a single agent to patients with HER2-positive metastatic breast cancer. Final results from this trial were published in the Journal of Clinical Oncology in March 2010.

The trial involved a total of 136 patients, 66 of whom had received prior treatment with trastuzumab and 70 of whom had not received prior treatment with trastuzumab. The results of the study showed that neratinib was reasonably well-tolerated among both the pretreated patients and the patients who had not received prior treatment with trastuzumab. Diarrhea was the most common side effect, but was manageable with antidiarrheal agents and dose modification. Efficacy results from the trial showed that the objective response rate was 24% for patients who had received prior trastuzumab treatment and 56% for patients with no prior trastuzumab treatment. Furthermore, the median PFS was 22.3 weeks for the patients who had received prior trastuzumab and 39.6 weeks for the patients who had not received prior trastuzumab.

Trials of Neratinib in Combination with Other Anti-Cancer Drugs . In November 2014, we announced top line results from a Phase II clinical trial of neratinib for the treatment of first-line HER2-positive locally recurrent or metastatic breast cancer (NEfERTT trial). Data from this trial was presented at the American Society of Clinical Oncology (ASCO) 2015 Annual Meeting in June 2015. The NEfERTT trial was a randomized, two-arm Phase II trial of neratinib plus the anticancer drug paclitaxel versus trastuzumab (Herceptin) plus paclitaxel as a first-line treatment for HER2-positive locally recurrent or metastatic breast cancer. The trial enrolled 479 patients in 33 countries with locally recurrent or metastatic breast cancer who had not received prior anticancer therapy for locally recurrent or metastatic disease. Patients were randomized to receive first-line treatment with either paclitaxel plus neratinib or paclitaxel plus trastuzumab. The primary endpoint of the trial was progression free survival. The secondary endpoints of the study included objective response rate and the incidence of central nervous system (CNS) metastases, including brain metastases.

The results of the trial demonstrated that the progression free survival for the patients who received the combination of paclitaxel plus neratinib was 12.9 months and the progression free survival for the patients who received the combination of paclit axel plus trastuzumab was 12.9 months (p=0.777). The objective response rate in the trial for the patients who received the combination of paclitaxel plus neratinib was 74.8% and the objective response rate for the patients who received the combination of paclitaxel plus trastuzumab was 77.6% (p=0.522). With respect to the incidence of central nervous system metastases (e.g., brain metastases), treatment with the combination of paclitaxel plus neratinib resulted in a 52% reduction in the incidence of CNS m etastases compared to the incidence of CNS metastases in patients who received the combination of paclitaxel plus trastuzumab. Symptomatic or progressive CNS recurrences occurred in 20 patients (8.3%) in the neratinib-paclitaxel group and 41 patients (17.3 %) in the trastuzumab-paclitaxel group (relative risk 0.48, p=0.002). The estimated Kaplan-Meier 2-year incidence of CNS recurrences was 16.3% in the neratinib-paclitaxel group and 31.2% in the trastuzumab-paclitaxel group (hazard ratio 0.45, p=0.004). The se results reflect a statistically significant difference between the two treatment arms. We believe that this represents the first randomized trial with a HER2 targeted agent that has shown a statistically significant reduction in the incidence of CNS me tastases. The Phase II trial results were published online in the *JAMA Oncology* in April 2016 .

Pfizer presented data from a Phase II trial at the 2010 CTRC-AACR San Antonio Breast Cancer Symposium, which evaluated the safety and efficacy of neratinib when given in combination with the anti-cancer drug vinorelbine in patients with HER2-positive metastatic breast cancer. In the 56 patients who had not been previously treated with the anti-HER2 therapy lapatinib, treatment with the combination of vinorelbine plus neratinib resulted in an overall response rate of 57% and PFS was 44.1 weeks. For those patients who had received prior treatment with lapatinib, the overall response rate was 50%. The combination of vinorelbine and neratinib was generally well tolerated.

Data from a third Phase II study, in which patients with confirmed HER2-positive metastatic breast cancer who had failed treatment with trastuzumab and taxane chemotherapy were given neratinib in combination with capecitabine, was presented at the 2011 CTRC-AACR San Antonio Breast Cancer Symposium. The results of the study showed that the combination of PB272 and capecitabine had acceptable tolerability. The efficacy results from the trial showed that for the 61 patients in the trial who had not been previously treated with the HER2 targeted anti-cancer drug lapatinib, there was an overall response rate of 64% and a clinical benefit rate of 72%. In addition, for the seven patients in the trial who had previously been treated with lapatinib, there was an overall response rate of 57% and a clinical benefit rate of 71%. The median PFS for patients who had not received prior treatment with lapatinib was 40.3 weeks and the median PFS for the patients who had received prior lapatinib treatment was 35.9 weeks.

In February 2013, we reached agreement with the FDA under an SPA for our planned Phase III clinical trial of neratinib in patients with HER2-positive metastatic breast cancer who have failed two or more prior treatments (third-line disease). The SPA is a written agreement between us, as the trial's sponsor, and the FDA regarding the design, endpoints, and planned statistical analysis of the Phase III trial with respect to the effectiveness of PB272 for the indication to be studied to support an NDA. The EMA has also provided follow-on SA, consistent with that of the FDA regarding our Phase III trial design and endpoints to be used and ability of such design to support the submission of an MAA in the EU.

Pursuant to the SPA and SA, the Phase III trial is designed as a randomized study of neratinib plus capecitabine versus lapatinib plus capecitabine in patients with third-line HER2-positive metastatic breast cancer. The trial is expected to enroll approximately 600 patients who will be randomized (1:1) to receive either PB272 plus capecitabine or lapatinib plus capecitabine. The trial will be conducted at approximately 250 sites in North America, Europe and Asia-Pacific. The agreed upon co-primary endpoints of the trial are PFS and overall survival. Our plan is to use the PFS data from the trial as the basis for submission of an NDA, and its foreign equivalents for Accelerated/Conditional Approval for PB272 from the regulatory agencies. We commenced patient enrollment in this Phase III trial in the second quarter of 2013. We expect to report the top line data from this trial in 2018.

In 2010, Pfizer also initiated a Phase I/II trial of neratinib in combination with the anti-cancer drug temsirolimus, or Torisel , in patients with HER2-positive metastatic breast cancer who have failed multiple prior treatments. The trial was conducted as a Phase I/II trial of PB272 given in combination with the anticancer drug temsirolimus in patients with HER2-positive metastatic breast cancer. The Phase I portion of the trial, which was reported previously, determined that the maximum tolerated dose was 240 mg of neratinib daily with 8 mg of temsirolimus weekly and the dose limiting toxicity was diarrhea. The interim Phase II dat a was presented at the 2014 CTRC-AACR San Antonio Breast Cancer Symposium. The Phase II portion of the study was conducted in two cohorts. The first cohort, referred to as the Maximum Tolerated Dose (MTD) cohort, received 240 mg of neratinib daily with 8 mg of temsirolimus weekly. This cohort of patients received low dose loperamide (4 mg per day) prophylactically in order to reduce the neratinib-related diarrhea. The second cohort of patients, referred to as the Dose Escalation cohort (DE cohort), receive d 240 mg of neratinib daily and initially received 8 mg of temsirolimus weekly. This cohort of patients received high dose loperamide (16 mg per day initially) prophylactically in order to reduce the neratinib-related diarrhea. If patients in the DE cohort had no tolerability issues with the combination of neratinib and temsirolimus given at 8 mg per week during the first cycle of treatment, patients in this DE cohort were allowed to dose escalate the temsirolimus to 15 mg per week for the remainder of the study. Patients in both cohorts in the study received a median of 3 prior regimens in the metastatic setting (range 1-8 prior regimens) before entering the trial. The 37 patients in the MTD cohort were enrolled at 3 centers in the United States and the 45 patients in the DE cohort were enrolled at 8 centers in the United States, Europe and Asia. The interim safety results of the study showed that the most frequently observed adverse event for the patients who received the combination of neratinib plus tems irolimus was diarrhea. For the 37 patients in the MTD cohort, who received low dose loperamide prophylactically, 12 patients (32%) experienced grade 3 diarrhea. For the 41 patients in the DE cohort, who received high dose loperamide prophylactically and we re allowed to dose escalate the temsirolimus dose, 7 patients (17%) reported grade 3 diarrhea. 4 (57%) of the 7 patients in the DE cohort who experienced grade 3 diarrhea were not compliant with the high dose loperamide prophylaxis. There were 4 patients i n the DE cohort who did not yet have safety data reported and are therefore not included in the safety population. For the patients in the DE cohort, thus far 47% of the patients have been able to dose escalate temsirolimus from 8 mg per week to 15 mg per week. The interim efficacy results from the trial showed that for the 37 patients in the MTD cohort, 11 patients (30%) experienced a partial response (PR). The median duration of response for this cohort of patients was 3.0 months and the median progress ion-free survival was 4.8 months. For the 37 evaluable patients in the DE cohort, the efficacy results from the trial demonstrated that 11 patients (30%) experienced a PR.

Metastatic Breast Cancer with Brain Metastases

Approximately one-third of the patients with HER2-positive metastatic breast cancer develop metastases that spread to their brain. The current antibody-based treatments, including trastuzumab, pertuzumab and T-DM1, do not enter the brain and therefore are not believed to be effective in treating these patients. In a Phase II trial with lapatinib given as a single agent, lapatinib demonstrated a 6% objective response rate in the patients with HER2-positive metastatic breast cancer whose disease spread to their brain. In January 2012, a Phase II trial of neratinib as a single agent and in combination with the anticancer drug capecitabine in patients with HER2-positive metastatic breast cancer that has spread to their brain was initiated in conjunction with the Dana Farber Translational Breast Cancer Research Consortium. In June 2014, at the ASCO 2014 Annual Meeting, results from the first cohort (n=40) who were administered neratinib monotherapy was presented. The efficacy results from the first cohort of the trial showed that for the 40 evaluable patients, 3 (7.5%) patients experienced a PR, 4 (10%) patients experienced prolonged stable disease (SD) for greater than or equal to 6 months and 12 (30%) patients experienced SD for less than 6 months. The median progression-free survival of the 40 evaluable patients was seen to be 1.9 months and the median overall survival was seen to be 8.7 months.

In June 2017, we presented additional data from this trial at the ASCO 2017 Annual Meeting. The multicenter Phase II clinical trial enrolled patients with HER2-positive metastatic breast cancer who have brain metasteses. The trial enrolled three cohorts of patients. Patients in the second cohort (n=5) represent patients who had brain metastases which were amenable to surgery and who were administered neratinib monotherapy prior to and after surgical resection. The third cohort (target enrollment=60) enrolled two sub-groups of patients (prior lapatinib-treated and no prior lapatinib) with progressive brain metastases who were administered neratinib in combination with the chemotherapy drug capecitabine. The oral presentation reflected only the patients in the third cohort of patients without prior lapatinib exposure (cohort 3A, n=37), who all had progressive brain metastases at the time of enrollment and who received the combination of capecitabine plus neratinib. Results from the second cohort and cohort 3B (prior lapatinib-treated) will be presented at a forthcoming medical meeting.

In cohort 3A, 30% of the patients had received prior craniotomy, 65% of the patients had received prior whole brain radiotherapy (WBRT), and 35% had received prior stereotactic radiosurgery (SRS) to the brain. No patients had received prior treatment with lapatinib.

The primary endpoint of the trial was central nervous system (CNS) Objective Response Rate according to a composite criteria that included volumetric brain MRI measurements, steroid use, neurological signs and symptoms, and RECIST evaluation for non-CNS sites. The secondary endpoint of the trial was CNS response by Response Assessment in Neuro-Oncology-Brain Metastases (RANO-BM) Criteria. The efficacy results from the trial showed that 49% of patients experienced a CNS Objective Response by the composite criteria. The results also showed that the CNS response rate using the RANO-BM criteria was 24%. The median time to CNS progression was 5.5 months and the median overall survival was 13.5 months, though 49% of patients remain alive and survival data are immature.

The results for cohort 3A showed that the most frequently observed severe adverse event for the 37 patients evaluable for safety was diarrhea. Patients received antidiarrheal prophylaxis consisting of high dos e loperamide, given together with the combination of capecitabine plus neratinib for the first cycle of treatment in order to try to reduce the neratinib-related diarrhea. Among the 37 patients evaluable for safety, 32% of the patients had grade 3 diarrhea and 41% had grade 2 diarrhea.

Safety Database . Our safety database includes over 3,000 patients who have been treated with neratinib. To date, the most significant grade 3 or higher adverse event associated with neratinib has been diarrhea, which occurs in approximately 30% of patients receiving the drug. Historically, once diarrhea occurred, patients were treated with loperamide and/or a reduction in the dose of neratinib. We have evaluated a prophylactic protocol pursuant to which a high dose of loperamide, approximately 16 mg, is given together with the initial dose of neratinib and then tapered down during the first cycle of treatment. We plan to continue evaluating this protocol as the preliminary data has suggested that this prophylactic regimen significantly reduces the incidence of diarrhea with neratinib.

In February 2015, Puma initiated a Phase II open-label trial of neratinib monotherapy for one year in 120 patients with early HER2-positive breast cancer who have completed one year of adjuvant trastuzumab, or the CONTROL trial. The CONTROL trial is an international, open-label, Phase II study investigating the use of loperamide prophylaxis with or without other agents in the reduction of neratinib-associated diarrhea that has a primary endpoint of the incidence of grade 3 diarrhea. In the CONTROL trial, patients with HER2-positive early stage breast cancer who had completed trastuzumab-based adjuvant therapy received neratinib daily for a period of one year. The trial initially tested high dose loperamide prophylaxis given for the first 2 cycles (56 days) of treatment (12 mg on days 1-14, 8 mg on days 15-56 and as needed thereafter). In the original protocol, 4 mg loperamide is self-administered with the first dose of neratinib, followed by 2 mg loperamide every 4 hours for the first 3 days, reducing to 2 mg loperamide every 6 to 8 hours through the first 2 cycles of therapy. With Amendment 1 of the protocol, the loperamide dosing schedule was modified to simplify the regimen. Following Amendment 1 of the protocol, 4 mg loperamide is self-administered with the first dose of neratinib, followed by 4 mg loperamide three times a day for 2 weeks, followed by 4 mg loperamide twice daily through the first 2 cycles of therapy. After two cycles, patients do not take loperamide prophylactically but take it as needed throughout the remainder of the treatment duration if diarrhea occurs.

In December 2017, interim results from the CONTROL trial were presented at the 2017 CTRC-AACR San Antonio Breast Cancer Symposium. The CONTROL trial was then expanded to include two additional cohorts. One cohort received the combination of loperamide and budesonide and the other cohort received the combination of loperamide plus colestipol. Budesonide is a locally acting corticosteroid that the Company believes targets the inflammation identified in a preclinical model of neratinib-induced diarrhea and colestipol is a bile acid sequestrant that the Company believes targets potential bile acid malabsorption that could result from such inflammation.

The interim analysis of the trial presented in the poster included a total of 137 patients who received neratinib plus loperamide prophylaxis, 64 patients who received neratinib plus loperamide prophylaxis for 2 cycles and budesonide for 1 cycle, and 120 patients who received neratinib plus loperamide prophylaxis for 1 cycle and colestipol for 1 cycle. The results of the trial showed that the incidence of grade 3 diarrhea for the 137 patients who received the loperamide prophylaxis was 30.7%. For the 137 patients who received the loperamide prophylaxis, the median number of grade 3 diarrhea episodes per patient was 1 and the median cumulative duration of grade 3 diarrhea was 3 days. For the 137 patients who received loperamide prophylaxis, 20.4% discontinued neratinib due to diarrhea. For the 64 patients who received the combination of loperamide plus budesonide, the results of the trial showed that the incidence of grade 3 diarrhea was 26.6%. The median number of grade 3 diarrhea episodes per patient was 1 and the median cumulative duration of grade 3 diarrhea was 2 days. For the 64 patients who received loperamide plus budesonide prophylaxis, 10.9% discontinued neratinib due to diarrhea.

For the 120 patients who received the co mbination of loperamide plus colestipol, the results of the trial showed that the incidence of grade 3 diarrhea was 10.8%. The median number of grade 3 diarrhea episodes per patient was 1 and the median cumulative duration of grade 3 diarrhea was 3 days. F or the 120 patients who received loperamide plus colestipol prophylaxis, 1.7% discontinued neratinib due to diarrhea. Further information is provided in Table 1 below:

Table 1: Characteristics of Treatment-Emergent Diarrhea

Study	**CONTROL**			**ExteNET**
	Loperamide (n=137)	**Loperamide + budesonide (n=64)**	**Loperamide + colestipol (n=120)**	**Loperamide prn (n=1408)**
Diarrhea, %				
Any grade	79.6	86.0	66.7	95.4
Grade 1	24.8	25.0	30.0	22.9
Grade 2	24.1	34.4	25.8	32.5
Grade 3 [a]	30.7	26.6	10.8	39.8
Grade 4	0	0	0	0.1
Median cumulative duration, days				
Any grade	14.0	24.0	16.0	59.0
Grade ≥2	5.0	6.0	3.5	10.0
Grade ≥3 [a]	3.0	2.0	3.0	5.0
Median diarrhea episodes/patient				
Any grade	2.0	9.0	2.5	8.0
Grade ≥2	2.0	3.0	1.0	3.0
Grade ≥3 [a]	1.0	1.0	1.0	2.0
Action taken, %				
Dose hold	15.3	18.8	9.2	33.9
Dose reduction	7.3	3.1	4.2	26.4
Discontinuation	20.4	10.9	1.7	16.8
Hospitalization	1.5	0	0	1.4
Duration of neratinib treatment, months				
Median	11.5	11.9	3.7	11.6

[a] No grade 4 events in the CONTROL study; one grade 4 event in the ExteNET study.

PB272 (neratinib, oral)—Other Potential Applications

Non-Small Cell Lung Cancer (NSCLC)

Approximately 2% to 4% of patients with NSCLC have a HER2 mutation in the kinase domain. This mutation is believed to narrow the ATP binding cleft, which results in increased tyrosine kinase activity. The mutation is also believed to result in increased PI3K activity and mTOR activation. Published data suggests that patients with HER2-mutated non-small cell lung cancer do not respond to platinum chemotherapy and do not respond to epidermal growth factor receptor inhibitors.

In September 2014, we reported initial data from the ongoing, open label Phase II clinical trial of PB272 (neratinib) for the treatment of patients with NSCLC with HER2 mutations as a late-breaking oral presentation at the ESMO 2014 Congress. In the trial, patients with confirmed Stage IIIB or Stage IV NSCLC with documented somatic HER2 mutations were randomized to receive either oral neratinib monotherapy at a dose of 240 mg per day or the combination of oral neratinib (at a dose of 240 mg daily) with intr avenous temsirolimus administered at a dose of 8 mg per week. In order to attempt to reduce the neratinib-related diarrhea, high-dose loperamide prophylaxis (Imodium) was given to all patients in both arms of the study beginning on day 1 of neratinib dosin g. The data presented in the oral presentation involved a total of 27 patients who completed the first stage of the trial; 13 of these patients received neratinib monotherapy and 14 of these patients received the combination of neratinib plus temsirolimus. The results of the study showed that the combination of PB272 and temsirolimus had acceptable tolerability. Historically the most frequently seen adverse event associated with neratinib has been diarrhea. In the previous Phase I trial of neratinib plus t emsirolimus (published in the *Journal of Clinical Oncology* in 2014) the diarrhea with neratinib was seen to be dose dependent and its incidence increased with increasing neratinib dosage. In that Phase I trial, grade 3 or higher diarrhea was seen in approx imately 30% of the patients treated with doses of neratinib that were 200 mg or higher. In the Phase II study, all patients received high-dose loperamide in order to attempt to prevent or reduce the neratinib-related diarrhea. For the 13 patients enrolled in the neratinib monotherapy arm, 1 patient (8%) experienced grade 3 diarrhea, and for the 14 patients enrolled in the combination of neratinib plus temsirolimus arm, 2 patients (14%) experienced grade 3 diarrhea. There were no grade 4 diarrhea events seen in the trial. For the 3 patients in the study (1 in the monotherapy arm, 2 in the combination arm) who experienced grade 3 diarrhea, 2 of the 3 patients were not compliant with the loperamide prophylaxis regimen and were not taking loperamide at the onset of grade 3 diarrhea.

The efficacy results from the trial showed that for the 13 patients in the trial who received neratinib monotherapy, no patient experienced a partial response, 7 patients (54%) achieved stable disease and 4 patients (31%) achieved clinical benefit (defined as a partial response or stable disease for 12 or more weeks). For the 14 patients who received the combination of neratinib plus temsirolimus, 3 patients (21%) experienced a partial response, 11 patients (79%) experienced stable disease and 9 patients (64%) achieved clinical benefit. The median PFS of the neratinib monotherapy arm was 2.9 months and the median PFS of the arm that received neratinib plus temsirolimus was 4.0 months. Patients continue to be enrolled in the arm of the trial that is receiving the combination of neratinib plus temsirolimus.

HER2 Mutation-Positive Solid Tumors

Based on the results from the Cancer Genome Atlas Study, we estimate that between 2% and 11% of each solid tumor has a mutation in HER2. In the United States, this includes new diagnoses of an estimated 7,000 – 7,500 patients with bladder cancer; 4,000 – 4,500 patients with colorectal cancer; 1,500 – 2,000 patients with glioblastoma; 1,000 patients with melanoma; 4,000 – 5,000 patients with prostate cancer; 1,000 patients with stomach cancer; and 1,000 – 2,000 patients with uterine cancer.

Basket Trial for HER2 Mutation-Positive Solid Tumors. In October 2013, we announced that we had initiated a Phase II clinical trial of neratinib as a single agent in patients with solid tumors that have an activating HER2 mutation (SUMMIT basket trial). The Phase II SUMMIT basket trial is an open-label, multicenter, multinational study to evaluate the safety and efficacy of PB272 administered daily to patients who have solid tumors with activating HER2 or HER3 mutations. The study initially included six cohorts (baskets) of patients, each of which will include one of the following cancers: (i) bladder/urinary tract cancer; (ii) colorectal cancer; (iii) endometrial cancer; (iv) gastric/esophageal cancer; (v) ovarian cancer; and (vi) all other solid tumors (including prostate, melanoma and pancreatic cancer). Each basket will initially consist of seven patients. If a certain predetermined objective response rate is seen in the initial cohort of seven patients, the basket will be expanded to include a larger number of patients.

In May 2014, we announced that we expanded the first cohort from the SUMMIT basket trial. The cohort that has been expanded includes patients with metastatic breast cancer that is not HER2 amplified or overexpressed (HER2 negative) and has a HER2 mutation. In April 2015, we announced that we expanded the cohort from the Phase II clinical trial of PB272 in patients with metastatic NSCLC that is not HER2 amplified or overexpressed (HER2 negative) and has a HER2 mutation. In December 2015, we announced that we expanded the cohort that includes patients with metastatic biliary duct (bile duct) cancer that is not HER2 amplified or overexpressed (HER2 negative) and has a HER2 mutation. In January 2017, we announced that we expanded the fourth cohort that includes patients with metastatic cervical cancer and whose tumors have a HER2 mutation. The cervical cancer patients initially entered the study in the “other solid tumors with a HER2 mutation” cohort and, due to the preliminary activity seen in the trial, we expanded a separate cervical cancer cohort pursuant to the protocol for the trial. The expanded HER2-mutant cervical cancer cohort will now enroll a total of 18 patients.

HER2-Mutated, Non-Amplified Breast Cancer

A HER2 mutation in patients with HER2-negative breast cancer was identified as part of a study performed by the Cancer Genome Atlas Network and published in Cancer Discovery in December 2012. We believe this mutation may occur in an estimated 2% of patients with breast cancer. Pre-clinical data from this publication demonstrated that neratinib was active in pre-clinical models of HER2-negative breast cancer that have this HER2 mutation and that neratinib has more anti-cancer activity than either trastuzumab or lapatinib in cells with this mutation. A Phase II trial of neratinib in HER2-negative breast cancer patients who have a HER2 mutation opened for enrollment in December 2012.

As stated above, in May 2014 we expanded the first cohort from the SUMMIT basket trial. Interim results from this ongoing Phase II trial were presented at the 2017 American Association for Cancer Research Annual Meeting (AACR) during the plenary session of the meeting. All patients received loperamide (16 mg per day initially) prophylactically for the first cycle of treatment in order to reduce the neratinib-related diarrhea. Included in the presentation were data on 141 patients enrolled in the neratinib monotherapy arm of the trial, including 124 patients with HER2 mutations and 17 patients with HER3 mutations. This included patients with 21 unique tumor types, with the most common being breast, lung, bladder and colorectal cancer. There were also 30 distinct HER2 and 12 distinct HER3 mutations observed among these patients, with the most frequent HER2 variants involving S310, L755, A755_G776insYVMA and V777.

In the HER2-mutant cohort, clinical responses were observed in tumors with S310, L755, V777, P780_Y781insGSP and A775_G776insYVMA mutations. When stratified by tumor type, responses were observed in patients with breast, cervical, biliary, salivary and non-small-cell lung cancers, which led to cohort expansions in these tumor types. No activity was observed in the HER3-mutant cohort. A more detailed presentation of the data is presented in Table 1 below

Table 1: SUMMIT Trial Efficacy Summary

	HER2 mut Breast (n=25)	**HER2 mut Bladder (n=16)**	**HER2 mut Lung (n=26)**	**HER2 mut Colorectal (n=12)**	**HER2 mut Biliary tract (n=9)**	**HER2 mut Cervical (n=5)**	**HER3 mut NOS (n=17)**
ORR at week 8, n (%) (95% CI)	8 (32.0) (14.9 — 53.5)	0 (0.0) (0.0 — 20.6)	1 (3.8) (0.1 — 19.6)	0 (0.0) (0.0 — 26.5)	2 (22.2) (2.8 — 60.0)	1 (20.0) (0.5 — 71.6)	0 (0.0) (0.0 — 20.6)
Clinical benefit rate, n (%) (95% CI)	10 (40.0) (21.1 — 61.3)	3 (18.8) (4.0 — 45.6)	11 (42.3) (23.4 — 63.1)	1 (8.3) (0.2 — 38.5)	3 (33.3) (7.5 — 70.1)	3 (60.0) (14.7 — 94.7)	2 (11.8) (1.6 — 38.3)
Median PFS, months (95% CI)	3.5 (1.9 — 4.3)	1.8 (1.7 — 3.5)	5.5 (2.7 — 10.9)	1.8 (1.4 — 1.9)	2.8 (0.5 — 3.7)	20.1 (0.5 — NA)	1.7 (1.4 — 2.0)

The neratinib safety profile observed in the SUMMIT study is consistent with that observed previously in metastatic patients with HER2 amplified tumors. With anti-diarrheal prophylaxis and management, diarrhea was not a treatment-limiting side effect in SUMMIT. The interim safety results of the study showed that the most frequently observed adverse event was diarrhea. For the 141 patients enrolled in the neratinib monotherapy arm with safety data available, 31 patients (22%) reported grade 3 diarrhea. The median duration of grade 3 diarrhea for those patients was 2 days. 4 patients (2.8%) permanently discontinued neratinib due to diarrhea and 21 patients (14.9%) temporarily discontinued neratinib due to diarrhea and then restarted after the diarrhea subsided.

PB272 (neratinib, intravenous)

We also plan to develop neratinib as an intravenously administered agent. The intravenous version of neratinib resulted in higher exposure levels of neratinib in pre-clinical models. We believe this may result in higher blood levels of neratinib in patients, and may translate into enhanced efficacy. We are evaluating the intravenous formulation of neratinib and considering options relative to its development.

PB357

PB357 is an orally administered agent that is an irreversible TKI that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. PB357 is structurally similar to PB272. Pfizer completed single-dose Phase I trials of PB357. We are evaluating PB357 and considering options relative to its development.

Clinical Testing of Our Products in Development

Each of our products in development, and likely all future drug candidates we in-license, will require extensive pre-clinical and clinical testing to determine the safety and efficacy of the product applications prior to seeking and obtaining regulatory approval. This process is expensive and time consuming. In completing these trials, we are dependent upon third-party consultants, consisting mainly of investigators and collaborators, who will conduct such trials.

We and our third-party consultants conduct pre-clinical testing in accordance with Good Laboratory Practices, or GLP, and clinical testing in accordance with Good Clinical P ractice standards, or GCP, which are international ethical and scientific quality standards utilized for pre-clinical and clinical testing, respectively. GCP is the standard for the design, conduct, performance, monitoring, auditing, recording, analysis an d reporting of clinical trials and the FDA requires compliance with GCP regulations in the conduct of clinical trials. Additionally, our pre-clinical and clinical testing completed in the EU is conducted in accordance with applicable EU standards, such as the EU Clinical Trials Directive (Directive 2001/20/EC of April 4, 2001), or the EU Clinical Trials Directive, and the national laws of the 28 member states of the EU, or Member States, implementing its provisions.

We have entered into, and may enter into in the future, master service agreements with clinical research organizations, or CROs, with respect to initiating, managing and conducting the clinical trials of our products. These contracts contain standard terms for the type of services provided that contain cancellation clauses requiring between 30 and 45 days written notice and that obligate us to pay for any services previously rendered with prepaid, unused funds being returned to us.

Competition

The development and commercialization of new products to treat cancer is highly competitive, and we face considerable competition from major pharmaceutical, biotechnology and specialty cancer companies. As a result, there are and will likely continue to be extensive research and substantial financial resources invested in the discovery and development of new cancer products. Our competitors include, but are not limited to, Genentech, Novartis, Roche, Boehringer Ingelheim, Takeda, Daiichi Sankyo and Seattle Genetics. None of these companies are developing their drugs for the extended adjuvant treatment of early stage HER2-positive breast cancer that has been previously treated with a trastuzumab-containing regimen. All of these competitors are developing their drugs for the treatment of metastatic HER2-positive breast cancer. We are an early stage company with a limited history of operations, sales, marketing and commercial manufacturing. Many of our competitors have substantially more financial and technical resources than we do. In addition, many of our competitors have more experience than we have in pre-clinical and clinical development, manufacturing, regulatory and global commercialization. We are also competing with academic institutions, governmental agencies and private organizations that are conducting research in the field of cancer.

We anticipate that we will face intense competition if we are able to commercialize additional product candidates. We expect that our products under development and in clinical trials will address major markets within the cancer sector. Our competition will be determined in part by the potential indications for which drugs are developed and ultimately approved by regulatory authorities. Additionally, the timing of market introduction of some of our potential products or of competitors' products may be an important competitive factor. Accordingly, the speed with which we can develop products, complete pre-clinical testing, clinical trials and approval processes, and supply commercial quantities to market are expected to be important competitive factors. We expect that competition among products approved for sale will be based on various factors, including product efficacy, safety, reliability, availability, price, reimbursement and patent position.

Sales and Marketing

During 2017, in connection with FDA approval of NERLYNX, we hired a U.S. specialty sales force of approximately 85 sales specialists who are focused on promoting NERLYNX to oncologists. This sales force is supported by an experienced sales leadership team comprised of regional sales managers, and our experienced commercial team comprised of experienced professionals in marketing, access and reimbursement, managed markets, marketing research, commercial operations, and sales force planning and management. In addition, our commercial infrastructure includes capabilities in manufacturing, medical affairs, quality control, and compliance.

We launched NERLYNX in the United States in July 2017, and our focus is to establish NERLYNX as the first choice for extended adjuvant treatment of adult patients with early stage HER2-overexpressed/amplified breast cancer following adjuvant trastuzumab-based therapy .

In other markets outside of the United States in which NERLYNX may be approved, if any, we may choose to commercialize NERLYNX independently or by establishing one or more strategic alliances such as the ones we have established for commercializing NERLYNX in South East Asia, beginning with Australia, Singapore, Malaysia, Brunei and New Zealand, Israel and in greater China, including mainland China, Taiwan, Hong Kong and Macau.

Intellectual Property and License Agreements

We hold a worldwide exclusive license under our license agreement with Pfizer to four granted U.S. patents and nine pending U.S. patent applications, as well as foreign counterparts thereof, and other patent applications and patents claiming priority therefrom.

In the United States, we have a license to an issued patent, which currently will expire in 2025, for the composition of matter of neratinib, our lead compound. We have a license to an issued U.S. patent covering a family of compounds including neratinib, as well as eq uivalent patents in the EU and Japan, that currently expire in 2019. We also have a license to an issued U.S. patent for the use of neratinib in the treatment of breast cancer, which currently expires in 2025, and an issued patent for the use of neratinib in the extended adjuvant treatment of early stage HER2 positive breast cancer that has previously been treated with a trastuzumab containing regimen that expires in 2030 . In jurisdictions which permit such, we will seek patent term extensions where possibl e for certain of our patents. We plan to pursue additional patents in and outside the United States covering additional therapeutic uses and polymorphs of neratinib from these existing applications. In addition, we will pursue patent protection for any new discoveries or inventions made in the course of our development of neratinib.

If we obtain marketing approval for neratinib or other drug candidates in the United States or in certain jurisdictions outside the United States, we may be eligible for regulatory protection, such as five years of new chemical entity exclusivity and, as mentioned below, up to five years of patent term extension potentially available in the United States under the Hatch-Waxman Amendments. In addition, eight to eleven years of data and marketing exclusivity potentially are available for new drugs in the European Union; up to five years of patent extension are potentially available in Europe (Supplemental Protection Certificate), and eight years of data exclusivity are potentially available in Japan. There can be no assurance that we will qualify for any such regulatory exclusivity, or that any such exclusivity will prevent competitors from seeking approval solely on the basis of their own studies. See “Government Regulation” below.

The intellectual property portfolio that was licensed from Pfizer in 2011 when we licensed neratinib included issued patents in a number of countries, including in Europe (EP 1848414), as well as pending patent applications in several countries, including the United States, relating to methods of treating gefitinib-and/or erlotinib-resistant cancer by administering an irreversible epidermal growth factor receptor inhibitor. More specifically, the patent that was issued in Europe in April 2011 included specific claims that included a pharmaceutical composition for use in treating cancer in a subject with a cancer having a mutation in epidermal growth factor receptor with a T790M mutation. On November 28, 2011, Boehringer Ingelheim International GmbH filed an opposition to this patent asking for this patent to be revoked. The Oral Proceedings of the European Patent Office were held in Munich, Germany on February 4, 2014. The decision of the European Patent Office was to uphold the granted claims of the European patent that relate to the T790M mutation without any modification. This included specific claims that include claims for the pharmaceutical composition comprising an irreversible epidermal growth factor receptor inhibitor for use in treating cancer in a subject having a T790M mutation, and claims for the pharmaceutical composition for use in the treatment of numerous cancers, including lung cancer and non-small cell lung cancer. In September 2015, we were advised of the issuance by the United States Patent and Trademark Office of a Notice of Allowance for U.S. Patent Application 11/883,474 titled “Method for Treating Gefitinib Resistant Cancer.”

Our goal is to obtain, maintain and enforce patent protection for our products, formulations, processes, methods and other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our policy is to actively seek to obtain, where appropriate, the broadest intellectual property protection possible for our current product candidates and any future product candidates, proprietary information and proprietary technology through a combination of contractual arrangements and patents, both in the United States and abroad. However, even patent protection may not always provide us with complete protection against competitors who seek to circumvent our patents. See “Risk Factors—Risks Related to Our Intellectual Property—Our proprietary rights may not adequately protect our intellectual property and potential products, and if we cannot obtain adequate protection of our intellectual property and potential products, we may not be able to successfully market our potential products.”

We depend upon the skills, knowledge and experience of our scientific and technical personnel, as well as that of our advisors, consultants and other contractors, none of which is patentable. To help protect our proprietary know-how, which is not patentable, and inventions for which patents may be difficult to obtain or enforce, we rely on trade secret protection and confidentiality agreements to protect our interests. To this end, we require all of our employees, consultants, advisors and other contractors to enter into confidentiality agreements that prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

In-License Agreement

In August 2011, Former Puma entered into an agreement pursuant to which Pfizer, or Licensor, agreed to grant to Former Puma a worldwide license for the development, manufacture and commercialization of neratinib (oral), neratinib (intravenous), PB357, and certain related compounds. Pursuant to the terms of the agreement, the license would not become effective until Former Puma closed a capital raising transaction in which it raised at least $25 million in aggregate net proceeds and had a net worth of at least $22.5 million. Upon the closing of the financing that preceded the Merger, this condition was satisfied.

We assumed the license agreement, in accordance with its terms, in the Merger. The license is exclusive with respect to certain patent rights owned or licensed by Pfizer. Under the license agreement, the Licensor is obligated to transfer to us certain information, records, regulatory filings, materials and inventory controlled by the Licensor and relating to or useful for developing these compounds and to continue to conduct certain ongoing clinical studies until a certain time. After that time, we are obligated to continue such studies pursuant to an approved development plan, including after the license agreement terminates for reasons unrelated to the Licensor's breach of the license agreement, subject to certain specified exceptions. We are also obligated to commence a new clinical trial for a product containing one of these compounds within a specified period of time and use commercially reasonable efforts to complete such trial and achieve certain milestones as provided in a development plan. If certain of our out-of-pocket costs in completing such studies exceed a mutually agreed amount, the Licensor will pay for certain additional out-of-pocket costs to complete such studies. We must use commercially reasonable efforts to develop and commercialize products containing these compounds in specified major-market countries and other countries in which we believe it is commercially reasonable to develop and commercialize such products.

As consideration for the license, we are required to make payments totaling $187.5 million upon the achievement of certain milestones if all such milestones are achieved. In connection with the FDA approval of NERLYNX in July 2017, we triggered a one-time milestone payment.

The license agreement originally stipulated that should we commercialize any of the compounds licensed from the Licensor or any products containing any of these compounds, we will be obligated to pay to the Licensor incremental annual royalties between approximately 10% and 20% of net sales of all such products, subject, in some circumstances, to certain reductions.

In July 2014, the Company signed an amendment to the license agreement with the Licensor. The amendment to the license agreement provides that the Company would be solely responsible for the expenses incurred or accrued in conducting the ongoing legacy clinical trials after December 31, 2013. These costs were previously the responsibility of the Licensor.

In addition, under the amended agreement, annual royalties to be paid on net sales of licensed products were reduced from a tiered royalty rate structure ranging between 10% to 20% to a fixed rate in the low to mid-teens. The Licensor and the Company have agreed to continue to cooperate to effect the transfer to the Company of certain records, regulatory filings, materials and inventory controlled by the Licensor as promptly as reasonably practicable.

Our royalty obligation continues, on a product-by-product and country-by-country basis, until the later of (i) the last to expire valid claim of a licensed patent covering the applicable licensed product in such country, or (ii) the earlier of generic competition for such licensed product reaching a certain level of sales in such country or expiration of a certain time period after first commercial sale of such licensed product in such country. When sublicensing the rights granted to us under the license agreement with the Licensor to a third party, the same milestone and royalty payments are required. We can terminate the license agreement at will at any time after April 4, 2013, or for safety concerns, in each case upon specified advance notice. Each party may terminate the license agreement if the other party fails to cure any breach of a material obligation by such other party within a specified time period. The Licensor may terminate the license agreement in the event of our bankruptcy, receivership, insolvency or similar proceeding. The license agreement contains other customary clauses and terms as are common in similar agreements in the industry.

Out-License Agreements

In November 2017 and January 2018, we entered into three exclusive license agreements with STA, Medison and CANbridge granting them the right to seek the regulatory approval and, if approved, commercialize NERLYNX in South East Asia, Israel and in greater China, respectively. Under each of the agreements, we are entitled to upfront and milestone payments throughout the term of the applicable agreement, as well as significant double-digit royalties calculated as a percentage of net sales of the licensed products in the respective territory. The description below provides a summary of our agreements with Specialised Therapeutics and CANbridge.

Specialised Therapeutics Agreement

On November 20, 2017, we entered into a license agreement, or the Specialised Therapeutics Agreement, with STA. Pursuant to the Specialised Therapeutics Agreement, we granted to STA, under certain of our intellectual property rights relating to neratinib, an exclusive (including with respect to us and our affiliates), sublicensable license to commercialize any pharmaceutical product containing neratinib in finished form, or, for purposes of this description, the Licensed Product, for the extended adjuvant treatment of adult patients with early stage HER2-positive breast cancer and HER2-positive metastatic breast cancer in Australia, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, New Zealand, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste and Vietnam, or the STA Territory.

The Specialised Therapeutics Agreement sets forth the parties' respective obligations with respect to the development, commercialization and supply of the Licensed Product. Within the STA Territory, STA will be generally responsible for regulatory and commercialization activities, and we will be solely responsible for the manufacturing and supply of the Licensed Product under a supply agreement that will be entered into between the parties.

Pursuant to the Specialised Therapeutics Agreement, we are entitled to upfront and other milestone payments of up to $4.5 million, payable upon achievement of the milestone events specified in the Specialised Therapeutics Agreement. Furthermore, we are entitled to receive significant double digit royalties calculated as a percentage of net sales of Licensed Products in the STA Territory.

The term of the Specialised Therapeutics Agreement continues, on a country-by-country basis, until the later of (i) the expiration or abandonment of the last patent covering the Licensed Product or (ii) the earlier of (a) the date upon which sales of generic versions of Licensed Product reach a specified level in such country, or (b) the tenth anniversary of the first commercial sale of the Licensed Product in such country. The Specialised Therapeutics Agreement may be terminated by either party if the other party commits a material breach, subject to a customary cure period, or if the other party is insolvent. The Specialised Therapeutics Agreement will also terminate upon the termination of the supply agreement for Licensed Products between the parties.

CANbridge Agreement

On January 30, 2018, we entered into an exclusive license agreement, or the CANbridge Agreement, with CANbridge. Pursuant to the CANbridge Agreement, we granted to CANbridge, under certain of our intellectual property rights relating to neratinib, an exclusive, sublicensable (under certain circumstances) license to develop and commercialize any pharmaceutical product containing neratinib, or, for purposes of this description, the Licensed Product, for the treatment of human disease, or for purposes of this description, the Field, in the People's Republic of China, or the CANbridge Territory, including mainland China, Hong Kong, Macao, and Taiwan, or, each, a CANbridge Region.

The CANbridge Agreement sets forth the parties' respective obligations with respect to the development, commercialization and supply of the Licensed Product. CANbridge will, at its expense, develop the Licensed Product for the purpose of obtaining regulatory approval in the Field and in the CANbridge Territory, subject to our approval of certain aspects of clinical studies conducted by CANbridge. Within the CANbridge Territory, CANbridge will be solely responsible, at its expense, for regulatory and commercialization activities. We will be solely responsible, subject to certain exceptions, for the manufacturing and supply of the Licensed Product under a supply agreement that will be entered into between the parties.

Pursuant to the CANbridge Agreement, we will receive an upfront payment of $30 million and potentially receive regulatory milestone payments totaling up to $40 million and sales-based milestone payments totaling up to $185 million. In addition, we are entitled to receive significant double-digit royalties calculated as a percentage of net sales of the Licensed Products in the CANbridge Territory.

The term of the CANbridge Agreement continues, on a CANbridge Region-by-CANbridge Region basis, until (i) the later of the expiration or abandonment of the last licensed patent covering the Licensed Product in such CANbridge Region or (ii) the earlier of (x) the date upon which sales of generic versions of the Licensed Product reach a specified level in such CANbridge Region, or (y) the tenth anniversary of the first commercial sale of the Licensed Product in such CANbridge Region. The CANbridge Agreement may be terminated by either party if the other party commits a material breach, subject to a customary cure period, or if the other party is insolvent; provided that if CANbridge materially breaches its development or commercialization obligations in a particular CANbridge Region, we may terminate the CANbridge Agreement solely with respect to such CANbridge Region. CANbridge may terminate the agreement at its convenience.

Government Regulation

United States—FDA Process

The research, development, testing, manufacture, labeling, promotion, advertising, distribution and marketing, among other things, of drug products are extensively regulated by governmental authorities in the United States and other countries. In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or the FDCA, and its implementing regulations. Failure to comply with the applicable U.S. requirements may subject us to administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, warning letters, fines, civil penalties, product recalls, product seizures, total or partial suspension of production or distribution, injunctions and/or criminal prosecution.

Drug Approval Process . None of our drug product candidates may be marketed in the United States until the drug has received FDA approval. The steps required before a drug may be marketed in the United States generally include the following:

- completion of extensive pre-clinical laboratory tests, animal studies, and formulation studies in accordance with the FDA's GLP regulations;
- submission to the FDA of an Investigational New Drug, or IND, application for human clinical testing, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety and efficacy of the drug for each proposed indication;
- submission to the FDA of an NDA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the active pharmaceutical ingredient, or API, and finished drug product are produced and tested to assess compliance with current Good Manufacturing Practices, or cGMPs; and
- FDA review and approval of the NDA prior to any commercial marketing or sale of the drug in the United States.

The development and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for our product candidates will be granted on a timely basis, if at all.

Pre-clinical tests include laboratory evaluation of product chemistry, toxicity and formulation, as well as animal studies. The conduct of the pre-clinical tests and formulation of the compounds for testing must comply with federal regulations and requirements. The results of the pre-clinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about the conduct of the trial, such as whether human research subjects will be exposed to an unreasonable health risk. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. We cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin.

Clinical trials involve administration of the investigational drug to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol must be provided to the FDA as part of a separate submission to the IND. Further, an Institutional Review Board, or IRB, for each medical center proposing to conduct the clinical trial must review and approve the study protocol and informed consent information for study subjects for any clinical trial before it commences at that center, and the IRB must monitor the study until it is completed. There are also requirements governing reporting of ongoing clinical trials and clinical trial results to public registries. Study subjects must sign an informed consent form before participating in a clinical trial. Clinical trials necessary for product approval typically are conducted in three sequential phases, but the phases may overlap. Phase I usually involves the initial introduction of the investigational drug into a limited population, typically healthy humans, to evaluate its short-term safety, dosage tolerance, metabolism, pharmacokinetics and pharmacologic actions, and, if possible, to gain an early indication of its effectiveness. Phase II usually involves trials in a limited patient population to (i) evaluate dosage tolerance and appropriate dosage; (ii) identify possible adverse effects and safety risks; and (iii) evaluate preliminarily the efficacy of the drug for specific targeted indications. Multiple Phase II clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase III clinical trials. Phase III trials, commonly referred to as pivotal studies, are undertaken in an expanded patient population at multiple, geographically dispersed clinical trial centers to further evaluate clinical efficacy and test further for safety by using the drug in its final form. There can be no assurance that Phase I, Phase II or Phase III testing will be completed successfully within any specified period of time, if at all. Furthermore, we, the FDA or an IRB may suspend clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Moreover, the FDA may approve an NDA for a product candidate, but require that the sponsor conduct additional clinical trials to further assess the drug after NDA approval under a post-approval commitment. Post-approval trials are typically referred to as Phase IV clinical trials.

During the development of a new drug, sponsors are given an opportunity to meet with the FDA at certain points. These points may be prior to submission of an IN D, at the end of Phase II, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach an agreement on the next phase of development. Sponsors typically use the end of Phase II meeting to discuss their Phase II clinical results and present their plans for the pivotal Phase III clinical trial that they believe wil l support approval of the new drug. A sponsor may request an SPA to reach an agreement with the FDA that the protocol design, clinical endpoints, and statistical analyses are acceptable to support regulatory approval of the product candidate with respect t o effectiveness in the indication studied. If such an agreement is reached, it will be documented and made part of the administrative record, and it will be binding on the FDA except in limited circumstances, such as if the FDA identifies a substantial sci entific issue essential to determining the safety or effectiveness of the product after clinical studies begin, or if the sponsor fails to follow the protocol that was agreed upon with the FDA. There is no guarantee that a study will ultimately be adequate to support an approval, even if the study is subject to an SPA.

Concurrent with clinical trials, companies usually complete additional animal safety studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and the manufacturer must develop methods for testing the quality, purity and potency of the final drugs. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

Assuming successful completion of the required clinical testing, the results of pre-clinical studies and of clinical trials, together with other detailed information, including information on the manufacture and composition of the drug, are submitted to the FDA in the form of an NDA requesting approval to market the product for one or more indications. An NDA must be accompanied by a significant user fee, which is waived for the first NDA submitted by a qualifying small business. In August 2017, the Food and Drug Administration Reauthorization Act, or FDARA, was signed into law. Among other things, FDARA reauthorizes the FDA's authority to collect user fees from industry participants to fund reviews of marketing applications for new drugs.

The testing and approval process requires substantial time, effort and financial resources. The FDA will review the NDA and may deem it to be inadequate to support approval, and we cannot be sure that any approval will be granted on a timely basis, if at all. The FDA may also refer the application to the appropriate advisory committee, typically a panel of clinicians, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendations of the advisory committee, but it typically follows such recommendations.

Before approving an NDA, the FDA inspects the facility or the facilities at which the drug and/or its active pharmaceutical ingredient is manufactured and will not approve the product unless the manufacturing is in compliance with cGMPs. If the FDA evaluates the NDA and the manufacturing facilities are deemed acceptable, the FDA may issue an approval letter, or in some cases a Complete Response Letter. The approval letter authorizes commercial marketing of the drug for specific indications. As a condition of NDA approval, the FDA may require post-marketing testing and surveillance to monitor the drug's safety or efficacy, or impose other conditions. A Complete Response Letter indicates that the review cycle of the application is complete and the application is not ready for approval. A Complete Response Letter may require additional clinical data and/or additional pivotal Phase III clinical trial(s), and/or other significant, expensive and time-consuming requirements related to clinical trials, pre-clinical studies or manufacturing. Even if such additional information is submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data from clinical trials is not always conclusive and the FDA may interpret data differently than we or our collaborators interpret data. Alternatively, the FDA could also approve the NDA with a Risk Evaluation and Mitigation Strategy to mitigate risks of the drug, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries or other risk minimization tools. Once the FDA approves a drug, the FDA may withdraw product approval if ongoing regulatory requirements are not met or if safety problems occur after the product reaches the market. In addition, the FDA may require testing, including Phase IV clinical trials, and surveillance programs to monitor the safety effects of approved products that have been commercialized. The FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs or other information.

Expedited Review and Approval . The FDA has various programs, including fa st track designation, priority review, accelerated approval, and breakthrough therapy designation, which are intended to expedite or simplify the process for reviewing drugs and/or provide for approval on the basis of surrogate endpoints. Even if a drug qu alifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will not be shortened. Generally, drugs that may be eligible for these pro grams are those for serious or life-threatening diseases or conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. For example, fast track designation is designed to facilitat e the development and expedite the review of drugs to treat serious or life-threatening diseases or conditions and which demonstrate the potential to address an unmet medical need. Priority review is designed to give drugs for serious conditions that offer significant improvement in safety or effectiveness an initial review within six months of the 60-day filing date, if the drug is a new molecular entity, as compared to a standard review time of 10 months. Although fast track designation and priority revie w do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a fast track designated drug and expedite review of the application for a drug designated for priority review. The FDA may also ini tiate review of sections of an NDA before the application is complete for drugs with fast track designation. This "rolling review" is available if the applicant provides and the FDA approves a schedule for submission of portions of the application. Drugs f or serious conditions are also eligible for accelerated approval, which provides an earlier approval of drugs, including fast track products, upon a determination that the product has an effect on a surrogate endpoint, which is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome, or an effect on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality and 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 receiving accelerated approval perform post-marketing clinical trials. Finally, breakthrough therapy designation, which was established by the Food and Drug Administration Safety and Innovation Act, or FDASIA, is for drugs intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Drugs designated as breakthrough therapies receive all the benefits of a fast track designation, as well as intensive guidance on efficient drug developme nt and organizational commitment involving senior managers in the FDA. We may seek to utilize one or more of these expedited programs for our product candidates in the future, but even if we were to obtain fast track designation, priority review, accelerat ed approval and/or breakthrough therapy designation, there is no guarantee that it would result in a quicker review or approval of our products, if any.

Post-Approval Requirements . After a drug has been approved by the FDA for sale, the FDA may require that certain post-approval requirements be satisfied, including the conduct of additional clinical studies. In addition, certain changes to an approved product, such as adding new indications, making certain manufacturing changes, or making certain additional labeling claims, are subject to further FDA review and approval. Before a company can market products for additional indications, it must obtain additional approvals from the FDA. Obtaining approval for a new indication generally requires that additional clinical studies be conducted. A company cannot be sure that any additional approval for new indications for any product candidate will be approved on a timely basis, or at all.

If post-approval conditions are not satisfied, the FDA may withdraw its approval of the drug. In addition, holders of an approved NDA are required to (i) report certain adverse reactions to the FDA and maintain pharmacovigilance programs to proactively look for these adverse events; (ii) comply with certain requirements concerning advertising and promotional labeling for their products; and (iii) continue to have quality control and manufacturing procedures conform to cGMPs after approval. The FDA periodically inspects the sponsor's records related to safety reporting and/or manufacturing facilities; this latter effort includes assessment of ongoing compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. We use third-party manufacturers to produce our products in clinical and commercial quantities, and future FDA inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of problems with a product after approval may result in restrictions on a product, manufacturer or holder of an approved NDA, including, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

Patent Term Restoration and Marketing Exclusivity . Depending upo n the timing, duration and specifics of FDA approval of the use of our drugs, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxm an Amendments. The Hatch-Waxman Amendments permit 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 remain ing 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 an NDA, plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension and the extension must be requested prior to expiration of the patent. The U.S. Patent and Trademark Office, or USPTO, in con sultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration date, depending on the expected length of clinical trials and other factors involved in the submission of the relevant NDA.

Data and market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent data exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application, or ANDA, or an NDA submitted under section 505(b)(2) of the FDCA by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, for new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct, or obtain a right of reference to all of the pre-clinical studies, adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries before we can commence clinical trials and approval of foreign countries or economic areas, such as the EU, before we may market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

In the European Economic Area, or EEA, which is comprised of the Member States of the EU plus Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are two types of MAs:

- Community MAs – These are issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, of the EMA, and are valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, and medicinal products indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA; for products that constitute a significant therapeutic, scientific or technical innovation; or for products that are in the interest of public health in the EU.
- National MAs – These are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, and are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member State through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure, an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State. The competent authority of the Reference Member State prepares a draft assessment report, a draft summary of the product characteristics, or SmPC, and a draft of the labeling and package leaflet, which are sent to the other Member States (referred to as the Member States Concerned) for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SmPC, labeling or packaging proposed by the Reference Member State, the product is subsequently granted a National MA in all the Member States, i.e., in the Reference Member State and the Member States Concerned.

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the Member States of the EEA assess the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

As in the United States, it may be possible in foreign countries to obtain a period of market and/or data exclusivity that would have the effect of postponing the entry into the marketplace of a competitor's generic product. For example, if any of our products receive marketing approval in the EEA, we expect they will benefit from eight years of data exclusivity and 10 years of marketing exclusivity. An additional non-cumulative one-year period of marketing exclusivity is possible if during the data exclusivity period (the first eight years of the 10-year marketing exclusivity period), we obtain an authorization for one or more new therapeutic indications that are deemed to bring a significant clinical benefit compared to existing therapies. The data exclusivity period begins on the date of the product's first marketing authorization in the EEA and prevents generics from relying on the marketing authorization holder's pharmacological, toxicological and clinical data for a period of eight years. After eight years, a generic product application may be submitted and generic companies may rely on the marketing authorization holder's data. However, a generic cannot launch until two years later (or a total of 10 years after the first marketing authorization in the EU of the innovator product), or three years later (or a total of 11 years after the first marketing authorization in the EU of the innovator product) if the marketing authorization holder obtains marketing authorization for a new indication with significant clinical benefit within the eight-year data exclusivity period. In Japan, our products may be eligible for eight years of data exclusivity. There can be no assurance that we will qualify for such regulatory exclusivity, or that such exclusivity will prevent competitors from seeking approval solely on the basis of their own studies.

When conducting clinical trials in the EU, we must adhere to the provisions of the European Union Clinical Trials Directive and the laws and regulations of the EU Member States implementing them. These provisions require, among other things, that the prior authorization of an Ethics Committee and the competent Member State authority is obtained before commencing the clinical trial.

Coverage and Reimbursement

In the United States and internationally, sales NERLYNX and any other products that we market in the future, and our ability to generate revenues on such sales, are dependent, in significant part, on the availability of adequate coverage and reimbursement from third-party payors, such as state and federal governments, managed care providers and private insurance plans. Private insurers, such as health maintenance organizations and managed care providers, have implemented cost-cutting and reimbursement initiatives and likely will continue to do so in the future. These include establishing formularies that govern the drugs and biologics that will be offered and the out-of-pocket obligations of member patients for such products. We may need to conduct pharmacoeconomic studies to demonstrate the cost-effectiveness of our products for formulary coverage and reimbursement. Even with such studies, our products may be considered less safe, less effective or less cost-effective than existing products, and third-party payors may not provide coverage and reimbursement for our product candidates, in whole or in part.

In addition, particularly in the United States and increasingly in other countries, we are required to provide discounts and pay rebates to state and federal governments and agencies in connection with purchases of our products that are reimbursed by such entities. It is possible that future legislation in the United States and other jurisdictions could be enacted to potentially impact reimbursement rates for the products we are developing and may develop in the future and could further impact the levels of discounts and rebates paid to federal and state government entities. Any legislation that impacts these areas could impact, in a significant way, our ability to generate revenues from sales of products that, if successfully developed, we bring to market.

Political, economic and regulatory influences are subjecting the healthcare industry in the United States to fundamental changes. There have been, and we expect there will continue to be, legislative and regulatory proposals to change the healthcare system in ways that could significantly affect our future business. For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, enacted in March 2010, substantially changes the way healthcare is financed by both governmental and private insurers. Among other cost containment measures, ACA establishes:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents;
- a new Medicare Part D coverage gap discount program, in which pharmaceutical manufacturers who wish to have their drugs covered under Part D must offer discounts to eligible beneficiaries during their coverage gap period, or the donut hole; and
- a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program.

We expect that the current presidential administration and U.S. Congress will likely continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. Most recently, the Tax Cuts and Jobs Act was enacted, which, among other things, removes penalties for not complying with the Affordable Care Act's individual mandate to carry health insurance. There is still uncertainty with respect to the impact President Trump's administration and the U.S. Congress may have, if any, and any changes will likely take time to unfold, and could have an impact on coverage and reimbursement for healthcare items and services covered by plans that were authorized by ACA.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, the Budget Control Act of 2011, among other things, included aggregate 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 to the statute, w ill remain in effect through 2025 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatm ent centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Individual states in the United States have also become increasingly active in passing legislation and implementi ng regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Recently, there has also been heightened governmental scrutiny over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congression al inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug produ cts. For example, the 21st Century Cures Act changes the reimbursement methodology for infusion drugs and biologics furnished through durable medical equipment in an attempt to remedy over- and underpayment of certain drugs.

In the future, there may continue to be additional proposals relating to the reform of the U.S. healthcare system. Future legislation, or regulatory actions implementing recent or future legislation may have a significant effect on our business. Our ability to successfully commercialize products depends in part on the extent to which reimbursement for the costs of our products and related treatments will be available in the United States and worldwide from government health administration authorities, private health insurers and other organizations. The adoption of certain proposals could limit the prices we are able to charge for our products, the amounts of reimbursement available for our products, and limit the acceptance and availability of our products. Therefore, substantial uncertainty exists as to the reimbursement status of newly approved health care products by third-party payors.

Sales and Marketing

The FDA regulates all advertising and promotion activities for products under its jurisdiction prior to and after approval, including standards and regulations for direct-to-consumer advertising, dissemination of off-label information, industry-sponsored scientific and educational activities and promotional activities involving the Internet. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved label. Further, if there are any modifications to the drug, including changes in indications, labeling, or manufacturing processes or facilities, we may be required to submit and obtain FDA approval of a new or supplemental NDA, which may require us to collect additional data or conduct additional pre-clinical studies and clinical trials. Failure to comply with applicable FDA requirements may subject a company to adverse publicity, enforcement action by the FDA, corrective advertising, consent decrees and the full range of civil and criminal penalties available to the FDA.

Physicians may prescribe legally available drugs for uses that are not described in the drug's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties, and often reflect a physician's belief that the off-label use is the best treatment for the patient. The FDA does not regulate the behavior of physicians in their choice of treatments, but FDA regulations do impose stringent restrictions on manufacturers' communications regarding off-label uses. Failure to comply with applicable FDA requirements may subject a company to adverse publicity, enforcement action by the FDA, corrective advertising, consent decrees and the full range of civil and criminal penalties available to the FDA.

Outside the United States, our ability to market a product is contingent upon obtaining marketing authorization from the appropriate regulatory authorities. The requirements governing marketing authorization, pricing and reimbursement vary widely from country to country.

Manufacturing

We do not currently have our own manufacturing facilities. We intend to continue to use our financial resources to accelerate commercialization of NERLYNX and development of our drug candidates rather than diverting resources to establish our own manufacturing facilities. We intend to meet our pre-clinical and clinical trial manufacturing requirements by establishing relationships with third-party manufacturers and other service providers to perform these services for us. While our drug candidates were being developed by Pfizer, both the drug substance and drug product were manufactured by third-party contractors. We are currently using the same third-party contractors to manufacture, supply, store and distribute our products in clinical trials and commercial quantities. We believe that we have manufactured sufficient quantities of the drug to support at least the first year of launch in the extended adjuvant breast cancer indication and plan to continue to manufacture the drug in 2018 to further support the commercial launch of the drug.

Should any of our other drug candidates obtain marketing approval, we anticipate establishing relationships with third-party manufacturers and other service providers in connection with commercial production of our product s. We have some flexibility in securing other manufacturers to produce our drug candidates; however, our alternatives may be limited due to proprietary technologies or methods used in the manufacture of some of our drug candidates.

Other Healthcare Laws

We may also be subject to various federal and state laws pertaining to health care "fraud and abuse," including anti-kickback laws and false claims laws, data privacy and security laws and transparency laws. Anti-kickback laws make it illegal for a prescription drug manufacturer to solicit, offer, receive, or pay any remuneration in exchange for, or to induce, the referral of business, including the purchase or prescription of a particular drug. Due to the breadth of the statutory provisions and the absence of guidance in the form of regulations and very few court decisions addressing industry practices, it is possible that our practices might be challenged under anti-kickback or similar laws. False claims laws prohibit anyone from knowingly and willingly presenting, or causing to be presented, for payment to third-party payors (including Medicare and Medicaid) claims for reimbursed drugs or services that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. In addition, some state prohibitions apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs. Our activities relating to the sale and marketing of our products may be subject to scrutiny under any of these laws.

The federal Health Insurance Portability and Accountability Act of 1996, or 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.

Violations of fraud and abuse laws may be punishable by criminal and/or civil sanctions, including fines and civil monetary penalties, the possibility of exclusion from federal health care programs (including Medicare and Medicaid) and corporate integrity agreements, which impose, among other things, rigorous operational and monitoring requirements on companies. Similar sanctions and penalties also may be imposed upon executive officers and employees, including criminal sanctions against executive officers under the so-called "responsible corporate officer" doctrine, even in situations where the executive officer did not intend to violate the law and was unaware of any wrongdoing. Given the penalties that may be imposed on companies and individuals if convicted, allegations of such violations often result in settlements even if the company or individual being investigated admits no wrongdoing. Settlements often include significant civil sanctions, including fines and civil monetary penalties, and corporate integrity agreements. If the government were to allege or determine that we or our executive officers had violated these laws, our business could be harmed. In addition, private individuals have the ability to bring similar actions.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology and Clinical Health Act, or HITECH, and their respective implementing regulations, including the final omnibus rule published on January 25, 2013, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, 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 attorney's fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.

Further, there are federal transparency requirements and an increasing number of state laws that require manufacturers to disclose and make reports to the government of pricing and marketing information as well as any "transfer of value" made or distributed to physicians, teaching hospitals and other healthcare providers. Many of these laws contain ambiguities as to what is required to comply with the laws. Given the lack of clarity in laws and their implementation, our future reporting actions could be subject to the penalty provisions of the applicable state and/or federal authorities.

Our activities could be subject to challenge for the reasons discussed above due to the breadth of these laws and the increasing attention being given to them by law enforcement authorities. The costs of defending such claims, as well as any sanctions imposed or negative public perceptions resulting therefrom, could require us to restructure our operations and have a material adverse effect on our financial performance.

Similar rigid restrictions are imposed on the promotion and marketing of medicinal products in the EU and other countries. Laws (including those governing promotion, mar keting and anti-kickback provisions), industry regulations and professional codes of conduct often are strictly enforced. Even in those countries where we may not be directly responsible for the promotion and marketing of our drug candidates, if approved, any inappropriate activity by international distribution partners could have adverse implications for us.

Other Laws and Regulatory Processes

We are subject to a variety of financial disclosure and securities trading regulations as a public company in the United States with securities traded on the NASDAQ Global Select Market, including laws relating to the oversight activities of the Securities and Exchange Commission, or the SEC, and the rules and regulations of The NASDAQ Stock Market LLC. In addition, the Financial Accounting Standards Board, or FASB, the SEC, and other bodies that have jurisdiction over the form and content of our accounts, our financial statements and other public disclosure are constantly discussing and interpreting proposals and existing pronouncements designed to ensure that companies best display relevant and transparent information relating to their respective businesses.

Our present and future business has been and will continue to be subject to various other laws and regulations. Various laws, regulations and recommendations relating to safe working conditions, laboratory practices, experimental use of animals, and the purchase, storage, movement, import and export, and use and disposal of hazardous or potentially hazardous substances used in connection with our research work are or may be applicable to our activities. Certain agreements entered into by us involving exclusive license rights or acquisitions may be subject to national or supranational antitrust regulatory control, the effect of which cannot be predicted. The extent of government regulation that might result from future legislation or administrative action cannot accurately be predicted.

Research and Development Expenses

Research and development activities, which include personnel costs, research supplies, clinical and pre-clinical study costs, are the primary source of our overall expenses. Such expenses related to the research and development of our product candidates totaled $207.8 million for the year ended December 31, 2017, $222.8 million for the year ended December 31, 2016 and $208.5 million for the year ended December 31, 2015.

Employees

As of December 31, 2017, we had 318 employees, all of whom are full-time employees. In 2017, we hired 125 full-time employees for sales, marketing and other commercial product launch activities related to NERLYNX. We believe our relations with our employees are good. Over the course of the next year, we anticipate hiring up to 6 full-time employees devoted to clinical activities, 8 full-time employees for medical affairs, 8 full-time employees for the regulatory and quality assurance function, 4 full-time employees for logistics and distribution, 10 full-time employees for sales, marketing and commercial related activities, and 2 full-time employees for general and administrative activities.

In addition, we intend to continue to use CROs and third parties to perform our clinical studies and manufacturing.

Corporate Information and History

Our principal executive offices are located at 10880 Wilshire Boulevard, Suite 2150, Los Angeles, California 90024 and our telephone number is (424) 248-6500. Our internet address is *www.pumabiotechnology.com* . Our annual, quarterly and current reports, and any amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 may be accessed free of charge through our website after we have electronically filed or furnished such material with the SEC. We also make available free of charge on or through our website our Code of Business Conduct and Ethics, Corporate Governance Guidelines, Audit Committee Charter, Compensation Committee Charter and Nominating and Corporate Governance Committee Charter. We will disclose on a current report on Form 8-K or on our website information any amendment or waiver of the Code of Business Conduct and Ethics for our executive officers and directors. Any amendment or waiver disclosed on our website will remain available on our website for at least 12 months after the initial disclosure.

The reference to *www.pumabiotechnology.com* (including any other reference to such address in this Annual Report) is an inactive textual reference only, meaning that the information contained on or accessible from the website is not part of this Annual Report on Form 10-K and is not incorporated in this report by reference.

We were originally incorporated in the State of Delaware in April 2007 under the name Innovative Acquisitions Corp. We were a "shell" company registered under the Exchange Act with no specific business plan or purpose until we acquired Former Puma in the M erger. As a result of this transaction, Former Puma become our wholly-owned subsidiary and subsequently merged with and into us, at which time we adopted Former Puma's business plan and changed our name to "Puma Biotechnology, Inc."

The Merger was accounted for as a reverse acquisition whereby Former Puma was deemed to be the acquirer for accounting and financial reporting purposes and we were deemed to be the acquired party. Consequently, our financial statements prior to the Merger reflect the assets and liabilities and the historical operations of Former Puma from its inception on September 15, 2010, through the closing of the Merger on October 4, 2011. Our financial statements after completion of the Merger include the assets and liabilities of us and Former Puma, the historical operations of Former Puma, and the operations of us following the closing date of the Merger.

The merger of a private operating company into a non-operating public shell corporation with nominal net assets is considered to be a capital transaction, in substance, rather than a business combination, for accounting purposes. Accordingly, we treated this transaction as a capital transaction without recording goodwill or adjusting any of our other assets or liabilities.

In November 2012, we established and incorporated Puma Biotechnology Ltd, a wholly owned subsidiary, for the sole purpose of serving as our legal representative in the United Kingdom and the European Union in connection with our clinical trial activity in those countries.

ITEM 1A. RISK FACTORS

In addition to the other information contained in this Annual Report, the following risk factors should be considered carefully in evaluating our company. Our business, financial condition, liquidity or results of operations could be materially adversely affected by any of these risks. Our business, financial condition, liquidity or results of operations could be materially adversely affected by any of these risks. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us.

Risks Related to our Business

We have a limited operating history and are not profitable and may never become profitable.

We have a limited operating history, and, until recently, we have focused our efforts and resources primarily on obtaining regulatory approval for NERLYNX (neratinib) and on acquiring and developing our pharmaceutical technologies, raising capital and recruiting personnel. On July 17, 2017, the FDA approved our first product, NERLYNX, for the extended adjuvant treatment of early stage, HER2-positive breast cancer in the United States, which became commercially available in the United States on July 31, 2017. We have a history of operating losses with net losses of $292.0 million for the fiscal year ended December 31, 2017 and $276.0 million and $239.3 million for the fiscal years ended December 31, 2016 and 2015, respectively. As of December 31, 2017, we had an accumulated deficit of approximately $1,088.5 million.

Although we received FDA approval and commenced commercialization of NERLYNX in the United States, we expect to incur substantial losses for the foreseeable future and may never become profitable. Moreover, even if we succeed in developing and commercializing one or more of other drug candidates, we may never become profitable. The successful development and commercialization of any drug candidate will require us to perform a variety of functions, including:

- undertaking pre-clinical development and clinical trials;
- hiring additional personnel;
- participating in regulatory approval processes;
- formulating and manufacturing products;
- initiating and conducting sales and marketing activities; and
- implementing additional internal systems and infrastructure.

We will likely need to raise additional capital in order to fund our business and generate significant revenue in order to achieve and maintain profitability. We may not be able to generate this revenue, raise additional capital or achieve profitability in the future. As a result, we expect our losses to continue for the foreseeable future. Accordingly, we cannot assure you that we will achieve profitability in the future or that, if we do become profitable, we will sustain profitability. Our failure to achieve or maintain profitability could negatively impact the value of our common stock.

Our success depends on our ability to successfully commercialize NERLYNX. We are currently a single product company with limited commercial sales experience, which makes it difficult to evaluate our current business, predict our future prospects and forecast our financial performance and growth.

We have invested a significant portion of our efforts and financial resources in the development and commercialization of our lead product, NERLYNX, which was approved by the FDA for the extended adjuvant treatment of early stage, HER2-positive breast cancer in the United States on July 17, 2017, and we expect NERLYNX to constitute the vast majority of our product revenue for the foreseeable future. Our success depends on our ability to effectively commercialize NERLYNX. Successful commercialization of NERLYNX is subject to many risks. We have never, as an organization, launched or commercialized a product, and there is no guarantee that we will be able to do so successfully with NERLYNX. There are numerous examples of unsuccessful product launches and failures to meet high expectations of market potential, including by pharmaceutical companies with more experience and resources than we have. The commercial success of NERLYNX depends on the extent to which patients and physicians accept and adopt NERLYNX. For example, if the expected patient population is smaller than we estimate or if physicians are unwilling to prescribe or patients are unwilling to take NERLYNX due to the related side effects, including diarrhea, the commercial potential of NERLYNX will be limited. Thus, significant uncertainty remains regarding the commercial potential of NERLYNX. Moreover, our ability to effectively generate product revenue from NERLYNX will depend on our ability to, among other things:

- achieve and maintain compliance with regulatory requirements;
- create market demand for and achieve market acceptance of NERLYNX through our marketing and sales activities and other arrangements established for the promotion of NERLYNX;

- compete with other breast cancer drugs (either in the pr esent or in the future);
- train, deploy and support a qualified sales force;
- secure formulary approvals for NERLYNX at a substantial number of targeted hospitals;
- ensure that our third-party manufacturers manufacture NERLYNX in sufficient quantities, in compliance with requirements of the FDA and similar foreign regulatory agencies, if NERLYNX is approved by such foreign regulatory agencies, and at acceptable quality and pricing levels in order to meet commercial demand;
- ensure that our third-party manufacturers develop, validate and maintain commercially viable manufacturing processes that are compliant with current Good Manufacturing Practice, or cGMP, regulations;
- implement and maintain agreements with wholesalers, distributors and group purchasing organizations on commercially reasonable terms;
- ensure that our entire supply chain efficiently and consistently delivers NERLYNX to our customers;
- receive adequate levels of coverage and reimbursement for NERLYNX from commercial health plans and governmental health programs;
- provide co-pay assistance to help qualified patients with out-of-pocket costs associated with their NERLYNX prescription and/or other programs to ensure patient access to our products;
- educate physicians and patients about the benefits, administration and use of NERLYNX;
- obtain acceptance of NERLYNX as safe and effective by patients and the medical community;
- influence the nature of publicity related to our product relative to the publicity related to our competitors' products;
- obtain regulatory approvals for additional indications for the use of NERLYNX; and
- maintain and defend our patent protection and regulatory exclusivity for NERLYNX and to comply with our obligations under, and otherwise maintain, our intellectual property license with Pfizer and our license agreements with third parties.

Any disruption in our ability to generate product revenue from the sale of NERLYNX will have a material and adverse impact on our results of operations.

We have limited experience as a company in marketing or distributing pharmaceutical products. If we are unable to expand our marketing capabilities and effectively commercialize NERLYNX, our business, results of operations and financial condition may be materially adversely affected.

Our strategy is to build our sales, marketing and distribution capabilities to successfully commercialize NERLYNX in the United States. While we are continuing to establish our commercial team and hire our U.S. sales force, we have limited experience commercializing pharmaceutical products as an organization. In order to successfully market NERLYNX, we must continue to build our sales, marketing, managerial, compliance, and related capabilities or make arrangements with third parties to perform these services. If we are unable to establish adequate sales, marketing, and distribution capabilities, whether independently or with third parties, we may not be able to appropriately commercialize NERLYNX and may not become profitable.

Included in our strategy in the United States is a direct sales force to commercialize NERLYNX. These efforts will continue to be expensive and time-consuming, and we cannot be certain that we will be able to successfully develop this capability. NERLYNX is a newly-marketed drug and, therefore, none of the members of our sales force has ever promoted NERLYNX prior to its commercial launch. In addition, we must train our sales force to ensure that a consistent and appropriate message about NERLYNX is being delivered to our potential customers. If we are unable to effectively train our sales force and equip them with effective materials, including medical and sales literature to help them inform and educate potential customers about the benefits of NERLYNX and its proper administration, our efforts to successfully commercialize NERLYNX could be harmed, which would negatively impact our ability to generate product revenue.

Additionally, we will need to maintain and further develop our sales force to achieve commercial success, and we will be competing with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel. In the event we are unable to continue to develop and effectively maintain our commercial team, including our U.S. sales force, our ability to successfully commercialize NERLYNX would be limited, and we would not be able to generate product revenue successfully.

There are risks involved both with establishing our own sales and marketing capabilities, and with entering into arrangements wit h third parties to perform these services. For example, any efforts to develop a direct sales and marketing organization are subject to numerous risks, including:

- the expense and time required to recruit and train a sales force;
- our inability to recruit, retain or motivate adequate numbers of effective and qualified sales and marketing personnel;
- the inability to provide adequate training to sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or convince adequate numbers of physicians to prescribe any product;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- the premature or unnecessary incurrence of significant commercialization expenses if the commercial launch of a product is delayed or does not occur for any reason.

Similarly, if we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenue or the profitability associated with any product revenue may be lower than if we were to market and sell any products that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell and market our products or may be unable to do so on terms that are favorable to us. We may have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. Moreover, we may be negatively impacted by other factors outside of our control relating to such third parties, including, but not limited to, their inability to comply with regulatory requirements. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our products.

We may not be able to secure additional financing on favorable terms, or at all, to meet our future capital needs and our failure to obtain additional financing when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development or commercialization efforts or other operations.

Our operations have consumed substantial amounts of cash since inception. We expect our costs and expenses to increase in the future as we commercialize NERLYNX, including the cost of a direct sales force and the cost of manufacturing. We will also continue to expend substantial amounts on research and development of our other product candidates, including conducting clinical trials. Our future capital requirements will depend on many factors, including:

- the costs and expenses of our U.S. sales and marketing infrastructure, and of manufacturing;
- the degree of success we experience in commercializing NERLYNX;
- the revenue generated by the sale of NERLYNX and any other products that may be approved;
- the costs, timing and outcomes of clinical trials and regulatory reviews associated with our other product candidates;
- the emergence of competing products;
- the extent to which NERLYNX is adopted by the physician community and patients;
- the number and types of future products we develop and commercialize;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims;
- the costs of operating as a public company and compliance with existing and future regulations; and
- the extent and scope of our general and administrative expenses.

While our consolidated financial statements ha ve been prepared on a going concern basis, we expect to continue incurring significant losses for the foreseeable future and will continue to remain dependent on our ability to obtain sufficient funding to sustain operations and successfully commercialize NERLYNX. The Company entered into a loan agreement with Silicon Valley Bank, or SVB, and Oxford Finance LLC, or Oxford, for a term loan of up to $100 million, subject to funding in two tranches. The Company received gross proceeds of $50 million from the first tranche of the credit facility upon closing on October 31, 2017 and intends to use the funds for general corporate purposes and to further support NERLYNX commercial initiatives. The second tranche of $50 million may be drawn at the Company's option subject to the achievement of certain revenue milestones. The loan will mature on October 31, 2022. While we have been successful in raising financing in the past, there can be no assurance that we will be able to do so in the future. Additional financ ing may not be available on a timely basis on terms acceptable to us, or at all. We may raise funds in equity or debt financings to access funds for our capital needs. If we raise additional funds through further issuances of equity or convertible debt sec urities, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. Any debt financing obtained by us in the future would cause us to incur debt service expenses and could include restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and pursue business opportunities. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, we may terminate or delay the development of one or more of our product candidates, del ay clinical trials necessary to market our products, or delay establishment of sales and marketing capabilities or other activities necessary to commercialize our products. If this were to occur, our ability to continue to grow and support our business and to respond to business challenges could be significantly limited. Furthermore, our ability to obtain funding may be adversely impacted by uncertain market conditions, unfavorable decisions of regulatory authorities or adverse clinical trial results. The outcome of these matters cannot be predicted at this time. Additionally, even though we have commenced the commercialization of NERLYNX, we will need to maintain and further develop our sales force to achieve commercial success, and we will be competin g with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel. In the event we are unable to continue to develop and effectively maintain our commercial team, including our U.S. sales force, our ab ility to successfully commercialize NERLYNX would be limited, and we would not be able to generate product revenue successfully. There are risks involved both with establishing our own sales and marketing capabilities and with entering into arrangements wi th third parties to perform these services. For example, any efforts to develop a direct sales and marketing organization would be subject to numerous risks, including:

- recruiting and training a sales force is expensive and time consuming and could delay any product launch;
- our inability to recruit, retain or motivate adequate numbers of effective and qualified sales and marketing personnel;
- the inability to provide adequate training to sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or convince adequate numbers of physicians to prescribe any future products;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- the premature or unnecessary incurrence of significant commercialization expenses if the commercial launch of a product is delayed or does not occur for any reason.

Similarly, if we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenue or the profitability associated with any product revenue may be lower than if we were to market and sell any products that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell and market our proposed products or may be unable to do so on terms that are favorable to us. We may have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. Moreover, we may be negatively impacted by other factors outside of our control relating to such third parties, including, but not limited to, their inability to comply with regulatory requirements. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our proposed products.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

Our historical consolidated financial statements have been prepared under the assumption that we will continue as a going concern. Our independent registered public accounting firm has issued a report on our audited consolidated financial statements for the year ended December 31, 2017 that included an explanatory paragraph referring to our significant operating losses and expressing substantial doubt in our ability to continue as a going concern. Our ability to continue as a going concern is dependent upon our ability to obtain additional equity financing or other capital, attain further operating efficiencies, reduce expenditures, and, ultimately, to generate revenue. Our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. However, if adequate funds are not available to us when we need it, we will be required to curtail our operations which would, in turn, further raise substantial doubt about our ability to continue as a going concern. The doubt regarding our potential ability to continue as a going concern may adversely affect our ability to obtain new financing on reasonable terms or at all. Additionally, if we are unable to continue as a going concern, our stockholders may lose some or all of their investment in the Company.

The terms of our credit facility place restrictions on our ability to operate our business and on our financial flexibility, and we may be unable to a chieve the revenue necessary for us to incur additional borrowings under the credit facility or to satisfy the minimum revenue covenants.

The terms of our credit facility place restrictions on our ability to operate our business and our financial flexibility. On October 31, 2017, we entered into a loan and security agreement, which we refer to as the credit facility, with SVB as administrative and collateral agent, and the lenders party thereto from time to time, including SVB and Oxford pursuant to which the lenders agreed to make term loans available to us in an aggregate amount of $100 million, consisting of (i) a Term Loan A in an aggregate amount of $50 million available on the effective date and (ii) a Term Loan B in an aggregate amount of $50 million available to be drawn at our option between March 31, 2018 and June 30, 2018 provided we have achieved a specified minimum revenue milestone and no event of default is occurring. As of December 31, 2017, we had $50 million in principal outstanding under the credit facility. We cannot assure you that we will achieve the revenue milestone that will trigger our ability to draw the Term Loan B, and accordingly, we may never be able to borrow the additional $50 million provided for in the credit facility. The credit facility is secured by substantially all of our personal property, other than our intellectual property.

The credit facility includes affirmative and negative covenants applicable to us, our current subsidiary and any subsidiaries we create in the future. The affirmative covenants include, among others, covenants requiring us to maintain our legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. We must also achieve product revenue, measured as of the last day of each fiscal quarter on a trailing 3-month basis, that is (i) greater than or equal to 70% of the revenue target set forth in our board-approved projections for the 2017 fiscal year, (ii) greater than or equal to 50% of the revenue target set forth in our board-approved projections for the 2018 fiscal year, and (iii) greater than or equal to 50% of the revenue target set forth in our board-approved projections for the 2019 fiscal year. New minimum revenue levels will be established for each subsequent fiscal year by mutual agreement of us, SVB as administrative agent, and the lenders. The negative covenants include, among others, restrictions on us transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens, selling assets and suffering a change in control, in each case subject to certain exceptions. These covenants may make it difficult for us to operate our business. In addition, we are in the early stages of commercializing NERLYNX and we cannot assure you that we will be able to achieve the minimum revenue requirements provided for in the credit facility. Our failure to satisfy the revenue, or any other, covenant could result in an event of default under the loan.

The credit facility also includes events of default, the occurrence and continuation of which could cause interest to be charged at the rate that is otherwise applicable plus 5% and would provide SVB, as collateral agent, with the right to exercise remedies against us and the collateral securing the credit facility, including foreclosure against the property securing the credit facilities, including our cash. These events of default include, among other things, our failure to pay principal or interest due under the credit facility, a breach of certain covenants under the credit facility, our insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than $500,000 and one or more judgments against us in an amount greater than $500,000 individually or in the aggregate.

NERLYNX or our other drug candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any, as applicable.

Undesirable side effects caused by NERLYNX or our other drug candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. To date, subjects treated with NERLYNX have experienced drug-related side effects including diarrhea. Results of our trials could reveal a high and unacceptable severity and prevalence of these or other side effects. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete clinical trials or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if we or others later identify undesirable side effects caused by any approved product, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require additional warnings on the label;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;

- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of NERLYNX or the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

Even though the FDA has granted approval of NERLYNX for the extended adjuvant treatment of early stage, HER2-positive breast cancer, the terms of the approval may limit its commercial potential.

Even though the FDA has granted approval of NERLYNX, the scope and terms of the approval may limit our ability to commercialize NERLYNX and, therefore, our ability to generate substantial sales revenue. The FDA has approved NERLYNX only for the extended adjuvant treatment of early stage, HER2-positive breast cancer. In connection with the FDA approval, we have committed to conduct the following post-marketing studies: (i) a physiologically-based pharmacokinetic, or PBPK, modeling/simulation study to evaluate the effect of repeat doses of a moderate CYP3A4 inhibitor on the single dose pharmacokinetics of neratinib and its active metabolites to assess the magnitude of increased drug exposure and to address the potential for excessive drug toxicity, or if the PBPK modeling/simulation is not feasible, a clinical pharmacokinetic trial, (ii) a PBPK modeling/simulation study or a clinical pharmacokinetic trial with repeat doses of a moderate CYP3A4 inducer on the single dose pharmacokinetics of neratinib and its active metabolites to assess the magnitude of decreased drug exposure and to determine appropriate dosing recommendations, (iii) a clinical pharmacokinetic trial to evaluate whether separating the dosing of H2-receptor antagonists and neratinib can minimize the drug-drug interaction potential, (iv) the submission of the final results of our 2-year carcinogenicity study in the rat, and (v) submission of certain trial data from our ongoing clinical trials. If we fail to comply with our post-marketing commitments, or if the results of the post-marketing studies, or any other ongoing clinical studies of NERLYNX, are negative, the FDA could decide to withdraw approval, add warnings or narrow the approved indication in the product label.

We are heavily dependent on the success of NERLYNX, which is still under clinical development for various additional indications. While the FDA has approved NERLYNX for the extended adjuvant treatment of patients with early stage HER2-positive breast cancer, we cannot be certain that NERLYNX will receive regulatory approval for any other indication for which we may seek approval.

The FDA has approved NERLYNX only for the extended adjuvant treatment of early stage, HER2-positive breast cancer in adult patients following adjuvant trastuzumab-based therapy. We expect that a substantial portion of our efforts and expenditures over the next few years will be devoted to the development of NERLYNX in various additional indications. Accordingly, our business currently depends heavily on the successful development and regulatory approval of NERLYNX for additional indications. The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of drug products are and will remain subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries that each have differing regulations. We are not permitted to market NERLYNX for other indications or any of our other drug candidates in the United States until we receive approval of an NDA from the FDA for such indications, or, in any foreign countries, until requisite approval from such countries. In June 2016, we submitted an MAA with the EMA. In August 2017, the Committee for Medicinal Products for Human Use of the EMA, or CHMP, issued its Day-180 List of Outstanding Issues in the process of their ongoing regulatory review of the MAA, requesting additional data analyses related to the safety and efficacy of neratinib and instituting a clock stop in order to allow the Company time to respond to this List of Outstanding Issues. The Company responded to the list in December 2017. The CHMP recently recommended refusal of our MAA for neratinib for the extended adjuvant treatment of early stage HER2-positive breast cancer but allowed us to request a re-examination which we intend to do.

Approval of NERLYNX by the FDA for the extended adjuvant treatment of early stage, HER2-positive breast cancer in adult patients following adjuvant trastuzumab-based therapy does not ensure that a foreign jurisdiction will also approve NERLYNX for that indication, nor does it ensure that NERLYNX will be approved by the FDA for any other indications. Obtaining approval of an NDA or foreign marketing application is an extensive, lengthy, expensive and inherently uncertain process, and the FDA or a foreign regulator may delay, limit or deny approval of a drug candidate for many reasons, including:

- we may not be able to demonstrate that NERLYNX or any other drug candidate is safe and effective as a treatment for our targeted indications to the satisfaction of the FDA or other regulator;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA or other regulator for marketing approval;
- the FDA or other regulator may disagree with the number, design, size, conduct or implementation of our clinical trials;
- the clinical research organization, or CRO, that we retain to conduct clinical trials or any other third parties involved in the conduct of trials may take actions outside of our control that materially adversely impact our clinical trials;

- the FDA or other regulator may not find the data from pre-clinical studies and clinical trials sufficient to demonstrate that the clinical and other benefits of NERLYNX or any other drug candidate outweigh the safety risks;
- the FDA or other regulator may disagree with our interpretation of data from our pre-clinical studies and clinical trials or may require that we conduct additional studies or trials;
- the FDA or other regulator may not accept data generated at our clinical trial sites;
- if our NDA is reviewed by an advisory committee, the FDA may have difficulties scheduling an advisory committee meeting in a timely manner or the advisory committee may recommend against approval of our application or may recommend that the FDA require, as a condition of approval, additional pre-clinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the advisory committee may recommend that the FDA require, as a condition of approval, additional pre-clinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the FDA may require development of a Risk Evaluation and Mitigation Strategy as a condition of approval;
- the FDA or other regulator may identify deficiencies in the manufacturing processes or facilities of our third-party manufacturers; or
- the FDA or other regulator may change its approval policies or adopt new regulations.

If we do not obtain regulatory approval of NERLYNX for other indications in the United States, or for any indication in foreign jurisdictions, we will not be able to market NERLYNX for other indications or in other jurisdictions, which will limit our commercial revenue.

We have no experience in drug formulation or manufacturing and plan to rely exclusively on third parties to formulate and manufacture NERLYNX and our drug candidates, and any disruption or loss of these relationships could delay our development and commercialization efforts.

We have no experience in drug formulation or manufacturing and do not intend to establish our own manufacturing facilities. We lack the resources and expertise to formulate or manufacture NERLYNX and our drug candidates. While our drug candidates were being developed by Pfizer, both the drug substance and drug product were manufactured by third-party contractors. We are using the same third-party contractors to manufacture, supply, store and distribute drug supplies for our clinical trials and the commercialization of NERLYNX. If we are unable to continue our relationships with one or more of these third-party contractors, we could experience delays in our development or commercialization efforts as we locate and qualify new manufacturers. We intend to rely on one or more third-party contractors to manufacture the commercial supply of our drugs. Our anticipated future 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 must approve any replacement manufacturer. 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.
- Our third-party manufacturers might be unable to formulate and manufacture our drugs in the volume and of the quality required to meet our clinical and/or commercial needs.
- 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 for commercialization, as applicable.
- The facilities used by our contract manufacturers to manufacture NERLYNX and our other drug candidates must be approved by the FDA pursuant to inspections that are conducted following submission of an NDA to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with cGMP regulations for manufacture of both active drug substances and finished drug products. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Administration for controlled substances, similar non-U.S. regulatory agencies and corresponding state agencies to ensure strict compliance with cGMP regulations and other government regulations and corresponding foreign standards. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our drug candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for our other drug candidates, if approved, or market NERLYNX.
- If any third-party manufacturer makes improvements in the manufacturing process for our products, we may not own, or may have to share, the intellectual property rights to the innovation.

Each of these risks could delay our clinical trials, the approval, if any, of our drug ca ndidates by the FDA or the commercialization of NERLYNX or our other drug candidates, or result in higher costs or deprive us of potential product revenue.

If our third-party manufacturers fail to manufacture NERLYNX in sufficient quantities and at acceptable quality and pricing levels, or fail to fully comply with cGMP regulations, we may face delays in commercialization or be unable to meet market demand, and may lose potential revenues.

The manufacture of NERLYNX requires significant expertise and capital investment, including the development of advanced manufacturing techniques, process controls and the use of specialized processing equipment. Our third-party manufacturers must comply with federal, state and foreign regulations, including the FDA's regulations governing cGMP, enforced by the FDA through its facilities inspection program and by similar regulatory authorities in other jurisdictions where we do business. These requirements include, among other things, quality control, quality assurance and the maintenance of records and documentation. The FDA or similar foreign regulatory authorities at any time may implement new standards, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of our products. Any failure by us or our third-party manufacturers to comply with applicable regulations may result in fines and civil penalties, suspension of production, product seizure or recall, operating restrictions, imposition of a consent decree, modification or withdrawal of product approval or criminal prosecution and would limit the availability of our product. Any manufacturing defect or error discovered after products have been produced and distributed also could result in significant consequences, including costly recall procedures, re-stocking costs, damage to our reputation and potential for product liability claims.

If our third-party manufacturers are unable to produce the required commercial quantities of NERLYNX to meet market demand for NERLYNX on a timely basis or at all, or if they fail to comply with applicable laws for the manufacturing of NERLYNX, we will suffer damage to our reputation and commercial prospects and we will lose potential revenue.

We are substantially dependent on international third-party licensees for the development and commercialization of NERLYNX in several countries outside the United States. The failure of these licensees to meet their contractual, regulatory, and other obligations could adversely affect our business.

We have entered into exclusive license agreements with several third parties that provide these licensees exclusive rights to the development and commercialization of NERLYNX in South East Asia, Israel and greater China. As a result, we are entirely dependent on these parties to achieve regulatory approval of NERLYNX for marketing in these countries and for the commercialization of NERLYNX, if approved. The timing and amount of any milestone and royalty payments we may receive under these agreements, as well as the commercial success of NERLYNX, will depend on, among other things, the efforts, allocation of resources and successful commercialization of NERLYNX by the licensees. We also depend on these third parties to comply with all applicable laws relative the development and commercialization of our products in those countries. We do not control the individual efforts of these licensees and have limited ability to terminate these agreements if the licensees do not perform as anticipated. The failure of these licensees to devote sufficient time and effort to the development and commercialization of NERLYNX, or the failure of these licensees to meet their obligations to us, including for future royalty and milestone payments; to adequately deploy business continuity plans in the event of a crisis; and/or satisfactorily resolve significant disagreements with us or address other factors, could have an adverse impact on our financial results and operations. In addition, if these third parties violate, or are alleged to have violated, any laws or regulations during the performance of their obligations for us, it is possible that we could suffer financial and reputational harm or other negative outcomes, including possible legal consequences.

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

Although the FDA approved NERLYNX for the extended adjuvant treatment of early stage, HER2-positive breast cancer in the United States on July 17, 2017, NERLYNX is still under development for various indications, and our other drug candidates are in development as well, all of which will require extensive clinical testing before we can submit any NDA for regulatory approval. We cannot predict with any certainty that any NDA submitted by us will be approved by the FDA. Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is also time consuming. We estimate that clinical trials of our other drug candidates will take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The results of pre-clinical studies and early clinical trials of our drug candidates may not be predictive of the results of later-stage clinical trials. Drug candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through pre-clinical 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 adverse safety profiles, notwithstanding promising results in earlier trials. Our future clinical trial results may not be successful.

The commencement and completion of clinical trials may be delayed by several factors, including:

- imposition of a clinical hold or failure to obtain regulatory authorization or approval to commence a trial;
- unforeseen safety issues;
- determination of dosing issues;
- lack of effectiveness during clinical trials;
- inability to reach agreement on acceptable terms with prospective CROs and clinical trial sites;
- slower-than-expected rates of patient recruitment;
- failure to manufacture sufficient quantities of a drug candidate for use in clinical trials;
- inability to monitor patients adequately during or after treatment; and
- inability or unwillingness of medical investigators to follow our clinical protocols.

Further, we, the FDA, foreign regulatory authorities, or an Institutional Review Board, or IRB, may suspend our clinical trials at any time if it appears that we or our collaborators are failing to conduct a trial in accordance with regulatory requirements, that we are exposing participants to unacceptable health risks, or if the FDA or such other regulator finds deficiencies in our IND or comparable submissions or the conduct of these trials. Therefore, we cannot predict with any certainty the schedule for commencement and completion of future clinical trials. If we experience delays in the commencement or completion of our clinical trials, or if we terminate a clinical trial prior to completion, the commercial prospects of our drug candidates could be harmed, and our ability to generate revenue from the drug candidates may be delayed. In addition, any delays in our clinical trials could increase our costs, slow down the approval process and jeopardize our ability to commence product sales and generate revenue. Any of these occurrences may harm our business, financial condition and results of operations. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our drug candidates.

Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be made more difficult or rendered impossible by multiple factors outside our control.

We may encounter delays in enrolling, or be unable to enroll, a sufficient number of patients to complete any of our clinical trials, and even once enrolled we may be unable to retain a sufficient number of patients to complete any of our trials. Patient enrollment and retention in clinical trials depends on many factors, including the size of the patient population, the nature of the trial protocol, the existing body of safety and efficacy data with respect to the study drug, the number and nature of competing treatments and ongoing clinical trials of competing drugs for the same indication, the proximity of patients to clinical sites and the eligibility criteria for the study. Furthermore, any negative results we may report in clinical trials of any of our drug candidates may make it difficult or impossible to recruit and retain patients in other clinical studies of that same drug candidate. Delays or failures in planned patient enrollment and/or retention may result in increased costs, program delays or both, which could have a harmful effect on our ability to develop our drug candidates, or could render further development impossible. In addition, we expect to rely on CROs and clinical trial sites to ensure proper and timely conduct of our future clinical trials and, while we intend to enter into agreements governing their services, we will be limited in our ability to compel their actual performance.

The results of our clinical trials may not support our drug candidate claims.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support the safety and effectiveness of our drug candidates for our targeted indications. Success in pre-clinical testing and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the results of later clinical trials will replicate the results of prior clinical trials and pre-clinical testing. A failure of a clinical trial to meet its predetermined endpoints would likely cause us to abandon a drug candidate and may delay development of other drug candidates. Any delay in, or termination of, our clinical trials will delay the filing of our NDAs with the FDA and, ultimately, our ability to commercialize our drug candidates and generate product revenue.

While we have negotiated a Special Protocol Assessment, or SPA, agreement with the FDA relating to our Phase III clinical study of PB272, this agreement does not guara ntee approval of PB272 or any other particular outcome from regulatory review of the clinical trial or the drug candidate.

In February 2013, we announced that we reached agreement with the FDA under an SPA for our Phase III clinical trial of PB272 in patients with HER2-positive metastatic breast cancer who have failed two or more prior treatments. We commenced the Phase III clinical trial in June 2013. The FDA's SPA process is designed to facilitate the FDA's review and approval of drugs by allowing the FDA to evaluate the proposed design and size of Phase III clinical trials that are intended to form the primary basis for determining a drug product's efficacy. Upon specific request by a clinical trial sponsor, the FDA will evaluate the protocol and respond to a sponsor's questions regarding, among other things, primary efficacy endpoints, trial conduct and data analysis, within 45 days of receipt of the request. The FDA ultimately assesses whether the protocol design and planned analysis of the trial are acceptable to support regulatory approval of the product candidate with respect to the effectiveness of the identified indication. All agreements between the FDA and the sponsor regarding an SPA must be clearly documented in writing, either in the form of an SPA letter or minutes of a meeting between the sponsor and the FDA at which the SPA agreement was reached. However, an SPA agreement does not guarantee approval of a product candidate, and even if the FDA agrees to the design, execution, and analysis proposed in protocols reviewed under the SPA process, the FDA may revoke or alter its agreement in certain circumstances. In particular, an SPA agreement is not binding on the FDA if public health concerns emerge that were unrecognized at the time of the SPA agreement, other new scientific concerns regarding product safety or efficacy arise, the sponsor company fails to comply with the agreed upon trial protocols, or the relevant data, assumptions or information provided by the sponsor in a request for the SPA change or are found to be false or omit relevant facts. In addition, even after an SPA agreement is finalized, the SPA agreement may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if the FDA and the sponsor agree in writing to modify the protocol and such modification is intended to improve the study. The FDA retains significant latitude and discretion in interpreting the terms of the SPA agreement and the data and results from any study that is the subject of the SPA agreement.

We cannot assure you that our Phase III clinical trial will succeed, or that the SPA will ultimately be binding on the FDA or will result in any FDA approval for PB272. The trial is expected to enroll approximately 600 patients. We expect that the FDA will review our compliance with the SPA, evaluate the results of the clinical trials and conduct inspections of some of the approximately 250 sites in North America, Europe and Asia-Pacific where the clinical trials will be conducted. We cannot assure you that each of the clinical trial sites will pass such FDA inspections, and negative inspection results could significantly delay or prevent any potential approval for PB272. If the FDA revokes or alters its agreement under the SPA, or interprets the data collected from the clinical trial differently than we do, the FDA may deem the data insufficient to support regulatory approval, which could materially adversely affect our business, financial condition and results of operations.

Planned expansion into new markets outside of the United States will subject us to additional business and regulatory risks, and there can be no assurance that our products will be accepted in those markets.

We recently entered into exclusive license agreement with third parties to pursue regulatory approval and commercialize NERLYNX, if approved, in South East Asia, Israel and greater China. We plan to continue to pursue commercialization of NERLYNX in other countries outside the United States, if approved. Engaging in international business inherently involves a number of difficulties and risks, including:

- competition from established companies, many of which are well-positioned within their local markets with longer operating histories, more recognizable names and better established distribution networks;
- the availability and level of coverage and reimbursement within prevailing foreign healthcare payment systems and the ability of patients to elect to privately pay for NERLYNX and our other products, if approved;
- difficulties in enforcing intellectual property rights;
- pricing pressure;
- required compliance with existing and changing foreign regulatory requirements and laws;
- laws and business practices favoring local companies;
- longer sales and payment cycles;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- political and economic instability;
- foreign currency risks that could adversely affect our financial results;
- potentially adverse tax consequences, tariffs and other trade barriers;

- exposure to liabilities under anti-corruption and anti-money laundering laws, including the U.S. Foreign Corrupt Practices Act, or FCPA, and similar laws and regulations in other jur isdictions;
- international terrorism and anti-American sentiment;
- difficulties and costs associated with staffing and managing foreign operations; and
- export restrictions and controls relating to technology.

If we or our third party manufacturers are unable to address these international risks, we may fail to establish and maintain an international presence, and our business, financial condition and results of operations would suffer.

The failure to comply with anti-bribery, anti-corruption, and anti-money laundering laws, including the FCPA and similar laws associated with our activities outside of the United States, could subject us to penalties and other adverse consequences .

We are subject to the FCPA, regulations of the U.S. Office of Foreign Assets Control, the United Kingdom Bribery Act of 2010 and other anti-corruption, anti-bribery and anti-money laundering laws around the world where we conduct activities, including, if approved in such countries, the sale of NERLYNX. We face significant risks and liability if we fail to comply with the FCPA and other anti-corruption and anti-bribery laws that prohibit companies and their employees and third-party business partners, such as distributors or resellers, from authorizing, offering or providing, directly or indirectly, improper payments or benefits to foreign government officials, political parties or candidates, employees of public international organizations including healthcare professionals, or private-sector recipients for the corrupt purpose of obtaining or retaining business, directing business to any person, or securing any advantage. We currently rely on various third parties for certain services outside the United States, including continued development of NERLYNX and, if approved, its subsequent commercialization. We may be held liable for the corrupt or other illegal activities of these third parties and intermediaries, our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize such activities.

Any violation of the FCPA, other applicable anti-bribery, anti-corruption laws, and anti-money laundering laws could result in whistleblower, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions and, in the case of the FCPA, suspension or debarment from U.S. government contracts, which could have a material and adverse effect on our reputation, business, operating results and prospects. In addition, responding to any enforcement action or related investigation may result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees.

If we fail to comply with United States export control and economic sanctions or fail to expand and maintain an effective sales force or successfully develop our international distribution network, our business, financial condition and operating results may be adversely affected.

When selling any products outside of the United States, including NERLYNX, if approved for commercialization outside of the United States, we are subject to United States export control and economic sanctions laws, the violation of which could result in substantial penalties being imposed against us. More broadly, if we fail to comply with export control laws, any sales could fail to grow or could decline, and our ability to grow our business could be adversely affected.

Regulatory approval for any approved product is limited by the FDA to those specific indications and conditions for which clinical safety and efficacy have been demonstrated as set forth on the product label. If we market NERLYNX for uses beyond such approved indications, we could be subject to enforcement action, which could have a material adverse effect on our business.

The FDA strictly regulates marketing, labeling, advertising and promotion of prescription drugs. These regulations include standards and restrictions for direct-to-consumer advertising, industry-sponsored scientific and educational activities, promotional activities involving the internet and off-label promotion. Any regulatory approval that the FDA grants is limited to those specific diseases and indications for which a product is deemed to be safe and effective by the FDA. For example, the FDA-approved label for NERLYNX is limited to the extended adjuvant treatment of adult patients with early stage, HER2-positive breast cancer following adjuvant trastuzumab-based therapy. In addition to the FDA approval required for new formulations, any new indication for an approved product also requires FDA approval. If we are not able to obtain FDA approval for any desired future indications for our drugs and drug candidates, our ability to effectively market and sell our products may be reduced and our business may be adversely affected.

While physicians in the United States may choose, and are generally permitted, to prescribe drugs for uses that are not described in the product's labeling and for uses that differ from those tested in clinical trials a nd approved by the regulatory authorities, our ability to promote the products is narrowly limited to those indications that are specifically approved by the FDA. These "off-label" uses are common across medical specialties and may constitute an appropriat e treatment for some patients in varied circumstances. Regulatory authorities in the United States generally do not regulate the behavior of physicians in their choice of treatments. Regulatory authorities do, however, restrict communications by pharmaceut ical companies on the subject of off-label use. Although recent court decisions suggest that certain off-label promotional activities may be protected under the First Amendment, the scope of any such protection is unclear. If our promotional activities fai l to comply with the FDA's regulations or guidelines, we may be subject to warnings from, or enforcement action by, these authorities. In addition, our failure to follow FDA rules and guidelines relating to promotion and advertising may cause the FDA to is sue warning letters or untitled letters, bring an enforcement action against us, suspend or withdraw an approved product from the market, require a recall or institute fines or civil fines, or could result in disgorgement of money, operating restrictions, injunctions or criminal prosecution, any of which could harm our reputation and our business.

Even though the FDA has approved NERLYNX for the extended adjuvant treatment of early stage, HER2-positive breast cancer in adult patients following adjuvant trastuzumab-based therapy, we will be subject to ongoing obligations and continued regulatory review with regard to NERLYNX and any other drug candidates that receive FDA approval, which may result in significant additional expense. Additionally, NERLYNX and our drug candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

The FDA's approval of the NDA for NERLYNX and any regulatory approvals that we receive for our other drug candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase IV clinical trials, and surveillance to monitor the safety and efficacy of the drug candidate. In addition, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a product, 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 the product, 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 product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our drug candidates. For example, in December 2016, the 21st Century Cures Act, or Cures Act, was signed into law. The Cures Act, among other things, is intended to modernize the regulation of drugs and spur innovation. 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, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these Executive Orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

We rely on third parties to conduct our pre-clinical studies and 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 for our drug candid ates.

We depend upon independent investigators and collaborators, such as CROs, universities and medical institutions, to conduct our pre-clinical studies and clinical trials under agreements with us. These collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with regulatory requirements, including good clinical practice, or GCP, requirements, and the applicable protocol. If we, or any of our CROs or third party contractors, fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under current cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, third party contractors and investigators may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. If outside collaborators fail to devote sufficient time and resources to our drug-development programs, or if their performance is substandard or otherwise fails to satisfy applicable regulatory requirements, the approval of our FDA applications, if any, and our introduction of new drugs, if any, will be delayed. These collaborators may also have relationships with other commercial entities, some of whom may compete with us. If our collaborators assist our competitors to our detriment, our competitive position would be harmed. If any of our relationships with these third-party collaborators terminate, we may not be able to enter into arrangements with alternative third parties on commercially reasonable terms, or at all. Switching or adding additional third parties to our clinical trial programs can involve substantial costs and require extensive management time and focus.

We rely significantly on information technology and any failure, inadequacy, interruption or security lapse of that technology, including any cybersecurity incidents, could harm our ability to operate our business effectively.

Our internal computer systems and those of third parties with which we contract may be vulnerable to damage from cyber-attacks, computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures despite the implementation of security measures. System failures, accidents or security breaches could cause interruptions in our operations, and could result in a material disruption of our clinical activities and business operations, in addition to possibly requiring substantial expenditures of resources to remedy. The loss of clinical trial data 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 our research and development programs and the development of our drug candidates could be delayed.

Health care reform measures may hinder or prevent our products' and product candidates' commercial success.

The United States and some foreign jurisdictions have enacted or are considering enacting a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to profitably sell our product and product candidates, if and when they are approved. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, became law in the United States. The ACA substantially changed and will continue to change the way healthcare is financed by both governmental and private insurers and significantly affects the pharmaceutical industry. Among the provisions of the ACA, of greatest importance to the pharmaceutical industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for branded and generic drugs, respectively;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- 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 manufact urers' 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, which began in April 2010, and by adding new eligibility categories for certain individuals with income at or below 133% of the Federal Poverty Level beginning in 2014, thereby potentially increasing manufacturers' Medicaid rebate liability;
- increase in the number of entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians;
- a licensure framework for follow-on biologic products; 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 ACA. As a result, there have been delays in the implementation of, and action taken to repeal or replace, certain aspects of the ACA. We expect that the Trump administration and U.S. Congress will continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. We cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, the Budget Control Act of 2011 resulted in aggregate 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 remain in effect through 2025 unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012, among other things, also 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. Recently, there has been heightened governmental scrutiny over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, the 21st Century Cures Act changes the reimbursement methodology for infusion drugs and biologics furnished through durable medical equipment in an attempt to remedy over- and underpayment of certain drugs. We cannot predict all of the ways in which future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs.

We anticipate that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and additional downward pressure on the price that we receive for any approved product, and could seriously harm our business. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our product and product candidates, if approved.

Failure to obtain or maintain adequate coverage and reim bursement for our products or product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

Successful commercial sales of any approved products will depend on the availability of adequate coverage and reimbursement from government health administration authorities, private health insurers and other third-party payors. Each third-party payor separately decides which products it will cover and establishes the reimbursement level, and there is no guarantee that any of our approved products or product candidates that may be approved for marketing by regulatory authorities will receive adequate coverage or reimbursement levels. Obtaining and maintaining coverage approval for a product is time-consuming, costly and may be difficult. We may be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of coverage and reimbursement relative to other therapies. If coverage and adequate reimbursement are not available or limited, we may not be able to successfully commercialize any product or product candidate for which we obtain marketing approval. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drugs and biologics. Even if we obtain coverage for a given product, the resulting reimbursement rates may be inadequate and may affect the demand for, or the price of, any product candidate for which we obtain marketing approval.

We expect to experience pricing pressures in connection with the sale of NERLYNX (oral), NERLYNX (intravenous), PB357 and any other products that we may develop, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals. There may be additional pressure by payors and healthcare providers to use generic drugs that contain the active ingredients found in neratinib (oral), neratinib (intravenous), PB357 or any other drug candidates that we may develop. If we fail to successfully secure and maintain adequate coverage and reimbursement for our products or are significantly delayed in doing so, we will have difficulty achieving market acceptance of our products and expected revenue and profitability which would have a material adverse effect on our business, results of operations and financial condition.

We are subject, directly and indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, physician payment transparency laws and health information privacy and security laws. Failure to comply with these laws may subject us to substantial penalties.

We do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors. However, federal and state healthcare laws and regulations pertaining to fraud and abuse, physician payment transparency, privacy and security laws and regulations may apply to us depending on programs we operate and have been asserted by the government and others to apply to companies like us, and our arrangements with healthcare providers, customers and other entities, including our marketing practices, educational programs and pricing policies. These laws include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation. In addition, the government may assert 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 False Claims Act;
- federal false claims laws, including, without limitation, the False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other federal third-party payors that are false or fraudulent, such as engaging in improper promotion of products or submitting inaccurate price reports to the Medicaid Drug Rebate program;
- the federal Civil Monetary Penalties law, which prohibits, among other things, offering or transferring remuneration to a federal healthcare beneficiary that a person knows or should know is likely to influence the beneficiary's decision to order or receive items or services reimbursable by the government from a particular provider or supplier;
- federal criminal laws that prohibit executing a scheme to defraud any federal healthcare benefit program or making false statements relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation;
- the federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information held by certain covered entities and their business associates, and imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;

- the federal Physician Payment Sunshine Act, which requires manufacturers of drugs, devices, biologics 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 Centers for Medicare & Medicaid Services, or CMS, information related to payments or other "transfers of value" made to physici ans (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and requires applicable manufacturers and group purchasing organizations to report annually to CMS ownership and investment interests held by th e physicians described above and their immediate family members and payments or other "transfers of value" to such physician owners (manufacturers are required to submit reports to CMS by the 90th day of each calendar year);
- analogous state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including commercial insurers; state laws that require pharmaceutical companies to comply with the industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available under such laws, it is possible that some of our business activities, including our relationships with physicians and other healthcare providers, some of whom recommend, purchase and/or prescribe our products, and the manner in which we promote our products, could be subject to challenge under one or more of such laws.

We are also exposed to the risk that our employees, independent contractors, principal investigators, consultants, vendors, distributors and agents may engage in fraudulent or other illegal activity. While we have policies and procedures in place prohibiting such activity, misconduct by these parties could include, among other infractions or violations, intentional, reckless and/or negligent conduct or unauthorized activity that violates FDA requirements, including those laws that require the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare fraud and abuse laws and regulations, laws that require the true, complete and accurate reporting of financial information or data or other commercial or regulatory laws or requirements. It is not always possible to identify and deter misconduct by our employees and other third parties, and the precautions we take to detect and prevent this activity 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.

If our operations are found to violate any of the laws described above or any other laws and regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment of officers involved, any of which could adversely affect our ability to market our current and any future products, once approved, and materially adversely affect our business, results of operations and financial condition. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate Program or other governmental pricing programs in the United States, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, results of operations and financial condition.

We participate in the Medicaid Drug Rebate Program, as administered by CMS, and other federal and state government pricing programs in the United States, and we may participate in additional government pricing programs in the future. These programs generally require us to pay rebates or otherwise provide discounts to government payors in connection with drugs, including NERLYNX, that are dispensed to beneficiaries of these programs. In some cases, such as with the Medicaid Drug Rebate Program, the rebates are based on pricing and rebate calculations that we report on a monthly and quarterly basis to the government agencies that administer the programs. Pricing and rebate calculations are complex, vary among products and programs, and are often subject to interpretation by governmental or regulatory agencies and the courts. The terms, scope and complexity of these government pricing programs change frequently. Responding to current and future changes may increase our costs and the complexity of compliance will be time consuming.

In addition, there is increased focus by the Office of Inspector General on the methodologies used by manufacturers to calculate average manufacturer price, or AMP, and best price, or BP, to assess manufacturer compliance with reporting requirements under the Medicaid Drug Rebate Program. We are liable for errors associated with our submission of pricing data and for any overcharging of government payors. For exa mple, failure to submit monthly/quarterly AMP and BP data on a timely basis could result in a civil monetary penalty per day for each day the submission is late beyond the due date. Failure to make necessary disclosures and/or to identify overpayments coul d result in allegations against us under the Federal False Claims Act and other laws and regulations.

Any required refunds to the U.S. government or responding to a government investigation or enforcement action would be expensive and time consuming and could have a material adverse effect on our business, results of operations and financial condition. In the event that CMS were to terminate our rebate agreement, no federal payments would be available under Medicaid or Medicare for our covered outpatient drugs.

If we cannot compete successfully for market share against other drug companies, we may not achieve sufficient product revenue and our business will suffer.

The market for our drugs and drug candidates is characterized by intense competition and rapid technological advances. NERLYNX competes, and any of our other drug candidates that receives FDA approval will compete, with a number of existing and future drugs and therapies developed, manufactured and marketed by others. Existing or future competing products may provide greater therapeutic convenience or clinical or other benefits for a specific indication than our products, or may offer comparable performance at a lower cost. In addition, a large number of companies are pursuing the development of pharmaceuticals that target the same diseases and conditions that we are targeting. If our products fail to capture and maintain market share, we may not achieve sufficient product revenue and our business will suffer.

We compete against fully integrated pharmaceutical companies and smaller companies that are collaborating with larger pharmaceutical companies, academic institutions, government agencies and other public and private research organizations. Many of these competitors have oncology compounds that have already been approved or are in development. In addition, many of these competitors, either alone or together with their collaborative partners, operate larger research and development programs or have substantially greater financial resources than we do, as well as significantly greater experience in the following:

- developing drugs;
- undertaking pre-clinical testing and clinical trials;
- obtaining FDA and other regulatory approvals of drugs;
- formulating and manufacturing drugs; and
- launching, marketing and selling drugs.

We may be exposed to liability claims associated with the use of hazardous materials and chemicals.

Our research and development activities may involve the controlled use of hazardous materials and chemicals. Although we believe that our safety procedures for using, storing, handling and disposing of these materials comply with federal, state and local laws and regulations, we cannot completely eliminate the risk of accidental injury or contamination from these materials. In the event of such an accident, we could be held liable for any resulting damages and any liability could materially adversely affect our business, financial condition and results of operations. In addition, the federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of hazardous or radioactive materials and waste products may require us to incur substantial compliance costs that could materially adversely affect our business, financial condition and results of operations.

The loss of one or more key members of our management team could adversely affect our business.

Our success and future growth depends to a significant degree on the skills and continued services of our management team, in particular Alan H. Auerbach, our Chief Executive Officer and President. If Mr. Auerbach resigns or becomes unable to continue in his present role and is not adequately replaced, our business operations could be materially adversely affected. We do not maintain “key man” life insurance for Mr. Auerbach.

If we are unable to hire additional qualified personnel, our ability to grow our business may be harmed.

As of December 31, 2017, we had 318 employees, including our Chief Executive Officer and President. Our future success depends on our ability to identify, attract, hire, train, retain and motivate other highly skilled scientific, technical, marketing, managerial and financial personnel. Although we will seek to hire and retain qualified personnel with experience and abilities commensurate with our needs, there is no assurance that we will succeed despite their collective efforts. Competition for personnel is intense, and any failure to attract and retain the necessary technical, marketing, managerial and financial personnel would have a material adverse effect on our business, prospects, financial condition and results of operations.

We may not successfully manage our growth.

Our success will depend upon the expansion of our operations and our ability to successfully manage our growth. Our future growth, if any, may place a significant strain on our management and on our administrative, operational and financial resources. Our ability to manage our growth effectively will require us to implement and improve our operational, financial and management systems and to expand, train, manage and motivate our employees. These demands may require the hiring of additional management personnel and the development of additional expertise by management. Any increase in resources devoted to research and product development without a corresponding increase in our operational, financial and management systems could have a material adverse effect on our business, financial condition and results of operations.

We may be adversely affected by the current economic environment.

Our ability to attract and retain collaborators or customers, invest in and grow our business and meet our financial obligations depends on our operating and financial performance, which, in turn, is subject to numerous factors, including the prevailing economic conditions and financial, business and other factors beyond our control, such as the rate of unemployment, the number of uninsured persons in the United States and inflationary pressures. We cannot anticipate all the ways in which the current economic climate and financial market conditions could adversely impact our business.

We are exposed to risks associated with reduced profitability and the potential financial instability of our collaborators or customers, many of which may be adversely affected by volatile conditions in the financial markets. For example, unemployment and underemployment, and the resultant loss of insurance, may decrease the demand for healthcare services and pharmaceuticals. If fewer patients are seeking medical care because they do not have insurance coverage, our collaboration partners or customers may experience reductions in revenues, profitability and/or cash flow that could lead them to modify, delay or cancel orders for our products once commercialized. If collaboration partners or customers are not successful in generating sufficient revenue or are precluded from securing financing, they may not be able to pay, or may delay payment of, accounts receivable that are owed to us. This, in turn, could adversely affect our financial condition and liquidity. In addition, if economic challenges in the United States result in widespread and prolonged unemployment, either regionally or on a national basis, a substantial number of people may become uninsured or underinsured. To the extent economic challenges result in fewer individuals pursuing or being able to afford our products once commercialized, our business, results of operations, financial condition and cash flows could be adversely affected.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits.

The testing and marketing of medical products entail an inherent risk of product liability. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our products. If we are unable to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims, the commercialization of pharmaceutical products we develop, alone or with collaborators, could be prevented or inhibited.

Our cash and cash equivalents could be adversely affected if the financial institutions in which we hold our cash and cash equivalents fail.

We regularly maintain cash balances at third-party financial institutions in excess of the Federal Deposit Insurance Corporation, or FDIC, insurance limit. While we monitor daily the cash balances in the operating accounts and adjust the balances as appropriate, these balances could be impacted, and there could be a material adverse effect on our business, if one or more of the financial institutions with which we deposit fails or is subject to other adverse conditions in the financial or credit markets. To date, we have experienced no loss or lack of access to our invested cash or cash equivalents; however, we can provide no assurance that access to our invested cash and cash equivalents will not be impacted by adverse conditions in the financial and credit markets.

Our investments in marketable securities are subject to market, interest and credit risk that may reduce their value.

The value of our investments in marketable securities may be adversely affected by changes in interest rates, downgrades in the creditworthiness of bonds we hold, turmoil in the credit markets and financial services industry and by other factors which may result in other than temporary declines in the value of our investments. Decreases in the market value of our marketable securities could have an adverse impact on our consolidated financial statements, results of operations and cash flow.

Risks Related to Our Intellectual Property

We depend significantly on intellectual property licensed from Pfizer and the termination of this license would significantly harm our business and future prospects.

We depend significantly on our license agreement with Pfizer. Our license agreement with Pfizer may be terminated by Pfizer if we materially breach the agreement and fail to cure our breach during an applicable cure period. Our failure to use commercially reasonable efforts to develop and commercialize licensed products in certain specified major market countries would constitute a material breach of the license agreement. Pfizer may also terminate the license agreement if we become involved in bankruptcy, receivership, insolvency or similar proceedings. In the event our license agreement with Pfizer is terminated, we will lose all of our rights to develop and commercialize the drug candidates covered by such license, which would significantly harm our business and future prospects.

Our proprietary rights may not adequately protect our intellectual property and potential products, and if we cannot obtain adequate protection of our intellectual property and potential products, we may not be able to successfully market our potential products.

Our commercial success will depend in part on obtaining and maintaining intellectual property protection for our products, formulations, processes, methods and other technologies. We will only be able to protect these technologies and products from unauthorized use by third parties to the extent that valid and enforceable intellectual property rights, including patents, cover them, or other market exclusionary rights apply. The patent positions of pharmaceutical companies, like ours, can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in such companies' patents has emerged to date in the United States. The general environment for pharmaceutical patents outside the United States also involves significant uncertainty. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced, or that the scope of these patent rights could provide a sufficient degree of future protection that could permit us to gain or keep our competitive advantage with respect to these products and technology. For example, we cannot predict:

- the degree and range of protection any patents will afford us against competitors, including whether third parties will find ways to make, use, sell, offer to sell or import competitive products without infringing our patents;
- if and when patents will issue;
- whether or not others will obtain patents claiming inventions similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings in connection with patent rights, which may be costly whether we win or lose.

The patents we have licensed may be subject to challenge and possibly invalidated or rendered unenforceable by third parties. Changes in either the patent laws or in the interpretations of patent laws in the United States or other countries may diminish the value of our intellectual property.

In addition, others may independently develop similar or alternative products and technologies that may be outside the scope of our intellectual property. Furthermore, others may have invented technology claimed by our patents before we or our licensors did so, and they may have filed patents claiming such technology before we did so, weakening our ability to obtain and maintain patent protection for such technology. Should third parties obtain patent rights to similar products or technology, this may have an adverse effect on our business.

We may also rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. Trade secrets, however, are difficult to protect. While we believe that we will use reasonable efforts to protect our trade secrets, our own or our strategic partners' employees, consultants, contractors or advisors may unintentionally or willfully disclose our information to competitors. We seek to protect this information, in part, through the use of non-disclosure and confidentiality agreements with employees, consultants, advisors and others. These agreements may be breached, and we may not have adequate remedies for a breach. In addition, we cannot ensure that those agreements will provide adequate protection for our trade secrets, know-how or other proprietary information or prevent their unauthorized use or disclosure.

To the extent that consultants or key employees apply technological information independently developed by them or by others to our potential products, disputes may arise as to the proprietary rights in such information, which may not be resolved in our favor. Consultants and key employees who work with our confidential and proprietary technologies are required to assign all intellectual property rights in their discoveries to us. However, these consultants or key employees may terminate their relationship with us, and we cannot preclude them indefinitely from dealing with our competitors. If our trade secrets become known to competitors with greater experience and financial resources, the competitors may copy or use our trade secrets and other proprietary information in the advancement of their products, methods or technologies. If we were to prosecute a claim that a third party had illegally obtained and was using our trade secrets, it could be expensive and time consuming and the outcome could be unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets than courts in the United States. Moreover, if our competitors independently develop equivalent knowledge, we would lack any legal or contractual claim to prevent them from using such information, and our business could be harmed.

Our ability to commercialize our potential products will depend on our ability to sell such prod ucts without infringing the patent or proprietary rights of third parties. If we are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation would have a materia l adverse effect on our business.

Our ability to commercialize our potential products will depend on our ability to sell such products without infringing the patents or other proprietary rights of third parties. Third-party intellectual property rights in our field are complicated and continuously evolving. The coverage of patents is subject to interpretation by the courts, and this interpretation is not always consistent.

Other companies may have or may acquire intellectual property rights that could be enforced against us. If they do so, we may be required to alter our products, formulations, processes, methods or other technologies, obtain a license, assuming one can be obtained, or cease our product-related activities. If our products or technologies infringe the intellectual property rights of others, such parties could bring legal action against us or our licensors or collaborators claiming damages and seeking to enjoin any activities that they believe infringe their intellectual property rights. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving the invalidity of a patent is particularly difficult in the United States, since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. If we are found to infringe a third-party patent, we may need to cease the commercial sale of our products.

Because patent applications can take many years to issue, there may be currently pending applications unknown to us or reissue applications that may later result in issued patents upon which our products or technologies may infringe. There could also be existing patents of which we are unaware that our products or technologies may infringe. In addition, if third parties file patent applications or obtain patents claiming products or technologies also claimed by us in pending applications or issued patents, we may have to participate in interference proceedings in the U.S. Patent and Trademark Office, or USPTO, to determine priority of invention. If third parties file oppositions in foreign countries, we may also have to participate in opposition proceedings in foreign tribunals to defend the patentability of our filed foreign patent applications. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Additionally, any uncertainties resulting from the initiation and continuation of any litigation may have a material adverse effect on our ability to raise the funds necessary to continue our operations.

If a third party claims that we infringe its intellectual property rights, it could cause our business to suffer in a number of ways, including:

- we may become involved in time-consuming and expensive litigation, even if the claim is without merit, the third party's patent is ultimately invalid or unenforceable, or we are ultimately found to have not infringed;
- we may become liable for substantial damages for past infringement if a court decides that our technologies infringe upon a third party's patent;
- we may be ordered by a court to stop making, selling or licensing our products or technologies without a license from a patent holder, and such license may not be available on commercially acceptable terms, if at all, or may require us to pay substantial royalties or grant cross-licenses to our patents; and
- we may have to redesign our products so that they do not infringe upon others' patent rights, which may not be possible or could require substantial investment and/or time.

If any of these events occur, our business could suffer and the market price of our common stock may decline.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously employed at other companies in these industries, including our competitors or potential competitors. We may become subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, although no such claims are pending. Litigation may be necessary to defend against these claims. Even if we successfully defend any such claims, we may incur substantial costs in such defense, and our management may be distracted by these claims.

Risks Related to Owning our Common Stock

Our stock price may fluctuate significantly and you may have difficulty selling your shares based on current trading volumes of our stock. In addition, numerous other factors could result in substantial volatility in the trading price of our stock.

We cannot predict the extent to which investor interest in our company will be sufficient to maintain an active trading market on the NASDAQ Global Select Market or any other exchange in the future. We have several stockholders, including affiliated stockholders, who hold substantial blocks of our stock. As of December 31, 2017, we estimate that our officers, directors and their affiliated entities, and our 5% or greater stockholders, collectively beneficially owned approximately 70.8% of our outstanding shares of common stock. Sales of large numbers of shares by any of our large stockholders could adversely affect our trading price. If stockholders holding shares of our common stock sell, indicate an intention to sell, or if it is perceived that they will sell, substantial amounts of their common stock in the public market, the trading price of our common stock could decline. Moreover, if there is a less active trading market, holders of our common stock may have difficulty selling their shares.

The price of our common stock could be subject to volatility related or unrelated to our operations.

The trading price of our common stock may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include:

- our ability to successfully commercialize NERLYNX in the United States for the extended adjuvant treatment of early stage, HER2-positive breast cancer;
- the status and cost of our marketing commitments for NERLYNX;
- the status and cost of development and commercialization of neratinib for indications other than in the treatment of HER2-positive breast cancer and in jurisdictions other than in the United States, if approved;
- actual or anticipated quarterly variation in our results of operations or the results of our competitors;
- announcements regarding results of any clinical trials relating to our drug candidates;
- announcements of medical innovations or new products by our competitors;
- issuance of new or changed securities analyst reports or recommendations for our stock;
- developments or disputes concerning our intellectual property or other proprietary rights;
- commencement of, or involvement in, litigation;
- market conditions in the biopharmaceutical industry;
- timing and announcement of regulatory approvals;
- any future sales of our common stock or other securities in connection with raising additional capital or otherwise;
- any major change to the composition of our board of directors or management; and
- general economic conditions and slow or negative growth of our markets.

The stock market in general, and market prices for the securities of biotechnology companies like ours in particular, have from time to time experienced volatility that often has been unrelated to the operating performance of the underlying companies. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our operating performance.

Volatility in the price of our common stock may subject us to securities litigation, which could cause us to incur substantial costs and divert management's attention, financial resources and other company assets.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. In addition, we and certain of our executive officers have been named as defendants in a securities class action and derivative lawsuits captioned Hsu vs. Puma Biotechnology, Inc., et al., Xing Xie vs. Alan H. Auerbach, and Kevin McKenney vs. Auerbach. These lawsuits and any future lawsuits to which we may become a party are subject to inherent uncertainties and will likely be expensive and time-consuming to investigate, defend and resolve, and will divert our management's attention and financial and other resources. The outcome of litigation is necessarily uncertain, and we could be forced to expend significant resources in the defense of these and other suits, and we may not prevail. Any litigation to which we are a party may result in an onerous or unfavorable judgment that may not be reversed upon appeal or in payments of substantial monetary damages or fines, or we may decide to settle this or other lawsuits on similarly unfavorable terms, which could adversely affect our business, financial condition, results of operations or stock price. See Item 3. “Legal Proceedings” below for additional information regarding the securities class action and derivative lawsuits.

Issuance of stock to fund our operations may dilute your investment and reduce your equity interest.

We may need to raise capital in the future to fund the development of our drug candidates or for other purposes. Any equity financing may have a significant dilutive effect to stockholders and a material decrease in our existing stockholders' equity interest in us. Equity financing, if obtained, could result in substantial dilution to our existing stockholders. At its sole discretion, our board of directors may issue additional securities without seeking stockholder approval, and we do not know when we will need additional capital or, if we do, whether it will be available to us.

Upon the exercise of our outstanding warrant, holders of our common stock may experience immediate dilution and the market price of our common stock may be adversely affected.

Following an October 2011 private placement, Alan H. Auerbach, our founder, Chief Executive Officer and President, held approximately 21% of our outstanding shares of common stock. Pursuant to the terms of the Securities Purchase Agreement for the private placement, we issued an anti-dilutive warrant to Mr. Auerbach. The warrant has a 10-year term expiring in October 2021 for 2,116,250 shares with an exercise price of $16.00 per share.

If any portion of the outstanding warrant is exercised for shares of our common stock, our stockholders may experience immediate dilution and the market price of our common stock may be adversely affected.

We will incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could harm our operating results.

As a public company, we incur significant legal, accounting and other expenses, including costs associated with public company reporting requirements. We also incur costs associated with current corporate governance requirements, including requirements under Section 404 and other provisions of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, as well as rules implemented by the SEC, or NASDAQ or any stock exchange or inter-dealer quotations system on which our common stock may be listed in the future. The expenses incurred by public companies for reporting and corporate governance purposes have increased dramatically in recent years. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. We are unable to currently estimate these costs with any degree of certainty. We also expect that these rules and regulations may make it difficult and expensive for us to maintain the appropriate level of director and officer insurance for a company with our market capitalization. If we are unable to maintain an appropriate level of such insurance, we may be required to accept reduced policy limits and coverage or larger deductible limits. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as our executive officers.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, our ability to operate our business and investors' views of us.

We are subject to the rules and regulations of the SEC, including those rules and regulations mandated by the Sarbanes-Oxley Act. Section 404 of the Sarbanes-Oxley Act requires public companies to include in their annual report a statement of management's responsibilities for establishing and maintaining adequate internal control over financial reporting, together with an assessment of the effectiveness of those internal controls. Section 404 also requires the independent auditors of certain public companies to attest to, and report on, this management assessment. Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that will need to be evaluated frequently. Our failure to maintain the effectiveness of our internal controls in accordance with the requirements of the Sarbanes-Oxley Act could have a material adverse effect on our business. We could lose investor confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on the price of our common stock. In addition, if our efforts to comply with new or changed laws, regulations, and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Sales of a substantial number of shares of our common stock in the public market could cause the market price of our common stock to drop significantly, even if our business is doing well, which result would in turn negatively affect our ability to raise additional equity capital.

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. A substantial majority of the outstanding shares of our common stock are freely tradable without restriction or further registration under the Securities Act of 1933, as amended. We have also registered all shares of common stock that we may issue under our equity compensation plan, which can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. We are unable to predict the effect that sales may have on the prevailing market price of our common stock. However, an adverse effect on the market price of our common stock could have a material adverse effect on our ability to raise additional equity capital.

If securities or industry analysts do not publish, or cease publishing, research reports about us, our business or our market, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock is and will be influenced by whether industry or securities analysts publish research and reports about us, our business, our market or our competitors and, if any analysts do publish such reports, what they publish in those reports. We may not obtain analyst coverage in the future. Any analysts who do cover us may make adverse recommendations regarding our stock, adversely change their recommendations from time to time, and/or provide more favorable relative recommendations about our competitors. If any analyst who may cover us in the future were to cease coverage of our company or fail to regularly publish reports on us, or if analysts fail to cover us or publish reports about us at all, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We do not foresee paying cash dividends in the foreseeable future.

We currently intend to retain any future earnings for funding growth. We do not anticipate paying any dividends in the foreseeable future, and the payment of dividends is also restricted under our credit facility. As a result, you should not rely on an investment in our securities if you require dividend income. Capital appreciation, if any, of our shares may be your sole source of gain for the foreseeable future. Moreover, you may not be able to re-sell your shares in us at or above the price you paid for them.

Our ability to use our net operating losses and research and development credit carryforwards to offset future taxable income may be subject to certain limitations.

In general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change," generally defined as a greater than 50% change (by value) in its equity ownership over a three year period, is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, and its research and development credit carryforwards to offset future taxable income. Our existing NOLs and research and development credit carryforwards may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change, our ability to utilize NOLs and research and development credit carryforwards could be further limited by Sections 382 and 383 of the Code. Future changes in our stock ownership, some of which might be beyond our control, could result in an ownership change under Sections 382 and 383 of the Code. Furthermore, our ability to utilize NOLs and research and development credit carryforwards of any companies we may acquire in the future may be subject to limitations, in accordance with Sections 382 and 383 of the Code. For these reasons, in the event we experience a change of control, we may not be able to utilize a material portion of the NOLs and research and development credit carryforwards, even if we attain profitability.

I TE M 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

I TEM 2. PROPERTIES

We lease approximately 25,700 square feet of office space in the building located at 10880 Wilshire Boulevard, Los Angeles, California for use as our corporate headquarters. This lease commenced in December 2011 and over time has been amended to add rentable square footage. In July 2015, we amended this lease to expand the leased space by approximately 26,000 square feet. The lease of the additional office space commenced on April 1, 2016. The lease terminates in March 2026, with an option to extend for an additional five-year term. We also lease approximately 9,600 square feet of office space in the building located at 701 Gateway Blvd, South San Francisco, California. The lease for the South San Francisco facility commenced in October 2012. In May 2014, the lease was amended to include approximately an additional 7,100 square feet of office space. In July 2015, we amended this office lease to expand the leased space by approximately 13,000 square feet. The lease commenced on April 1, 2016. The lease will terminate around March 2026, with an option to extend for an additional five-year term. We believe that our existing office space, along with the additional office space in South San Francisco, is adequate to meet current and anticipated future requirements and that additional or substitute space will be available as needed to accommodate any expansions that our operations require.

I TEM 3. LEGAL PROCEEDINGS

Hsu vs. Puma Biotechnology, Inc., et. al.

On June 3, 2015, Hsingching Hsu or the "plaintiff," individually and on behalf of all others similarly situated, filed a class action lawsuit against us or "the defendants" and certain of our executive officers in the United States District Court for the Central District of California (Case No. 8:15-cv-00865-AG-JCG). On October 16, 2015, lead plaintiff Norfolk Pension Fund filed a consolidated complaint on behalf of all persons who purchased our securities between July 22, 2014 and May 29, 2015. The consolidated complaint alleges that we and certain of our executive officers made false or misleading statements and failed to disclose material adverse facts about our business, operations, prospects and performance in violation of Sections 10(b) (and Rule 10b-5 promulgated thereunder) and 20(a) of the Exchange Act. The plaintiff seeks damages, interest, costs, attorneys' fees, and other unspecified equitable relief. On September 30, 2016, the court denied the defendants' motion to dismiss the consolidated complaint. On June 6, 2017, the lead plaintiff filed a first amended complaint that included new claims about additional statements that plaintiff alleges are false or misleading. On June 19, 2017, the defendants moved to dismiss the new claims in the amended complaint. On July 25, 2017, the court denied the motion to dismiss. On December 8, 2017, the court granted the plaintiff's motion for class certification. A trial date is currently set for November 6, 2018. We intend to vigorously defend against this matter.

Eshelman vs. Puma Biotechnology, Inc., et. al.

On February 2, 2016, Fredric N. Eshelman filed a lawsuit against our Chief Executive Officer and President, Alan H. Auerbach, and us in the United States District Court for the Eastern District of North Carolina (Case No. 7:16-cv-00018-D). The complaint generally alleges that Mr. Auerbach and we made defamatory statements regarding Dr. Eshelman in connection with a proxy contest. Dr. Eshelman seeks compensatory and punitive damages and expenses and costs, including attorneys' fees. On April 4, 2016, we filed a motion to dismiss the complaint. On May 2, 2016, Dr. Eshelman filed a notice of voluntary dismissal of the claims against Mr. Auerbach. On February 6, 2017, the court denied our motion to dismiss. Discovery ended in September 2017. Summary judgment briefing was completed on November 17, 2017. It is unknown when the court will rule on the summary judgment motions. We intend to vigorously defend against Dr. Eshelman's claims.

Derivative Actions

On April 12 and April 14, 2016, alleged shareholders filed two derivative lawsuits purportedly on behalf of us against certain of our officers and directors in the Superior Court of the State of California, Los Angeles, captioned Xing Xie vs. Alan H. Auerbach, No. BC616617, and Kevin McKenney vs. Auerbach, No. BC617059. The complaints assert claims for breach of fiduciary duty, unjust enrichment, abuse of control, mismanagement and waste of corporate assets arising from substantially similar allegations as those contained in the securities class action described above. The complaints seek an unspecified sum of damages and equitable relief. These two derivative claims are currently stayed, pending the outcome of the Hsu securities class action. We intend to vigorously defend against this matter.

Separately, on February 9, 2018, another alleged shareholder filed a derivative lawsuit purportedly on behalf of us against certain of our officers and directors in the United States District Court, Central District of California, captions Arnaud Van Der G racht De Rommerswael vs. Alan H. Auerbach, et al., No. 8:18-cv-00236. The complaint asserts claims for violation of securities law, breach of fiduciary duty, waste of corporate assets, and unjust enrichment arising from substantially similar allegations a s those contained in the securities class action described above. The complaint seeks an unspecified sum of damages, corporate reforms, equitable relief, and restitution. We intend to vigorously defend against this matter.

Stockholder Demand

On September 13, 2017, a purported stockholder filed a complaint in the Court of Chancery of the State of Delaware seeking an equitable apportionment of attorneys' fees in an unspecified amount. The purported stockholder alleges that his actions caused our board of directors to implement certain governance reforms and enhancements to our director compensation program, and that, as a result of his actions, the purported stockholder is entitled to attorneys' fees in an amount commensurate to those purported benefits. We filed an answer to the complaint on October 20, 2017. We intend to vigorously defend against this matter.

The pending proceedings described in this section involve complex questions of fact and law and will require the expenditure of significant funds and the diversion of other resources to defend. The results of legal proceedings are inherently uncertain, and material adverse outcomes are possible.

I TEM 4. MINE SAFETY DISCLOSURE

Not applicable.

PART II

I TEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market for Common Stock

Our common stock has been quoted on the NASDAQ Global Select Market, or NASDAQ, since January 3, 2017. Prior to January 3, 2017, shares of our common stock had been listed on the New York Stock Exchange, or NYSE, since October 19, 2012. The high and low sales prices of our common stock on NASDAQ in 2017 and on NYSE in 2016 are set forth below for the periods indicated:

2017	High	Low
First quarter	$ 45.44	$ 28.95
Second quarter	92.00	28.35
Third quarter	120.85	71.14
Fourth quarter	136.90	92.36

2016	High	Low
First quarter	$ 77.99	$ 25.20
Second quarter	39.67	19.74
Third quarter	73.27	28.14
Fourth quarter	68.05	29.85

On February 20, 2018, the last reported sale price for our common stock on NASDAQ was $67.05 per share.

Record Holders

On February 20, 2018, we had 15 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities. We believe approximately 15,255 additional owners held our common stock in "Street Name" as of February 20, 2018.

Dividends

We have never declared or paid any cash dividends on our capital stock. Currently, we anticipate that we will retain all available funds for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Any future determination relating to dividend policy will be made at the discretion of our board of directors and will depend on our future earnings, capital requirements, financial condition, prospects, applicable Delaware law, which provides that dividends are only payable out of surplus or current net profits, and other factors that our board of directors deems relevant. Additionally, we are restricted from paying cash dividends under our credit facility with SVB.

Securities Authorized for Issuance Under Equity Compensation Plans

The information included under Item 12 of Part III of this Annual Report, "Securities Authorized for Issuance Under Equity Compensation Plans," is hereby incorporated by reference into this Item 5 of Part II of this Annual Report.

Recent Sales of Unregistered Securities

We did not make any sales of unregistered securities during fiscal year 2017.

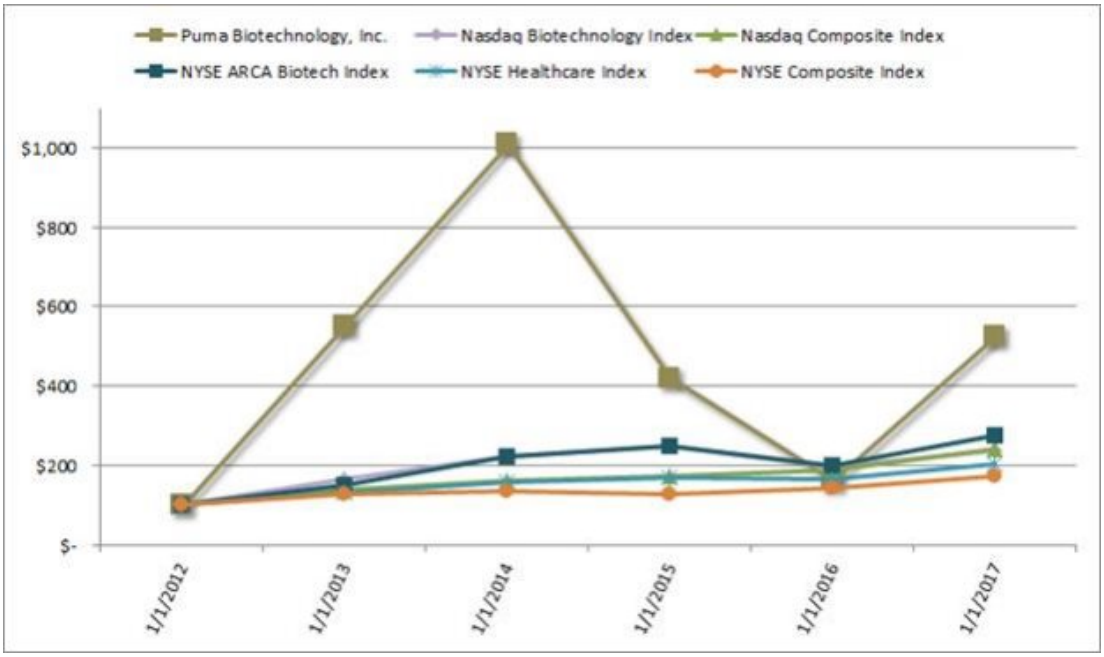
Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Neither we nor any "affiliated purchasers" within the definition of Rule 10b-18(a)(3) made any purchases of our equity securities during the fourth quarter of 2017.

Performance Graph

The graph below compares the cumulative total return of the Company's common stock from December 31, 2012, through December 31, 2017, with the cumulative total returns on (i) the Nasdaq Biotechnology Index and (ii) the Nasdaq Composite Index. The following indices were used in prior years and are presented for comparative purposes, but, since our common stock has been quoted on NASDAQ since January 3, 2017, we believe that the comparison to the Nasdaq Biotechnology Index and the Nasdaq Composite Index to be more meaningful; (i) the NYSE ARCA Biotechnology Index, (ii) the NYSE Healthcare Index and (iii) the NYSE Composite Index. The comparison assumes investment of $100 on December 31, 2012, in our common stock and in each index and, for each index, assumes reinvestment of all dividends.

The historical price performance included below is not necessarily indicative of future stock price performance.



The material in this performance graph is not soliciting material, is not deemed filed with the SEC and is not incorporated by reference in any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, whether made on, before or after the date of this filing and irrespective of any general incorporation language in such filing.

ITEM 6. SELECTED FINANCIAL DATA

The following financial data should be read in conjunction with our consolidated financial statements and the related notes thereto appearing elsewhere in this Annual Report and with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations."

The Consolidated Statements of Operations Data and Other Financial Data for the years ended December 31, 2017, 2016 and 2015 and the Consolidated Balance Sheet Data as of December 31, 2017 and 2016 have been derived from our audited consolidated financial statements included elsewhere in this Annual Report. The Consolidated Statement of Operations Data and Other Financial Data for the years ended December 31, 2014 and 2013 and the Consolidated Balance Sheet Data as of December 31, 2015, 2014 and 2013 have been derived from our audited consolidated financial statements not included herein. Historical results are not necessarily indicative of the results to be expected in the future, and the results for the years presented should not be considered indicative of our future results of operations.

	Years Ended December 31,				
	2017	2016	2015	2014	2013
	(in millions, except share and per share data)				
Statement of Operations Data:					
Product revenue, net	$ 26.2	$ —	$ —	$ —	$ —
License revenue	1.5	—	—	—	—
Expenses:					
Cost of sales	5.6	—	—	—	—
Selling, general and administrative	106.7	53.8	31.8	19.4	9.8
Research and development	207.8	222.8	208.5	122.9	45.0
Operating loss	(292.4)	(276.6)	(240.3)	(142.3)	(54.8)
Interest income	1.2	1.0	1.0	0.3	0.2
Interest expense	(0.7)	—	—	—	—
Other income	(0.1)	(0.4)	—	—	—
Totals	0.4	0.6	1.0	0.3	0.2
Net loss	(292.0)	(276.0)	(239.3)	(142.0)	(54.6)
Net loss attributable to common stock	(292.0)	(276.0)	(239.3)	(142.0)	(54.6)
Net loss per common share—basic and diluted	$ (7.85)	$ (8.29)	$ (7.45)	$ (4.73)	$ (1.90)
Weighted-average common shares outstanding—basic and diluted	37,169,678	33,295,114	32,126,094	30,010,979	28,696,573

	As of December 31,				
	2017	2016	2015	2014	2013
	(in millions)				
Balance Sheet Data:					
Total assets	$ 165.5	$ 252.8	$ 239.8	$ 162.8	$ 104.4
Total liabilities	112.2	43.0	33.8	45.7	20.4
Total stockholders' equity	53.3	209.8	206.0	117.0	84.0

	Years Ended December 31,				
	2017	2016	2015	2014	2013
	(in millions)				
Other Financial Data:					
Net cash used in operating activities	$ (172.5)	$ (141.7)	$ (154.5)	$ (77.2)	$ (55.0)
Net cash (used in) provided by investing activities	(15.4)	142.2	(85.9)	(63.3)	(41.5)
Net cash provided by financing activities	75.1	162.4	233.4	136.0	2.2

I tem 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Annual Report on Form 10-K contains forward-looking statements within the meanings of the federal securities laws. These statements are subject to risks and uncertainties that could cause actual results and events to differ materially from those expressed or implied by such forward-looking statements. For a detailed discussion of these risks and uncertainties, see the "Risk Factors" section in Item 1A of Part I of this Form 10-K. We caution the reader not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date of this Form 10-K. We undertake no obligation to update forward-looking statements to reflect events or circumstances occurring after the date of this Form 10-K.

Overview

We are a biopharmaceutical company with a focus on the development and commercialization of innovative products to enhance cancer care. We in-license the global development and commercialization rights to three drug candidates—PB272 (neratinib (oral)), PB272 (neratinib (intravenous)) and PB357. Neratinib is a potent irreversible tyrosine kinase inhibitor, or TKI, that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. Currently, we are primarily focused on the development and commercialization of the oral version of neratinib, and our most advanced drug candidates are directed at the treatment of HER2-positive breast cancer. We believe neratinib has clinical application in the treatment of several other cancers as well, including non-small cell lung cancer and other tumor types that over-express or have a mutation in HER2. Prior to 2017, our efforts and resources to date had been focused primarily on acquiring and developing our pharmaceutical technologies, raising capital and recruiting personnel. During 2017, the United States Food and Drug Administration, or FDA, approved NERLYNX, formally known as PB272 (neratinib(oral)), for the extended adjuvant treatment of adult patients with early stage HER2-overexpressed/amplified breast cancer following trastuzumab-based therapy. Developing drug products, however, is a lengthy and very expensive process.

We recently completed a Phase III clinical trial of neratinib for the extended adjuvant treatment of patients with early stage HER2-positive breast cancer, which we refer to as the ExteNET trial. Based on the results from the ExteNET trial, we submitted Marketing Authorization Application, or MAA, with the European Medicines Agency, or EMA, in June 2016. We are continuing to evaluate potential commercialization options for NERLYNX outside the United States in this indication, including developing a direct sales force, contracting with third parties to provide sales and marketing capabilities, some combination of these two options or other strategic options. We expect that our expenses will continue to increase as we continue to evaluate our options with regard to commercialization efforts.

The license agreement for PB272 established a limit for our expenses related to the Pfizer-initiated clinical trials for PB272 that were ongoing at the time of the agreement. This capped our "out-of-pocket" costs incurred in conducting these existing trials beginning January 1, 2012. We reached the cost cap during the fourth quarter of 2012, which resulted in a reduction of our research and development, or R&D, expenses for the fourth quarter of 2012 and for the year ended December 31, 2013. In July 2014, we signed an amendment to the license agreement with the Licensor whereby we would be responsible for the expenses incurred or accrued in conducting the ongoing legacy clinical trials after December 31, 2013. Additionally, our expenses to date have been related to hiring staff, commencing company-sponsored clinical trials and the build out of our corporate infrastructure. As we proceed with clinical development of PB272 (neratinib (oral)), and as we further develop PB272 (neratinib (intravenous)), and PB357, our second and third product candidates, respectively, we expect our R&D expenses and expenses related to our third-party contractors will begin to decline unless we decide to pursue additional clinical trials in alternate indications or acquire additional product candidates.

To the extent we are successful in acquiring additional product candidates for our development pipeline, our need to finance R&D will increase. Accordingly, our success depends not only on the safety and efficacy of our product candidates, but also on our ability to finance product development. Our major sources of working capital have been proceeds from public offerings of our common stock, proceeds from our credit facility and sales of our common stock in private placements.

Summary of Income and Expenses

Product revenue, net

Product revenue, net consists of revenue from sales of NERLYNX. We record revenue at the net sales price, which includes an estimate for variable consideration for which reserves are established. Variable consideration consists of trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates and other incentives.

License revenue

License revenue consists of consideration paid to us pursuant to our license agreements.

Cost of sales

Cost of sales consists of third-party manufacturing costs, freight, and indirect overhead costs associated with sales of NERLYNX. Cost of product sales may also include period costs related to royalty charges payable to the Licensor, the amortization of a milestone payment made to the Licensor after obtaining FDA approval of NERLYNX, certain inventory manufacturing services, inventory adjustment charges, unabsorbed manufacturing and overhead costs, and manufacturing variances.

Selling, general and administration expenses

Selling , general and administrative, or SG&A, expenses consist primarily of salaries and related personnel costs, including stock-based compensation expense, professional fees, business insurance, rent, general legal activities, and other corporate expenses. Internal expenses primarily consist of payroll-related costs, but also include facilities and equipment costs, travel expenses and supplies. External expenses primarily consist of legal fees, insurance expenses and consulting for activities such as sales, marketing and software implementations to support corporate growth.

Research and development expenses:

R&D expenses include costs associated with services provided by consultants who conduct clinical services on our behalf, contract organizations for manufacturing of clinical materials and clinical trials. During the years ended December 31, 2017, 2016 and 2015, our R&D expenses consisted primarily of clinical research organization, or CRO, fees; fees paid to consultants; salaries and related personnel costs; and stock-based compensation. We expense our R&D costs as they are incurred. Internal expenses primarily consist of payroll-related costs, but also include equipment costs, travel expenses and supplies. External expenses primarily consist of clinical trial expenses and consultant and contractor expense, but also include costs such as legal fees, insurance costs and manufacturing expense.

Results of Operations

The following summarizes our results of operations for the periods indicated.

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Total revenue

Total revenue was approximately $27.7 million for the year ended December 31, 2017 compared to $0 for the year ended December 31, 2016.

Product revenue, net

Product revenue, net was approximately $26.2 million for the year ended December 31, 2017, compared to $0 for the year ended December 31, 2016. This increase in product revenue, net was entirely attributable to sales of NERLYNX, our initial product, following its commercial launch in July 2017.

License revenue

License revenue was approximately $1.5 million for the year ended December 31, 2017, compared to $0 for the year ended December 31, 2016. This increase in license revenue was entirely attributable to an upfront payment in an out-license agreement.

Cost of sales

Cost of sales was approximately $5.6 million for the year ended December 31, 2017, compared to $0 for the year ended December 31, 2016. The increase in cost of sales was entirely attributable to the commercial launch of NERLYNX, our initial product, in July 2017.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Total revenue

Total revenue was $0 for the years ended December 31, 2016 and 2015 as we did not generate revenue until the commercial launch of NERLYNX during 2017.

Cost of sales

Cost of sales was $0 for the years ended December 31, 2016 and 2015 because we did not yet have a commercial product.

Selling, general and administrative expenses:

Selling, general and administrative expenses (in thousands)	2017	2016	2015	Annual Percentage Change 2017/2016	Annual Percentage Change 2016/2015
External	$ 41,364	$ 14,172	$ 6,925	191.9%	104.6%
Internal	34,135	13,003	7,717	162.5%	68.5%
Employee stock-based compensation expense	31,194	26,623	17,166	17.2%	55.1%
	$ 106,693	$ 53,798	$ 31,808	98.3%	69.1%

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Total SG&A expenses increased approximately 98.3% to $106.7 million for the year ended December 31, 2017 from $53.8 million for the year ended December 31, 2016. Approximately $16.1 million of this increase, or 30.4% of the total increase, is related to the hiring and training of a commercial sales force and field based support personnel (approximately 100 employees) upon obtaining FDA approval of NERLYNX. The remaining approximately $36.8 million increase in SG&A expense for the year ended December 31, 2017 compared to the same period in 2016 was primarily attributable to:

- an approximately $27.2 million increase in external costs for commercial launch and non-commercial launch related expenses primarily comprised of:
- an approximately $18.4 million increase in expenses related to the commercial launch of NERLYNX, primarily driven by an approximately $5.8 million increase in marketing, an approximately $5.4 million increase in system infrastructure, an approximately $4.3 million increase in patient programs and consulting and an approximately $2.9 million increase for recruiting and on-boarding costs of the sales force; and
- an approximately $8.8 million increase in non-launch related external expenses, primarily driven by an approximately $7.3 million increase in legal expenses and an approximately $1.5 million increase from various additional expenses such as audit fees, additional temporary labor and administrative fees to support overall corporate growth.
- an approximately $5.0 million additional increase in internal expenses. Included in this increase are an approximately $1.7 million increase in headcount in marketing and market access to support the commercial launch, an approximately $1.3 million increase in G&A headcount and an approximately $2.0 million increase of expense to support corporate growth in the form of increased software and depreciation expenses; and
- an increase of approximately $4.6 million in employee stock-based compensation for employees hired during 2017 and annual awards to existing employees.

We expect SG&A expenses to increase in 2018. The majority of the salesforce and field based support personnel were hired in the late 3 rd quarter of 2017 while we expect a full years' worth of sales force expenses in 2018. This increase should only be partially offset by an expected reduction in legal fees and system implementation fees.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Total SG&A expenses increased approximately 69.1% to $53.8 million for the year ended December 31, 2016 from $31.8 million for the year ended December 31, 2015. Approximately $9.4 million of this increase, or 42.7% of the total increase, is related to an increase in stock-based compensation expense, attributable to our increased headcount and additional incentive awards to existing employees. The remaining approximately $12.6 million increase in SG&A expense for the year ended December 31, 2016 compared to the same period in 2015 was primarily attributable to:

- an approximately $7.2 million increase in external expenses. Included in the increase are an approximately $5.3 million increase in consulting and professional expenses for our pre-commercialization efforts and an approximately $1.9 million increase in other professional fees and expenses, which consist primarily of legal, auditing, consulting and investor relations fees; and
- an approximately $5.3 million increase in internal expenses. Included in the increase are an approximately $2.8 million increase in payroll and related costs as administrative headcount increased from 18 to 27, mostly in support of the expected commercial product launch in 2017, an approximately $2.1 million increase in facility and equipment costs and an approximately $0.5 million increase in other expenses primarily attributable to supporting our corporate growth.

Research and development expenses:

Research and development expenses (in thousands)	2017	2016	2015	Annual Percentage Change 2017/2016	Annual Percentage Change 2016/2015
External	$ 89,212	$ 95,010	$ 99,184	(6.1%)	(4.2%)
Internal	41,057	37,147	31,520	10.5%	17.9%
Employee stock-based compensation	77,541	90,641	77,768	(14.5%)	16.6%
	$ 207,810	$ 222,798	$ 208,472	(6.7%)	6.9%

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

For the year ended December 31, 2017, R&D expenses decreased approximately $15.0 million compared to the same period in 2016. The decrease was primarily attributable to:

- an approximately $5.8 million decrease in external expenses. Included in the decrease is an approximately $6.8 million decrease in manufacturing costs related to launch preparation, offset by an approximate $1.0 million increase in clinical study related expenses;
- an approximately $3.9 million increase in internal expenses. Included in the increase is an approximately $3.2 million increase from adding 19 new employees in clinical development and medical affairs and an approximately $0.7 million increase for additional expenses such as travel and software; and
- an approximately $13.1 million decrease in stock-based compensation expense.

We expect R&D expenses in 2018 to continue to decline slightly when compared with R&D expenses in 2017 based on a decline in clinical trial activities as trials begin to wind down.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

For the year ended December 31, 2016, R&D expenses increased approximately $14.3 million compared to the same period in 2015. Approximately $12.8 million of this increase, or 89.5% of the total increase, is related to an increase in stock-based compensation expense, attributable to our increased headcount and additional incentive awards to existing employees. The remaining approximately $1.5 million increase in R&D expense for the year ended December 31, 2016 compared to the same period in 2015 was primarily attributable to:

- an approximately $4.1 million decrease in external expenses primarily from an approximately $14.3 million decrease in CRO expenses partially offset by an approximate increase of $10.2 million in clinical and pre-clinical service expenses, and consultant expense to support the filing of an NDA with the FDA and MAA with the EMA; and
- an approximately $5.6 million increase in internal expenses driven primarily by headcount increases in clinical development, regulatory affairs and manufacturing.

While expenditures on current and future clinical development programs, particularly our PB272 program, are expected to be substantial, they are subject to many uncertainties, including the results of clinical trials and whether we develop any of our drug candidates with a partner or independently. As a result of such uncertainties, we cannot predict with any significant degree of certainty the duration and completion costs of our research and development projects or whether, when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates. The duration and cost of clinical trials may vary significantly over the life of a project as a result of unanticipated events arising during clinical development and a variety of other factors, including:

- the number of trials and studies in a clinical program;
- the number of patients who participate in the trials;
- the number of sites included in the trials;
- the rates of patient recruitment and enrollment;
- the duration of patient treatment and follow-up;
- the costs of manufacturing our drug candidates; and
- the costs, requirements, timing of, and ability to secure regulatory approvals.

Other income and expenses:

Other (expenses) income:				Annual Percentage Change	
(in thousands)	2017	2016	2015	2017/2016	2016/2015
Interest income	$ 1,256	$ 958	$ 971	31.1%	(1.3%)
Interest expense	(720)	—	—	—	—
Other (expenses) income	(101)	(373)	25	(72.9%)	(1,592.0%)
Total other (expenses) income	$ 435	$ 585	$ 996	(25.6%)	(41.3%)

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Interest income:

For the year ended December 31, 2017, we recognized approximately $1.3 million in interest income compared to approximately $1.0 million of interest income for the year ended December 31, 2016. The increase in interest income reflects more cash invested in money market accounts and "high yield" savings accounts for 2017 compared to 2016 (see Note 6 in the accompanying notes to consolidated financial statements).

Interest expense:

For the year ended December 31, 2017, we recognized approximately $0.7 million in interest expense compared to $0 of interest expense for the year ended December 31, 2016. This increase in interest expense is as a result of the debt financing which closed in October 2017 (see Note 7 in the accompanying notes to consolidated financial statements).

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Interest income:

For the year ended December 31, 2016, we recognized approximately $1.0 million in interest income compared to approximately $1.0 million of interest income for the years ended December 31, 2015.

Interest expense:

For the years ended December 31, 2016 and 2015, we did not recognize interest expense as we did not have any debt financing.

Non-GAAP Financial Measures:

In addition to our operating results, as calculated in accordance with generally accepted accounting principles, or GAAP, we use certain non-GAAP financial measures when planning, monitoring, and evaluating our operational performance. The following table presents our net loss and net loss per share, as calculated in accordance with GAAP, as adjusted to remove the impact of stock-based compensation. For the three and twelve months ended December 31, 2017, stock-based compensation represented approximately 39.8% and 37.2% of our net loss, respectively. Although net loss is important to measure our financial performance, we currently place an emphasis on cash burn and, more specifically, cash used in operations. Because stock-based compensation appears in GAAP net loss but is removed from net loss to arrive as cash used in operations on the statement of cash flows, due to its non-cash nature, we believe these non-GAAP measures enhance understanding of our financial performance, are more indicative of our operational performance and facilitate a better comparison among fiscal periods. These non-GAAP financial measures are not, and should not be viewed as, substitutes for GAAP reporting measures.

Reconciliation of GAAP Net Loss to Non-GAAP Adjusted Net Loss and GAAP Net Loss Per Share to Non-GAAP Adjusted Net Loss Per Share
(in thousands except share and per share data)

	For the Year Ended December 31,			
	2017	2016	2015	
GAAP net loss	$ (291,955)	$ (276,011)	$ (239,284)	
Adjustments:				
Stock-based compensation -				
Selling, general and administrative	31,194	26,623	17,166	(1)
Research and development	77,541	90,641	77,768	(2)
Non-GAAP adjusted net loss	$ (183,220)	$ (158,747)	$ (144,350)	
GAAP net loss per share — basic and diluted	$ (7.85)	$ (8.29)	$ (7.45)	
Adjustment to net loss (as detailed above)	2.92	3.52	2.96	
Non-GAAP adjusted net loss per share	$ (4.93)	$ (4.77)	$ (4.49)	(3)

(1) To reflect a non-cash charge to operating expense for selling, general and administrative stock-based compensation.
(2) To reflect a non-cash charge to operating expense for research and development stock-based compensation.
(3) Non-GAAP adjusted net loss per share was calculated based on 37,169,678, 33,295,114 and 32,126,094 weighted average common shares outstanding for the years ended December 31, 2017, 2016 and 2015, respectively.

Liquidity and Capital Resources

Operating Activities

We reported net losses of approximately $292.0 million, $276.0 million and $239.3 million for the years ended December 31, 2017, 2016 and 2015, respectively. We also reported negative cash flows from operating activities of approximately $172.5 million, $141.7 million and $154.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Net cash used in operating activities for the year ended December 31, 2017, includes a net loss of $292.0 million adjusted for non-cash items of approximately $108.7 million for stock-based compensation expense, and depreciation of property and equipment and license amortization of approximately $2.8 million. Further changes in cash flows from operations include an increase in accounts payable and accrued expenses of approximately $21.6 million, an increase in accounts receivable of approximately $9.7 million, an increase in inventory of approximately $2.0 million, an increase in prepaid expenses and other of approximately $1.1 million and an decrease in the accrued liability for deferred rent of approximately $0.1 million.

Net cash used in operating activities for the year ended December 31, 2016, includes a net loss of $276.0 million adjusted for non-cash items of approximately $117.3 million for stock-based compensation expense, build-out allowance of approximately $3.0 million, disposal of leasehold improvements of approximately $0.4 million and depreciation and amortization of property and equipment of approximately $1.1 million. Further changes in cash flows from operations include an increase in accounts payable and accrued expenses of approximately $5.0 million, a decrease in prepaid expenses and other of approximately $3.4 million and an increase in the accrued liability for deferred rent of approximately $4.1 million. This increase in accrued liability for deferred rent was due to the amendments to the leases for office space, which became effective in April 2016.

Net cash used in operating activities for the year ended December 31, 2015, includes a net loss of $239.3 million, adjusted for non-cash items of approximately $94.9 million for stock-based compensation expense, build-out allowance of $0.2 million and $0.8 million for depreciation and amortization of property and equipment. Further changes in cash flows from operations include a decrease in accounts payable and accrued expenses of approximately $12.0 million, a decrease of $1.8 million in Licensor receivables, and an increase in prepaid expenses and other assets of approximately $1.0 million. The decrease in accrued expenses reflects a payment of approximately $16.4 million for employee payroll taxes withheld related to the exercise of employee stock options during December 2014, paid in January 2015. The increase in prepaid expenses and other assets reflects up-front payments made to various CROs for company-initiated clinical trials, for various insurance policies and the comparator inventory.

Investing Activities

Net cash used in investing activities was approximately $15.4 million for the year ended December 31, 2017. This includes an increase in intangible assets of approximately $50.0 million, the purchase of available-for-sale securities of approximately $79.7 million, offset by the maturity of available-for-sale securities of approximately $114.7 million and cash used for the purchase of property and equipment of approximately $0.4 million as provided the newly hired salesforce with computer and phone equipment for commercial launch of NERLYNX.

Net cash provided by investing activities was approximately $142.2 million for the year ended December 31, 2016. A significant portion represents cash provided by the sale and maturity of available-for-sale securities of approximately $231.3 million offset by cash used for the purchase of available-for-sale securities of approximately $81.8 million. Additionally, cash used included approximately $4.3 million used for the purchase of property and equipment and approximately $3.0 million for expenditures for leasehold improvements.

Net cash used in investing activities was approximately $85.9 million for the year ended December 31, 2015. A significant portion of this represents cash used for the purchase of available-for-sale securities of approximately $214.8 million offset by the sale and maturity of available-for-sale securities of $133.2 million. Additionally, approximately $3.1 million of net cash used in investing activities was transferred to restricted cash to secure a standby letter of credit for the additional office leases and approximately $1.2 million was used for leasehold improvements and the purchase of property and equipment to support corporate growth.

Financing Activities

October 2017 Debt Financing

On October 31, 2017, we entered into a loan agreement for a term loan of up to $100.0 million, subject to funding in two tranches. We received proceeds net of fee associated with the initiation and interest fees of $48.5 million from the first tranche of the credit facility upon closing on October 31, 2017 and intend to use the funds for general corporate purposes and to further support NERLYNX commercial initiatives. The second tranche of $50.0 million less associated fees per the financing agreement may be drawn at our option between March 31, 2018 and June 30, 2018 provided we have achieved a specified minimum revenue milestone and no event of default is occurring. The loan will mature on October 31, 2022.

Other Financing Activities

In addition, during the year ended December 31, 2017, approximately $26.7 million was received for employee stock options exercised during 2017.

October 2016 Common Stock Offering

On October 19, 2016, we entered into an underwriting agreement in connection with the public offering, issuance and sale by us of 3,750,000 shares of our common stock at a public offering price of $40.00 per share, less underwriting discounts and commissions. Under the terms of the underwriting agreement, we also granted the underwriters an option exercisable for 30 days to purchase up to an additional 562,500 shares of our common stock at the public offering price, less underwriting discounts and commissions. On October 20, 2016, the underwriters exercised their option to purchase additional shares in full. We received net proceeds from the offering of approximately $161.9 million, after deducting underwriting discounts and commissions and offering expenses.

Other Financing Activities

In addition, during the year ended December 31, 2016, approximately $0.6 million was received for employee stock options exercised during 2016.

January 2015 Common Stock Offering

On January 27, 2015, we completed an underwritten public offering of 1,150,000 shares of our common stock (including an additional 150,000 shares of our common stock issued and sold pursuant to the underwriters' option to purchase additional shares) at a price of $190.00 per share, less underwriting discounts and commissions. The net proceeds received by us were approximately $205.1 million after deducting underwriting discounts and commissions and offering expenses.

Other Financing Activities

In addition, during the year ended December 31, 2015, $28.2 million was received for employee stock options exercised during 2015.

Loan and Security Agreement

On October 31, 2017, or the Effective Date, we entered into a loan and security agreement, or the credit facility, with Silicon Valley Bank, as administrative and collateral agent, or SVB, and the lenders party thereto from time to time, including Oxford Finance LLC and SVB, pursuant to which the lenders agreed to make term loans available to us in an aggregate amount of $100 million, consisting of (i) an aggregate amount of $50 million available on the Effective Date and (ii) an aggregate amount of $50 million available to be drawn at our option between March 31, 2018 and June 30, 2018, provided we have achieved a specified minimum revenue milestone and no event of default is occurring. Proceeds from the term loans may be used for working capital and general business purposes. The credit facility is secured by substantially all of our personal property other than our intellectual property. We also pledged 65% of the issued and outstanding capital stock of our subsidiary, Puma Biotechnology Ltd. The credit facility limits our ability to grant any interest in our intellectual property to certain permitted licenses and permitted encumbrances set forth in the agreement.

The term loans under the credit facility bear interest at an annual rate equal to the greater of (i) 7.75% and (ii) the sum of (a) the "prime rate," as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. We are required to make monthly interest-only payments on each outstanding term loan commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month thereafter through December 1, 2019. Commencing on December 1, 2019, and continuing on the first calendar day of each calendar month thereafter, we are required to make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each lender, calculated pursuant to the credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan is due and payable in full on October 31, 2022. Upon repayment of the term loans, we are also required to make a final payment to the lenders equal to 7.5% of the original principal amount of term loans funded.

At our option, we may prepay the outstanding principal balance of any term loan in whole but not in part, subject to a prepayment fee of 2.0% of any amount prepaid if the prepayment occurs through and including the first anniversary of the funding date of such term loan, or 1.0% of the amount prepaid if the prepayment occurs after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan.

The credit facility includes affirmative and negative covenants applicable to us, our current subsidiary and any subsidiaries we may create in the future. The affirmative covenants include, among others, covenants requiring us to maintain our legal corporate existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. We must also achieve product revenue, measured as of the last day of each fiscal quarter on a trailing three-month basis, that is (i) greater than or equal to 70% of our revenue target set forth in our board-approved projections for the 2017 fiscal year, (ii) greater than or equal to 50% of our revenue target set forth in our board-approved projections for the 2018 fiscal year, and (iii) greater than or equal to 50% of our revenue target set forth in our board-approved projections for the 2019 fiscal year. New minimum revenue levels will be established for each subsequent fiscal year by our mutual agreement with SVB, as administrative agent, and the lenders. The negative covenants include, among others, restrictions on us transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens, selling assets and suffering a change in control, in each case subject to certain exceptions.

The credit facility also includes events of default, the occurrence and continuation of which could cause interest to be charged at the rate that is otherwise applicable plus 5.0% and would provide SVB, as collateral agent, with the right to exercise remedies against us and the collateral securing the credit facility, including foreclosure against the property securing the credit facilities, including its cash. These events of default include, among other things, any failure by us to pay principal or interest due under the credit facility, a breach of certain covenants under the credit facility, our insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than $500,000 and one or more judgments against us in an amount greater than $500,000 individually or in the aggregate.

Current and Future Financing Needs

We have incurred negative cash flows from operations since we started our business, and we did not achieve any product revenues until the third quarter of 2017. We have spent, and expect to continue to spend, substantial amounts in connection with implementing our business strategy, including our planned product development efforts, our clinical trials, our R&D efforts and the commercialization efforts. Given the current and desired pace of clinical development of our product candidates, over the next 12 months we estimate that our R&D spending will be approximately $130 million to $140 million, excluding stock-based compensation.

Additionally, we expect SG&A expenses to increase as we continue commercialization efforts.

We are currently exploring methods by which to commercialize our product candidates if approved by the FDA or EMA. These methods may require funding in addition to the cash and cash equivalents totaling approximately $81.7 million available at December 31, 2017. While our consolidated financial statements have been prepared on a going concern basis, we expect to continue incurring significant losses for the foreseeable future and will continue to remain dependent on our ability to obtain sufficient funding to sustain operation and successfully commercially launch neratinib. While we have been successful in raising financing in the past, there can be no assurance that we will be able to do so in the future. Our ability to obtain funding may be adversely impacted by uncertain market conditions, unfavorable decisions of regulatory authorities or adverse clinical trial results. The outcome of these matters cannot be predicted at this time.

In addition, we have based our estimate of capital needs on assumptions that may prove to be wrong. Changes may occur that would consume our available capital faster than anticipated, including changes in and progress of our development activities, the impact of commercialization efforts, acquisitions of additional drug candidates and changes in regulation. Potential sources of financing include strategic relationships, public or private sales of equity or debt and other sources of funds. We may seek to access the public or private equity markets when conditions are favorable due to our long-term capital requirements. Although we may have access to the additional $50 million from the debt financing during 2018 provided we have achieved a specified minimum revnue milestone and no event of default is occurring, it is uncertain whether additional funding will be available when we need it on terms that will be acceptable to us, or at all. If we raise funds by selling additional shares of common stock or other securities convertible into common stock, the ownership interests of our existing stockholders will be diluted. If we are not able to obtain financing when needed, we may be unable to carry out our business plan. As a result, we may have to significantly limit our operations, and our business, financial condition and results of operations would be materially harmed. In such an event, we will be required to undertake a thorough review of our programs, and the opportunities presented by such programs, and allocate our resources in the manner most prudent.

Going Concern

Our independent registered public accounting firm has issued a report on our audited consolidated financial statements for the year ended December 31, 2017 that included an explanatory paragraph referring to our significant operating losses and expressing substantial doubt in our ability to continue as a going concern. Our consolidated financial statements have been prepared on a going concern basis, which assumes the realization of assets and settlement of liabilities in the normal course of business. Our ability to continue as a going concern is dependent upon our ability to generate profitable operations in the future and/ or to obtain the necessary financing to meet our obligations and repay our liabilities arising from normal business operations when they become due. The outcome of these matters cannot be predicted with any certainty at this time and raise substantial doubt that we will be able to continue as a going concern. Our consolidated financial statements do not include any adjustments to the amount and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern.

Off-Balance Sheet Arrangements

We do not have any “off-balance sheet arrangements,” as defined by the SEC regulations.

Contractual Obligations

Contractual obligations represent future cash commitments and liabilities under agreements with third parties, and exclude contingent liabilities for which we cannot reasonably predict future payment. Our contractual obligations result from property leases for office space. Although we do have obligations for CRO services, the table below excludes potential payments we may be required to make under our agreements with CROs because timing of payments and actual amounts paid under those agreements may be different depending on the timing of receipt of goods or services or changes to agreed-upon terms or amounts for some obligations, and those agreements are cancelable upon written notice by the Company and therefore, not long-term liabilities. The contracts also contain variable costs that are hard to predict as they are based on such things as patients enrolled and clinical trial sites, which can vary and therefore, are also not included in the table below. We also have unrecognized tax benefits that, if recognized, would affect the effective tax rate at December 31, 2017. We do not have tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefit will significantly increase or decrease within 12 months of the reporting date. Additionally, the expected timing of payment of the obligations presented below is estimated based on current information.

The following table repre sents our contractual obligations as of December 31, 2017, aggregated by type (in thousands):

	Payments Due by Period				
Contractual Obligations	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Operating Lease Obligations	$ 43,862	$ 4,472	$ 10,000	$ 10,764	$ 18,626
Debt (principal and interest)	67,345	3,929	43,789	19,627	—
Total	$ 111,207	$ 8,401	$ 53,789	$ 30,391	$ 18,626

See Note 10—Taxes and Note 11—Commitments and Contingencies in the accompanying notes to the financial statements for a summary of the Company's uncertain tax positions and contracts held by the Company as of December 31, 2017.

Critical Accounting Policies

The discussion and analysis of our consolidated financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in conformity with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, and expenses, and related disclosure of contingent assets and liabilities reported in our consolidated financial statements. The estimation process requires assumptions to be made about future events and conditions and, as a result, is inherently subjective and uncertain. Actual results could differ materially from our estimates.

The SEC defines critical accounting policies as those that are, in management's view, most important to the portrayal of our financial condition and results of operations and most demanding of our judgment. We consider the following policies to be critical to an understanding of our consolidated financial statements and the uncertainties associated with the complex judgments made by us that could impact our results of operations, financial position, and cash flows.

Revenue Recognition:

We adopted Accounting Standards Codification ("ASC") Topic 606 - Revenue from Contracts with Customers ("Topic 606") on January 1, 2017. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements, and financial instruments. Under Topic 606, an entity recognizes revenue when its customer obtains control of the promised goods or services, in an amount that reflects the consideration which the entity expects to be entitled in exchange for those goods or services. We had no contracts with customers until the FDA approved NERLYNX on July 17, 2017. Subsequent to receiving FDA approval, we entered into a limited number of arrangements with specialty pharmacies ("SPs") and specialty distributors ("SDs") in the United States, which we refer to as our Customers, to distribute NERLYNX. These arrangements are our initial contracts with customers. We have determined that these sales channels with customers are similar.

Reserves for Variable Consideration:

Revenue from product sales are recorded at the net sales price (transaction price), which includes estimates of variable consideration for which reserves are established. Components of variable consideration include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between us and our Customers, payors, and other indirect customers relating to the sale of our products. These reserves, as detailed below, are based on the amounts earned, or to be claimed on the related sales, and are classified as reductions of accounts receivable or a current liability. These estimates take into consideration a range of possible outcomes which are probability-weighted in accordance with the expected value method in Topic 606 for relevant factors such as current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns. Overall, these reserves reflect our best estimates of the amount of consideration to which it is entitled based on the terms of the respective underlying contracts.

The amount of variable consideration which is included in the transaction price may be constrained, and is included in the net sales price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized under the contract will not occur in a future period. Our analyses also contemplated application of the constraint in accordance with the guidance, under which it determined a material reversal of revenue would not occur in a future period for the estimates detailed below as of December 31, 2017 and, therefore, the transaction price was not reduced further during the year ended December 31, 2017. Actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known.

Trade Discounts and Allowances:

We generally provide Customers with discounts which include incentive fees that are explicitly stated in our contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. In addition, we compensate (through trade discounts and allowances) our Customers for sales order management, data, and distribution services. However, we have determined

such services received to date are not distinct from our sale of products to the Customer and, therefore, these payments have been recorded as a reduction of revenu e within the statement of operations and comprehensive loss through December 31, 2017.

Product Returns:

Consistent with industry practice, we offer the SPs and SDs limited product return rights for damaged and expiring products, provided it is within a specified period around the product expiration date as set forth in the applicable individual distribution agreement. We estimate the amount of our product sales that may be returned by our Customers and record this estimate as a reduction of revenue in the period the related product revenue is recognized, as well a reduction to trade receivables, net on the consolidated balance sheets. We currently estimate product returns using available industry data and our sales information, including our visibility into the inventory remaining in the distribution channel. We have an insignificant amount of returns to date and believe that returns of our products will continue to be minimal.

Provider Chargebacks and Discounts:

Chargebacks for fees and discounts to providers represent the estimated obligations resulting from contractual commitments to sell products to qualified healthcare providers at prices lower than the list prices charged to Customers who directly purchase the product from us. Customers charge us for the difference between what they pay for the product and the ultimate selling price to the qualified healthcare providers. These reserves are established in the same period that the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability. Chargeback amounts are generally determined at the time of resale to the qualified healthcare provider by Customers, and we generally issue payments for such amounts within a few weeks of the Customer's notification to us of the resale. Reserves for chargebacks consist of payments that we expect to issue for units that remain in the distribution channel at each reporting period-end that we expect will be sold to qualified healthcare providers, and chargebacks that Customers have claimed, but for which we have not yet issued a payment.

Government Rebates:

We are subject to discount obligations under state Medicaid programs and Medicare. These reserves are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability which is included in accrued expenses and other current liabilities on the consolidated balance sheets. For Medicare, we also estimate the number of patients in the prescription drug coverage gap for whom we will owe an additional liability under the Medicare Part D program. Our liability for these rebates consists of invoices received for claims from prior quarters that have not been paid or for which an invoice has not yet been received, estimates of claims for the current quarter, and estimated future claims that will be made for product that has been recognized as revenue, but which remains in the distribution channel at the end of each reporting period.

Payor Rebates:

We contract with certain private payor organizations, primarily insurance companies and pharmacy benefit managers, for the payment of rebates with respect to utilization of its products. We estimate these rebates and records such estimates in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability.

Other Incentives:

Other incentives which we offer include voluntary patient assistance programs, such as the co-pay assistance program, which are intended to provide financial assistance to qualified commercially-insured patients with prescription drug co-payments required by payors. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the cost per claim that we expect to receive associated with product that has been recognized as revenue, but remains in the distribution channel at the end of each reporting period. The adjustments are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability which is included as a component of accrued expenses and other current liabilities on the consolidated balance sheets.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board, FASB, issued a new accounting standard that amends the guidance for the recognition of revenue from contracts with customers to transfer goods and services. The FASB has subsequently issued additional, clarifying standards to address issues arising from implementation of the new revenue recognition standard. The new revenue recognition standard and clarifying standards are effective for interim and annual periods beginning on January 1, 2018, but could have been adopted early beginning January 1, 2017. We chose to adopt this standard in 2017 as we began to first generate revenue, with no revenue

recognized in prior years. We have also identified and implemented c hanges to our accounting policies, business processes, and internal controls to support the new accounting and disclosure requirements.

In January 2016, the FASB issued ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities* . ASU No. 2016-01 requires equity investments to be measured at fair value with changes in fair value recognized in net income; simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment; eliminates the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet; requires public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes; requires an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments; requires separate presentation of financial assets and financial liabilities by measurement category and form of financial assets on the balance sheet or the accompanying notes to the condensed consolidated financial statements and clarifies that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. ASU No. 2016-01 is effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. We are currently evaluating the impact that ASU No. 2016-01 will have on our consolidated financial statements and related disclosures.

In February 2016, the FASB issued Accounting Standards Update, or ASU, No. 2016-02, *Leases* . The amendments in ASU 2016-02 will require organizations that lease assets, with lease terms of more than 12 months, to recognize on their balance sheet the assets and liabilities for the rights and obligations created by those leases. Consistent with current GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, unlike current GAAP which requires only capital leases to be recognized on the balance sheet, ASU No. 2016-02 will require both types of leases to be recognized on the balance sheet. ASU 2016-02 will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. We are currently in the process of evaluating the impact of ASU 2016-02 on our outstanding leases and expects that adoption will have an impact on the consolidated balance sheets related to recording right-of-use assets and corresponding lease liabilities.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting,* which was intended to simplify various aspects of accounting for share-based payment transactions. The new guidance requires immediate recognition of all excess tax benefits and deficiencies in the income statement; requires classification of excess tax benefits as an operating activity as opposed to a financing activity in the statements of cash flows; requires the classification of cash paid by an employer when directly withholding shares for tax-withholding purposes be classified as a financing activity on the statements of cash flows; and allows us to make an accounting policy election to either estimate the number of awards expected to vest or account for forfeitures when they occur. The standard is effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual reporting periods. We applied an accounting policy election to estimate forfeitures and then true up actual forfeitures as they occur. Because this treatment was in line with our current treatment of forfeitures, the impact was insignificant as of December 31, 2017. This adoption resulted in a one-time net increase to the net operating losses deferred tax asset and the corresponding valuation allowance of $184.1 million at the federal and state level, which is a primarily cumulative adjustment for the previously unrecognized windfall tax benefits related to previous vesting and exercises of stock-based awards. We applied this standard in the first quarter of 2017 using the modified retrospective transition method of adoption. Due to the full valuation allowance on the deferred tax assets, the adoption did not have any impact on our consolidated financial statements on the adoption date. In addition, under the new standard, we will prospectively reflect the tax deficiencies and benefits as an operating activity, rather than as a financing activity under the previous standard, in our Consolidated Statements of Cash Flows.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows* (*Topic 230*) *: Classification of Certain Cash Receipts and Cash Payments* (*a consensus of the Emerging Issues Task Force*), which addresses the diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. ASU 2016-15 will be effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted, including adoption in an interim period. We are currently evaluating the impact of adopting ASU 2016-15 on our consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows* (*Topic 230*): *Restricted Cash* that changes the presentation of restricted cash and cash equivalents on the statement of cash flows. Restricted cash and restricted cash equivalents will be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This amendment is effective for us in the fiscal year beginning after December 15, 2017, but early adoption is permissible. We are currently evaluating the effect that the adoption of ASU 2016-18 will have on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11 , *Inventory (Topic 330)* : *Simplifying the Measurement of Inventory* , which requires an entity to measure inventory at the lower of cost and net realizable value, and eliminates current GAAP options for measuring market value. ASU 2015-11 defines realizable v alue as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. ASU 2015-11 was adopted by the Company in fiscal year 2017, and interim periods therein without a materi al impact to the financial statements. We measure our inventory at the lower of cost and net realizable value.

I TEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Some of the securities that we invest in have market risk in that a change in prevailing interest rates may cause the principal amount of the cash equivalents to fluctuate. Financial instruments that potentially subject us to significant concentrations of credit risk consist primarily of cash and cash equivalents. We invest our excess cash primarily in cash equivalents such as money market investments as of December 31, 2017. The primary objectives of our investment activities are to ensure liquidity and to preserve principal while at the same time maximizing the income we receive from our cash and cash equivalents without significantly increasing risk. Additionally, we established guidelines regarding approved investments and maturities of investments, which are designed to maintain safety and liquidity.

Because of the short-term maturities of our cash equivalents, we do not believe that a 10% increase in interest rates would have a material effect on the realized value of our cash equivalents.

We also have interest rate exposure as a result of our outstanding $100.0 million secured term loan from SVB and Oxford. As of December 31, 2017, the outstanding principal amount of the term loan was $50.0 million. The term bears interest at an annual rate equal to the greater of (i) 7.75% and (ii) the sum of (a) the "prime rate," as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. Changes in the prime rate may therefore affect our interest expense associated with the term loan.

We do not believe that a 10% increase in the prime rate on December 31, 2017 would have had a material effect on our interest expense as of that date.

I TEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

All financial statements and supplementary data required by this Item are listed in Part IV, Item 15 of this Annual Report and are presented beginning on Page F-1.

I TEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

I TEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act, is recorded, processed, summarized and reported within the timelines specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Senior Vice President, Finance and Administration and Treasurer, as appropriate, to allow timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Senior Vice President, Finance and Administration and Treasurer, we have evaluated the effectiveness of our disclosure controls and procedures (as defined under Exchange Act Rule 13a-15(e)), as of December 31, 2017. Based on that evaluation, our Chief Executive Officer and Senior Vice President, Finance and Administration and Treasurer have concluded that these disclosure controls and procedures were effective as of December 31, 2017.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the fourth quarter ended December 31, 2017, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting, other than controls that were a result of the loan and security agreement entered into on October 31, 2017.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Senior Vice President, Finance and Administration and Treasurer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2017. Management based its assessment on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework - 2013* (COSO 2013 framework). Based on this evaluation, our management concluded that, as of December 31, 2017, our internal control over financial reporting was effective.

Our internal control over financial reporting as of December 31, 2017 has been audited by KPMG LLP, our independent registered public accounting firm, as stated in their report, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2017.

Report of Independe nt Registered Public Accounting Firm

To the Stockholders and Board of Directors
Puma Biotechnology, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Puma Biotechnology, Inc. and subsidiary (the Company) internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheet of the Company as of December 31, 2017, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for the year ended December 31, 2017,and the related notes (collectively, the consolidated financial statements), and our report dated March 9, 2018 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Los Angeles, California
March 9, 2018

ITEM 9B. OTHER INFORMATION

On December 15, 2017, the compensation committee of our board of directors approved the ratification, or the Ratification, of certain grants of Restricted Stock Units, or the RSU Awards, under the Puma Biotechnology, Inc. 2011 Incentive Award Plan, as amended, pursuant to and in accordance with Section 204 of the General Corporation Law of the State of Delaware, or the General Corporation Law. The RSU Awards were made on August 28, 2017, September 11, 2017, September 18, 2017, September 25, 2017 and October 2, 2017 and involved the grant of 43,500, 18,750, 2,000, 7,500 and 13,125 Restricted Stock Units, respectively. The compensation committee approved the Ratification of such RSU Awards after it determined that the RSU Awards may not have been duly authorized in accordance with Section 152 of the General Corporation Law. As none of the RSU Awards have vested, no shares of putative stock have been issued in respect of the RSU Awards. Any claim that the RSU Awards are void or voidable due to the foregoing failure of authorization, or that the Court of Chancery of the State of Delaware should declare in its discretion that the Ratification not be effective or be effective only on certain conditions, must be brought within 120 days from the later of the validation effective time and the giving of this notice (which is deemed given on the date that this Annual Report on Form 10-K is filed with the Securities and Exchange Commission).

Part III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item will be included in our 2018 Proxy Statement, which will be filed with the SEC, and is incorporated by reference herein.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item will be included in our 2018 Proxy Statement, which will be filed with the SEC, and is incorporated by reference herein.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item will be included in our 2018 Proxy Statement, which will be filed with the SEC, and is incorporated by reference herein.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item will be included in our 2018 Proxy Statement, which will be filed with the SEC, and is incorporated by reference herein.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item will be included in our 2018 Proxy Statement, which will be filed with the SEC, and is incorporated by reference herein.

Part IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Reference is made to the Index to Consolidated Financial Statements beginning on Page F-1 hereof.

Consolidated Financial Statement Schedules

(a) Documents Filed as Part of Report

(1) Consolidated Financial Statements

(2) Consolidated Financial Statement Schedules

Consolidated Financial Statement Schedules have been omitted because they are either not required or not applicable, or because the information required to be presented is included in the consolidated financial statements or the notes thereto included in this Annual Report.

(3) Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference as part of this Annual Report and such Exhibit Index is incorporated by reference herein.

ITEM 16. Form 10-K SUMMARY

None.

EXHIBIT INDEX

Exhibit No.		Incorporation by Reference		
		Form	Exhibit	Filing Date
2.1	Agreement and Plan of Merger, dated September 29, 2011, by and among Innovative Acquisitions Corp., IAC Merger Corporation, a Delaware corporation and wholly-owned subsidiary of the Company, and Puma Biotechnology, Inc., a Delaware corporation	8-K	2.1	10/4/2011
3.1	Certificate of Merger relating to the merger of IAC Merger Corporation with and into Puma Biotechnology, Inc., filed with the Secretary of State of Delaware on October 4, 2011	8-K	3.1	10/11/2011
3.2	Certificate of Ownership and Merger relating to the merger of Puma Biotechnology, Inc. with and into Innovative Acquisitions Corp., filed with the Secretary of State of the State of Delaware on October 4, 2011	8-K	3.2	10/11/2011
3.3	Second Amended and Restated Certificate of Incorporation, as filed with the Secretary of State of the State of Delaware on June 14, 2016	8-K	3.1	6/15/2016
3.4	Second Amended and Restated Bylaws of Puma Biotechnology, Inc.	8-K	3.1	5/8/2017
4.1	Form of Common Stock Certificate	S-1/A	4.1	2/1/2012
4.2#	Warrant to Purchase Shares of Common Stock of Puma Biotechnology, Inc., dated October 4, 2011, issued to Alan H. Auerbach	8-K	4.2	10/11/2011
10.1(a)*	License Agreement, dated August 18, 2011, by and between the Company, as successor to Puma Biotechnology, Inc., and Pfizer Inc.	8-K/A	10.1	12/16/2011
10.1(b)*	Amendment No. 1 to License Agreement dated July 18, 2014, between the Company and Pfizer, Inc.	10-Q	10.1	11/10/2014
10.2(a)#	Puma Biotechnology, Inc. 2011 Incentive Award Plan	8-K	10.4	10/11/2011
10.2(b)#	First Amendment to Puma Biotechnology, Inc. 2011 Incentive Award Plan	DEF 14A	Appendix A	6/4/2014
10.2(c)#	Second Amendment to Puma Biotechnology, Inc. 2011 Incentive Award Plan	10-Q	10.1	8/10/2015
10.2(d)#	Third Amendment to Puma Biotechnology, Inc. 2011 Incentive Award Plan	8-K	10.1	6/14/2017
10.2(e)#	Fourth Amendment to Puma Biotechnology, Inc. 2011 Incentive Award Plan	8-K	10.2	6/14/2017
10.2(f)#	Puma Biotechnology, Inc. 2017 Employment Inducement Incentive Award Plan	S-8	99.1	5/31/2017
10.2(g)#	Form of Stock Option Grant Notice and Stock Option Agreement, issued pursuant to the 2011 Incentive Award Plan	10-K	10.5	3/29/2012
10.2(h)#	Form of Chief Executive Officer Stock Option Grant Notice and Stock Option Agreement, issued pursuant to the 2011 Incentive Award Plan	10-K	10.6	3/29/2012
10.2(i)#	Form of Performance Share Award Agreement, issued pursuant to the 2011 Incentive Award Plan	10-K	10.2(d)	3/3/2014
10.2(j)#	Form of Restricted Stock Unit Award Agreement, issued pursuant to the 2011 Incentive Award Plan	8-K	10.1	10/17/2016
10.2(k)+#	Form of Stock Option Grant Notice and Stock Option Agreement, issued pursuant to the 2017 Employment Inducement Incentive Award Plan			

Exhibit No.		Incorporation by Reference		
		Form	Exhibit	Filing Date
10.3(a)	Registration Rights Agreement, dated October 4, 2011, by and among Puma, the investors listed on Exhibit A attached thereto and the Company	8-K/A	10.5	12/16/2011
10.3(b)	Amendment No. 1 to Registration Rights Agreement	8-K	10.2	11/23/2011
10.4#	Letter Agreement, dated October 21, 2011, between the Company and Charles Eyler	8-K	10.2	10/27/2011
10.5(a)	Office Lease by and between the Company and CA – 10880 Wilshire Limited Partnership, executed on December 7, 2011	8-K	10.1	12/13/2011
10.5(b)	First Amendment to the Office Lease, dated as of November 28, 2012, by and between the Company and CA – 10880 Wilshire Limited Partnership	10-K	10.13(B)	4/1/2013
10.5(c)	Second Amendment to the Office Lease, dated as of December 3, 2013, by and between the Company and CA – 10880 Wilshire Limited Partnership	10-K	10.6(c)	3/3/2014
10.5(d)	Third Amendment to the Office Lease, dated as of March 18, 2014, by and between the Company and CA – 10880 Wilshire Limited Partnership	10-K	10.5(d)	3/2/2015
10.5(e)	Fourth Amendment to the Office Lease, dated as of July 31, 2015, by and between the Company and CA – 10880 Wilshire Limited Partnership	10-Q	10.1	11/9/2015
10.6#	Employment Agreement, dated January 19, 2012, by and between the Company and Alan H. Auerbach	8-K	10.1	1/24/2012
10.7(a)	Office Lease by and between DWF III Gateway, LLC and the Company, executed June 7, 2012	8-K	10.1	6/13/2012
10.7(b)	First Amendment to Lease, dated as of May 19, 2014, by and between DWF III Gateway, LLC and Puma Biotechnology, Inc.	8-K	10.1	5/23/2014
10.7(c)	Second Amendment to Lease, dated as of June 10, 2014, by and between DWF III Gateway, LLC and Puma Biotechnology, Inc.	10-Q	10.2	8/10/2015
10.7(d)	Third Amendment to Lease, dated as of July 21, 2015, by and between PR 707 Gateway, LLC (as sucessor in interest to DWF III Gateway, LLC) and the Company	10-Q	10.2	11/9/2015
10.8#	Letter Agreement, dated May 2, 2012, between the Company and Richard P. Bryce	8-K	10.1	6/26/2012
10.9#	Form of Indemnification Agreement	S-1/A	10.17	10/15/2012
10.10#	Non-Employee Director Compensation Program	10-Q	10.3	8/9/2017
10.11#	Letter Agreement, dated August 21, 2015, between the Company and Steven Lo	10-Q	10.3	11/9/2015
10.12#	Letter Agreement, dated May 24, 2016, between the Company and Robert Charnas	10-Q	10.2	8/9/2016
10.13+*	License Agreement, dated November 20, 2017, by and between the Company and Specialised Therapeutics Asia Pte Ltd.			
10.14(a)+*	Loan and Security Agreement dated October 31, 2017, by and among the Company, Silicon Valley Bank, as administrative and collateral agent, and the lenders party thereto from time to time			
10.14(b)+*	Form of Secured Promissory Note (included as Exhibit D to Exhibit 10.14(a))			

Exhibit No.		Incorporation by Reference		
		Form	Exhibit	Filing Date
10.15+#	Letter Agreement, dated December 8, 2017, between the Company and Douglas Hunt			
21.1+	Subsidiaries			
23.1+	Consent of KPMG LLP			
23.2+	Consent of PKF, LLP (formally PKF, Certified Public Accountants, A Professional Corporation)			
24.1+	Power of Attorney (included on signature page)			
31.1+	Certification of Principal Executive Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002			
31.2+	Certification of Principal Financial Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002			
32.1++	Certification of Principal Executive Officer, as required by Section 906 of the Sarbanes-Oxley Act of 2002			
32.2++	Certification of Principal Financial Officer, as required by Section 906 of the Sarbanes-Oxley Act of 2002			
101.INS+	XBRL Instance Document			
101.SCH+	XBRL Taxonomy Extension Schema Document			
101.CAL+	XBRL Taxonomy Extension Calculation Linkbase Document			
101.DEF+	XBRL Taxonomy Extension Definition Linkbase Document			
101.LAB+	XBRL Taxonomy Extension Label Linkbase Document			
101.PRE+	XBRL Taxonomy Extension Linkbase Document			

+ Filed herewith.

++ Furnished herewith.

* Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment pursuant to Rule 24b-2 under the Securities Exchange Act of 1934.

Management contract or compensatory plan or arrangement.

S ignatures

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, on March 9, 2018.

PUMA BIOTECHNOLOGY, INC.

By: /s/ Alan H. Auerbach
Alan H. Auerbach
President & Chief Executive Officer
(Principal Executive Officer)

KNOWN BY ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Alan H. Auerbach and Charles R. Eyler, or either of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K and any documents related to this report and filed pursuant to the Securities Exchange Act of 1934, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Alan H. Auerbach Alan H. Auerbach	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	March 9, 2018
/s/ Charles R. Eyler Charles R. Eyler	Senior Vice President, Finance and Administration and Treasurer (Principal Financial Officer and Principal Accounting Officer)	March 9, 2018
/s/ Michael P. Miller Michael P. Miller	Director	March 9, 2018
/s/ Jay M. Moyes Jay M. Moyes	Director	March 9, 2018
/s/ Adrian M. Senderowicz Adrian M. Senderowicz	Director	March 9, 2018
/s/ Troy E. Wilson Troy E. Wilson	Director	March 9, 2018
/s/ Frank Zavrl Frank Zavrl	Director	March 9, 2018

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent R egistered Public Accounting Firm

To the Stockholders and Board of Directors
Puma Biotechnology, Inc.:

Opinion on the Consolidated *Financial Statements*

We have audited the accompanying consolidated balance sheet of Puma Biotechnology, Inc. and subsidiary (the Company) as of December 31, 2017, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017, and the results of their operations and their cash flows for the year ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 9, 2018 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

Los Angeles, California
March 9, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCO UNTING FIRM

To the Board of Directors and
Stockholders of Puma Biotechnology, Inc. and Subsidiary

We have audited the accompanying consolidated balance sheet of Puma Biotechnology, Inc. and Subsidiary (the "Company") as of December 31, 2016, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the two years ended 2016 and 2015. We also have audited Puma Biotechnology, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework - 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Puma Biotechnology, Inc.'s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the consolidated financial statements.

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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Puma Biotechnology, Inc. and Subsidiary as of December 31, 2016, and the results of its operations, comprehensive loss, changes in stockholders' equity and its cash flows for each of the two years ended 2016 and 2015, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, Puma Biotechnology, Inc. and Subsidiary maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework - 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company's significant operating losses raise substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters also are described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to that matter.

San Diego, California
March 1, 2017

/s/ PKF, LLP
PKF, LLP
(formerly PKF
Certified Public Accountants
A Professional Corporation)

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$ 81,698	$ 194,494
Marketable securities	—	34,982
Accounts receivable, net	9,670	—
Inventory	2,029	—
Prepaid expenses and other, current	12,997	6,998
Total current assets	106,394	236,474
Property and equipment, net	4,470	5,153
Prepaid expenses and other, long-term	1,989	6,846
Intangible assets, net	48,355	—
Restricted cash	4,317	4,317
Total assets	$ 165,525	$ 252,790
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 27,692	$ 20,035
Accrued expenses	30,648	17,426
Total current liabilities	58,340	37,461
Deferred rent	5,406	5,505
Long term debt	48,477	—
Total liabilities	112,223	42,966
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Common stock - $.0001 par value; 100,000,000 shares authorized; 37,594,851 shares issued and outstanding at December 31, 2017 and 36,826,010 issued and outstanding at December 31, 2016	4	4
Additional paid-in capital	1,142,213	1,006,344
Receivable from exercise of stock options	(449)	—
Accumulated other comprehensive loss	—	(13)
Accumulated deficit	(1,088,466)	(796,511)
Total stockholders' equity	53,302	209,824
Total liabilities and stockholders' equity	$ 165,525	$ 252,790

See Accompanying Notes to the Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	For the Year Ended December 31,		
	2017	**2016**	**2015**
Revenue:			
Product revenue, net	$ 26,185	$ —	$ —
License revenue	1,500	—	—
Total revenue	27,685	—	—
Operating costs and expenses:			
Cost of sales	5,572	—	—
Selling, general and administrative	106,693	53,798	31,808
Research and development	207,810	222,798	208,472
Total operating expense	320,075	276,596	240,280
Loss from operations	(292,390)	(276,596)	(240,280)
Other (expenses) income:			
Interest income	1,256	958	971
Interest expense	(720)	—	—
Other (expenses) income	(101)	(373)	25
Total other (expenses) income	435	585	996
Net loss	$ (291,955)	$ (276,011)	$ (239,284)
Net loss applicable to common stock	$ (291,955)	$ (276,011)	$ (239,284)
Net loss per common share—basic and diluted	$ (7.85)	$ (8.29)	$ (7.45)
Weighted-average common shares outstanding—basic and diluted	37,169,678	33,295,114	32,126,094

See Accompanying Notes to the Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	For the Year Ended December 31,		
	2017	2016	2015
Net loss	$ (291,955)	$ (276,011)	$ (239,284)
Other comprehensive income (loss)			
Unrealized gain (loss) on available-for-sale securities	13	134	(52)
Comprehensive loss	$ (291,942)	$ (275,877)	$ (239,336)

See Accompanying Notes to the Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)

	Common Stock		Additional Paid-in Capital	Receivables from the Exercises of Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance at December 31, 2014	30,548,309	$ 3	$ 399,191	$ (835)	$ (95)	$ (281,216)	$ 117,048
Stock-based compensation	—	—	94,934	—	—	—	94,934
Exercises of stock options	757,038	—	27,393	835	—	—	28,228
Issuance of performance shares	11,495	—	—	—	—	—	—
Issuance of common stock through equity placement at $190.00 per share, net of issuance costs	1,150,000	—	205,133	—	—	—	205,133
Unrealized gain on available-for-sale securities	—	—	—	—	(52)	—	(52)
Net loss	—	—	—	—	—	(239,284)	(239,284)
Balance at December 31, 2015	32,466,842	3	726,651	—	(147)	(520,500)	206,007
Stock-based compensation	—	—	117,264	—	—	—	117,264
Exercises of stock options	46,668	—	576	—	—	—	576
Issuance of common stock through equity placement at $40.00 per share, net of issuance costs	4,312,500	1	161,853	—	—	—	161,854
Unrealized gain on available-for-sale securities	—	—	—	—	134	—	134
Net loss	—	—	—	—	—	(276,011)	(276,011)
Balance at December 31, 2016	36,826,010	4	1,006,344	—	(13)	(796,511)	209,824
Stock-based compensation	—	—	108,735	—	—	—	108,735
Shares issued or RSUs vested under employee stock plans	768,841	—	27,134	(449)	—	—	26,685
Unrealized gain on available-for-sale securities	—	—	—	—	13	—	13
Net loss	—	—	—	—	—	(291,955)	(291,955)
Balance at December 31, 2017	37,594,851	$ 4	$ 1,142,213	$ (449)	$ —	$ (1,088,466)	$ 53,302

See Accompanying Notes to the Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2017	2016	2015
Operating activities:			
Net loss	$ (291,955)	$ (276,011)	$ (239,284)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	2,811	1,149	776
Built-out allowance received from landlord	—	2,997	179
Stock-based compensation	108,735	117,264	94,934
Disposal of leasehold improvements	—	368	—
Changes in operating assets and liabilities:			
Accounts receivable, net	(9,670)	—	—
Inventory	(2,029)	—	—
Other receivables	—	—	1,760
Prepaid expenses and other	(1,142)	3,413	(958)
Accounts payable	7,657	2,231	2,806
Accrued expenses	13,222	2,787	(14,805)
Accrual of deferred rent	(99)	4,112	124
Net cash used in operating activities	(172,470)	(141,690)	(154,468)
Investing activities:			
Intangible assets	(50,000)	—	—
Purchase of property and equipment	(431)	(4,287)	(1,002)
Restricted cash	—	(4)	(3,098)
Expenditures for leasehold improvements	—	(2,997)	(179)
Purchase of available-for-sale securities	(79,729)	(81,794)	(214,806)
Sale/maturity of available-for-sale securities	114,724	231,267	133,222
Net cash provided by (used in) investing activities	(15,436)	142,185	(85,863)
Financing activities:			
Net proceeds from issuance of common stock	—	161,854	205,133
Net proceeds from shares issued under employee stock plans	26,685	576	28,228
Debt issuance costs	(1,575)	—	—
Proceeds from long term debt	50,000	—	—
Net cash provided by financing activities	75,110	162,430	233,361
Net (decrease) increase in cash and cash equivalents	(112,796)	162,925	(6,970)
Cash and cash equivalents, beginning of period	194,494	31,569	38,539
Cash and cash equivalents, end of period	$ 81,698	$ 194,494	$ 31,569
Supplemental disclosures of non-cash investing and financing activities:			
Property and equipment purchases in accounts payable	$ 27	$ —	$ —
Receivables related to stock option exercises	$ 449	$ —	$ —
Supplemental disclosure of cash flow information:			
Interest paid	$ 334	$ —	$ —

See Accompanying Notes to the Consolidated Financial Statements

Note 1—Business and Basis of Presentation:

Business:

Puma Biotechnology, Inc., or the Company, is a biopharmaceutical company based in Los Angeles, California with a focus on the development and commercialization of innovative products to enhance cancer care. The Company in-licenses the global development and commercialization rights to three drug candidates—PB272 (neratinib (oral)), PB272 (neratinib (intravenous)) and PB357. Neratinib is a potent irreversible tyrosine kinase inhibitor that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. Currently, the Company is primarily focused on the development and commercialization of the oral version of neratinib, and its most advanced drug candidates are directed at the treatment of HER2-positive breast cancer. The Company believes that neratinib has clinical application in the treatment of several other cancers as well, including non-small cell lung cancer and other tumor types that over-express or have a mutation in HER2.

In November 2012, the Company established and incorporated Puma Biotechnology Ltd., a wholly owned subsidiary, for the sole purpose of serving as the Company's legal representative in the United Kingdom and the European Union in connection with the Company's clinical trial activity in those countries.

Basis of Presentation:

The Company is focused on developing and commercializing neratinib for the treatment of patients with human epidermal growth factor receptor type 2, or HER2-positive, breast cancer, HER2 mutated non-small cell lung cancer, HER2-negative breast cancer that has a HER2 mutation and other solid tumors that have an activating mutation in HER2. The Company has reported a net loss of approximately $292.0 million and negative cash flows from operations of approximately $172.5 million for the year ended December 31, 2017. Management believes that the Company will continue to incur net losses and negative net cash flows from operating activities through the drug development process and early commercialization.

The Company has incurred significant operating losses and negative cash flows from operations since its inception, which raises substantial doubt about its ability to continue as a going concern. On July 17, 2017, the Company received U.S. Food and Drug Administration, or FDA, approval for its first product, NERLYNX® (neratinib), formerly known as PB272 (neratinib (oral)), for the extended adjuvant treatment of adult patients with early stage HER2-overexpressed/amplified breast cancer following adjuvant trastuzumab-based therapy. Following FDA approval in July 2017, NERLYNX became available by prescription in the United States, and the Company has commenced commercialization. The Company is exploring methods by which to commercially launch neratinib in the European Union should approval be granted by the European Medicines Agency, or EMA. In addition, the Company is required to make substantial payments to Pfizer upon the achievement of certain milestones, some of which may occur within one year from the date the financial statements are issued, and has contractual obligations for clinical trial contracts, some of which are expected to require payment within one year from the date the financial statements are issued (see Note 11). Commercialization in the United States, and if approved, in the European Union, may require funding in addition to the cash and cash equivalents and marketable securities totaling approximately $81.7 million available at December 31, 2017. While the consolidated financial statements have been prepared on a going concern basis, the Company continues to remain dependent on its ability to obtain sufficient funding to sustain operations and successfully commercialize neratinib in the United States, and, if approved, launch in the European Union. While the Company has been successful in raising financing in the past, there can be no assurance that it will be able to do so in the future. The Company's ability to obtain funding may be adversely impacted by uncertain market conditions, unfavorable decisions of regulatory authorities or adverse clinical trial results. The outcome of these matters cannot be predicted at this time. The Company's continued operations will depend on its ability to successfully commercialize NERLYNX, the Company's only product, and to obtain additional capital through various potential sources, such as equity and debt financing.

Since its inception through December 31, 2017, the Company's financing has primarily been through public offerings of Company common stock, private equity placements and a debt financing. The Company sold shares of its common stock through an underwritten public offering in October 2016 (see Note 8), through which the Company received net proceeds of approximately $161.9 million. On October 31, 2017, the Company entered into a loan agreement with Silicon Valley Bank and Oxford Finance for a term loan of up to $100.0 million, dependent upon the achievement of certain milestones (see Note 7).

The Company may need additional financing before it can achieve profitability, if ever. There can be no assurance that additional capital will be available on favorable terms or at all or that any additional capital that the Company is able to obtain will be sufficient to meet its needs. If it is unable to raise additional capital, the Company could likely be forced to curtail desired development activities, which will delay the development of its product candidates.

Note 2—Significant Accounting Policies:

The significant accounting policies followed in the preparation of these consolidated financial statements are as follows:

Financial Instruments

The carrying value of financial instruments, such as cash equivalents, accounts receivable and accounts payable, approximate their fair value because of their short-term nature. The carrying value of long-term debt approximates its fair value as the principal amounts outstanding are subject to variable interest rates that are based on market rates which are regularly reset.

Use of Estimates:

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the balance sheet, and reported amounts of expenses for the period presented. Accordingly, actual results could differ from those estimates.

Significant estimates include estimates for variable consideration for which reserves were established. These estimates are included in the calculation of net revenues and include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between the Company and its customers, payors, and other indirect customers relating to the Company's sale of its products.

Principles of Consolidation:

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany balances and transactions have been eliminated in consolidation.

Investment Securities:

The Company classifies all investment securities (short term and long term) as available-for-sale, as the sale of such securities may be required prior to maturity to implement management's strategies. These securities are carried at fair value, with the unrealized gains and losses, reported as a component of accumulated other comprehensive loss in stockholders' equity until realized. Realized gains and losses from the sale of available-for-sale securities, if any, are determined on a specific identification basis. A decline in the market value of any available-for-sale security below cost that is determined to be other than temporary results in the revaluation of its carrying amount to fair value. The impairment is charged to earnings and a new cost basis for the security is established. Premiums and discounts are amortized or accreted over the life of the related security as an adjustment to yield using the straight-line method. Interest income is recognized when earned.

License Fees and Intangible Assets:

The Company expenses amounts paid to acquire licenses associated with products under development when the ultimate recoverability of the amounts paid is uncertain and the technology has no alternative future use when acquired. Acquisitions of technology licenses are charged to expense or capitalized based upon the asset achieving technological feasibility in accordance with management's assessment regarding the ultimate recoverability of the amounts paid and the potential for alternative future use. The Company has determined that technological feasibility for its product candidates is reached when the requisite regulatory approvals are obtained to make the product available for sale. The Company capitalizes technology licenses upon reaching technological feasibility.

The Company maintains definite-lived intangible assets related to the Licensor agreement. These assets are amortized over their remaining useful lives, which are estimated based on the shorter of the remaining patent life or the estimated useful life of the underlying product. Intangible assets are amortized using the economic consumption method if anticipated future revenues can be reasonably estimated. The straight-line method is used when future revenues cannot be reasonably estimated. Amortization costs are recorded as part of cost of sales.

The Company assesses its intangible assets for impairment if indicators are present or changes in circumstance suggest that impairment may exist. Events that could result in an impairment, or trigger an interim impairment assessment, include the receipt of additional clinical or nonclinical data regarding one of the Company's drug candidates or a potentially competitive drug candidate, changes in the clinical d evelopment program for a drug candidate, or new information regarding potential sales for the drug. If impairment indicators are present or changes in circumstance suggest that impairment may exist, the Company performs a recoverability test by comparing t he sum of the estimated undiscounted cash flows of each intangible asset to its carrying value on the consolidated balance sheet. If the undiscounted cash flows used in the recoverability test are less than the carrying value, the Company would determine t he fair value of the intangible asset and recognize an impairment loss if the carrying value of the intangible asset exceeds its fair value. In connection with the FDA approval of NERLYNX in July 2017, the Company triggered a one-time milestone payment pur suant to its 2014 license agreement with Pfizer Inc., or the Licensor. The Company capitalized the milestone payment as an intangible asset and is amortizing the asset to cost of sales on a straight-line basis over the estimated useful life of the licensed patent through 2030. The Company recorded amortization expense related to its intangible asset of $1.6 million for the year ended December 31, 2017. As of December 31, 2017, estimated future amortization expense related to the Company's intangible asset w as approximately $3.9 million for each year starting 2018 through 2029, and $1.0 million for 2030.

Royalties:

Royalties incurred in connection with the Company's license agreement with the Licensor, as disclosed in Note 11-Commitments and Contingencies, are expensed to cost of sales as revenue from product sales is recognized.

Inventory:

The Company values its inventories at the lower of cost and estimated net realizable value. The Company determines the cost of its inventories, which includes amounts related to materials and manufacturing overhead, on a first-in, first-out basis. The Company performs an assessment of the recoverability of capitalized inventory during each reporting period, and it writes down any excess and obsolete inventories to their estimated realizable value in the period in which the impairment is first identified. Such impairment charges, should they occur, are recorded within the cost of sales. The determination of whether inventory costs will be realizable requires estimates by management. If actual market conditions are less favorable than projected by management, additional write-downs of inventory may be required, which would be recorded as a cost of sales in the consolidated statements of operations and comprehensive loss.

The Company capitalizes inventory costs associated with the Company's products after regulatory approval, if any, when, based on management's judgment, future commercialization is considered probable and the future economic benefit is expected to be realized. Inventory acquired prior to receipt of marketing approval of a product candidate is recorded as research and development expense as incurred. Inventory that can be used in either the production of clinical or commercial product is recorded as research and development expense when selected for use in a clinical trial. Starter kits, provided to patients prior to insurance approval, are expensed by the Company to sales and marketing expense as incurred.

As of December 31, 2017, the Company's inventory balance consisted primarily of raw materials purchased subsequent to FDA approval.

Revenue Recognition:

The Company adopted Accounting Standards Codification ("ASC") Topic 606 - Revenue from Contracts with Customers ("Topic 606") on January 1, 2017. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements, and financial instruments. Under Topic 606, an entity recognizes revenue when its customer obtains control of the promised goods or services, in an amount that reflects the consideration which the entity expects to be entitled in exchange for those goods or services. The Company had no contracts with customers until the FDA approved NERLYNX on July 17, 2017. Subsequent to receiving FDA approval, the Company entered into a limited number of arrangements with specialty pharmacies ("SPs") and specialty distributors ("SDs") in the United States, referred to as the Customers, to distribute NERLYNX. These arrangements are the Company's initial contracts with customers. The Company has determined that these sales channels with customers are similar.

To determine revenue recognition for arrangements that an entity determines are within the scope of Topic 606, the entity performs the following five steps: (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract, and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-ste p model to arrangements that meet the definition of a contract under Topic 606, including when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract i nception, once the contract is determined to be within the scope of Topic 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or servic e is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. For a complete discussion of accounting for product r evenue, see *Product Revenue, Net* (below).

Product Revenue, Net:

The Company sells NERLYNX to a limited number of SPs and SDs in the United States. These Customers subsequently resell the Company's products to patients and certain medical centers or hospitals. In addition to distribution agreements with Customers, the Company enters into arrangements with health care providers and payors that provide for government mandated and/or privately negotiated rebates, chargebacks and discounts with respect to the purchase of the Company's products.

The Company recognizes revenue on product sales when the Customer obtains control of the Company's product, which occurs at a point in time (upon delivery). Product revenue is recorded net of applicable reserves for variable consideration, including discounts and allowances. The Company's payment terms range between 10 and 60 days.

Shipping and handling costs for product shipments occur prior to the customer obtaining control of the goods, and are recorded in cost of sales.

If taxes should be collected from Customers relating to product sales and remitted to governmental authorities, they will be excluded from revenue. The Company expenses incremental costs of obtaining a contract when incurred, if the expected amortization period of the asset that the Company would have recognized is one year or less. However, no such costs were incurred during the year ended December 31, 2017.

Product revenue from each of our customers who individually accounted for 10% or more of total revenues consisted of the following:

	December 31, 2017
Customer A	38%
Customer B	23%
Customer C	13%

License Revenue:

The Company also recognizes license revenue under certain of the Company's license agreements that are within the scope of ASC 606 . The terms of these agreements may contain multiple performance obligations, which may include licenses and research and development activities. The Company evaluates these agreements under ASC 606 to determine the distinct performance obligations.

Prior to recognizing revenue, the Company makes estimates of the transaction price, including variable consideration that is subject to a constraint. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur and when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration may include nonrefundable upfront license fees, payments for research and development activities, reimbursement of certain third-party costs, payments based upon the achievement of specified milestones, and royalty payments based on product sales derived from the collaboration.

If there are multiple distinct performance obligations, the Company allocates the transaction price to each distinct performance obligation based on its relative standalone selling price. The standalone selling price is generally determined based on the prices charged to customers or using expected cost plus margin. Revenue is recognized by measuring the progress toward complete satisfaction of the performance obligations using an input measure.

Reserves for Variable Consideration:

Revenue from product sales are recorded at the net sales price (transaction price), which includes estimates of variable consideration for which reserves are established. Components of variable consideration include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between the Company and its Customers, payors, and other indirect customers relating to the Company's sale of its products. These reserves, as detailed below, are based on the related sales, and are classified as reductions of accounts receivable or a current liability. These estimates take into consideration a range of possible outcomes which are probability-weighted in accordance with the expected value method in Topic 606 for relevant factors such as current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns. Overall, these reserves reflect the Company's best estimates of the amount of consideration to which it is entitled based on the terms of the respective underlying contracts.

The amount of variable consideration which is included in the transaction price may be constrained, and is included in the net sales price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized under the contract will not occur in a future period. The Company's analyses also contemplated application of the constraint in accordance with the guidance, under which it determined a material reversal of revenue would not occur in a future period for the estimates detailed below as of December 31, 2017 and, therefore, the transaction price was not reduced further during the year ended December 31, 2017. Actual amounts of consideration ultimately received may differ from the Company's estimates. If actual results in the future vary from the Company's estimates, the Company will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known.

Trade Discounts and Allowances:

The Company generally provides Customers with discounts which include incentive fees that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. The reserve for discounts is established in the same period that the related revenue is recognized, as well as reductions to trade receivables, net on the consolidated balance sheets. In addition, the Company compensates its Customers for sales order management, data, and distribution services. However, the Company has determined such services received to date are not distinct from the Company's sale of products to the Customer and, therefore, these payments have been recorded as a reduction of revenue within the statement of operations and comprehensive loss through December 31, 2017.

Product Returns:

Consistent with industry practice, the Company offers the SPs and SDs limited product return rights for damaged and expiring product, provided it is within a specified period around the product expiration date as set forth in the applicable individual distribution agreement. The Company estimates the amount of its product sales that may be returned by its Customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized, as well a reduction to trade receivables, net on the consolidated balance sheets. The Company currently estimates product returns using available industry data and its own sales information, including its visibility into the inventory remaining in the distribution channel. The Company has an insignificant amount of returns to date and believes that returns of its products will continue to be minimal.

Provider Chargebacks and Discounts:

Chargebacks for fees and discounts to providers represent the estimated obligations resulting from contractual commitments to sell products to qualified healthcare providers at prices lower than the list prices charged to Customers who directly purchase the product from the Company. Customers charge the Company for the difference between what they pay for the product and the ultimate selling price to the qualified healthcare providers. The reserve for chargebacks is established in the same period that the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability. Chargeback amounts are generally determined at the time of resale to the qualified healthcare provider by Customers, and the Company generally issues payments for such amounts within a few weeks of the Customer's notification to the Company of the resale. Reserves for chargebacks consist of payments that the Company expects to issue for units that remain in the distribution channel at each reporting period-end that the Company expects will be sold to qualified healthcare providers, and chargebacks that Customers have claimed, but for which the Company has not yet issued a payment.

Government Rebates:

The Company is subject to discount obligations under state Medicaid programs and Medicare. These reserves are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability which is included in accrued expenses and other current liabilities on the consolidated balance sheets. For Medicare, the Company also estimates the number of patients in the prescription drug coverage gap for whom the Company will owe an additional liability under the Medicare Part D program. The Company's liability for these rebates consists of invoices received for claims from prior quarters that have not been paid or for which an invoice has not yet been received, estimates of claims for the current quarter, and estimated future claims that will be made for product that has been recognized as revenue, but which remains in the distribution channel at the end of each reporting period.

Payor Rebates:

The Company contracts with certain private payor organizations, primarily insurance companies and pharmacy benefit managers, for the payment of rebates with respect to utilization of its products. The Company estimates these rebates and records such estimates in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability.

Other Incentives:

Other incentives which the Company offers include voluntary patient assistance programs, such as the co-pay assistance program, which are intended to provide financial assistance to qualified commercially-insured patients with prescription drug co-payments required by payors. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the cost per claim that the Company expects to receive associated with product that has been recognized as revenue, but remains in the distribution channel at the end of each reporting period. The adjustments are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability which is included as a component of accrued expenses and other current liabilities on the consolidated balance sheets.

Assets Measured at Fair Value on a Recurring Basis:

Accounting Standards Codification, or "ASC", 820, *Fair Value Measurement* , or ASC 820, provides a single definition of fair value and a common framework for measuring fair value as well as disclosure requirements for fair value measurements used in financial statements. Under ASC 820, fair value is determined based upon the exit price that would be received by a company to sell an asset or paid by a company to transfer a liability in an orderly transaction between market participants, exclusive of any transaction costs. Fair value measurements are determined by either the principal market or the most advantageous market. The principal market is the market with the greatest level of activity and volume for the asset or liability. Absent a principal market to measure fair value, the Company uses the most advantageous market, which is the market from which the Company would receive the highest selling price for the asset or pay the lowest price to settle the liability, after considering transaction costs. However, when using the most advantageous market, transaction costs are only considered to determine which market is the most advantageous and these costs are then excluded when applying a fair value measurement. ASC 820 creates a three-level hierarchy to prioritize the inputs used in the valuation techniques to derive fair values. The basis for fair value measurements for each level within the hierarchy is described below, with Level 1 having the highest priority and Level 3 having the lowest.

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.

Level 3: Valuations derived from valuation techniques in which one or more significant inputs are unobservable.

Following are the major categories of assets measured at fair value on a recurring basis as of December 31, 2017 and 2016, using quoted prices in active markets for identical assets (Level 1), significant other observable inputs (Level 2), and significant unobservable inputs (Level 3) (in thousands):

December 31, 2017	Level 1	Level 2	Level 3	Total
Cash equivalents	$ 81,698	$ —	$ —	$ 81,698
	$ 81,698	$ —	$ —	$ 81,698

December 31, 2016	Level 1	Level 2	Level 3	Total
Cash equivalents	$ 188,543	$ —	$ —	$ 188,543
Commercial paper	—	5,998	—	5,998
Marketable securities - corporate bonds	—	28,984	—	28,984
	$ 188,543	$ 34,982	$ —	$ 223,525

The Company's investments in commercial paper, corporate bonds and U.S. government securities are exposed to price fluctuations. The fair value measurements for commercial paper, corporate bonds and U.S. government securities are based upon the quoted prices of similar items in active markets multiplied by the number of securities owned.

The following tables summarize the Company's short-term investments (in thousands):

December 31, 2017	Maturity (in years)	Amortized cost	Unrealized Gains	Unrealized Losses	Estimated fair value
Cash equivalents		$ 81,698	$ —	$ —	$ 81,698
		$ 81,698	$ —	$ —	$ 81,698

December 31, 2016	Maturity (in years)	Amortized cost	Unrealized Gains	Unrealized Losses	Estimated fair value
Cash equivalents		$ 188,543	$ —	$ —	$ 188,543
Commercial paper	Less than 1	5,998	—	—	5,998
Marketable securities - corporate bonds	Less than 1	28,997	—	(13)	28,984
		$ 223,538	$ —	$ (13)	$ 223,525

Concentration of Risk:

Financial instruments, which potentially subject the Company to concentrations of credit risk, principally consist of cash and cash equivalents and accounts receivable. The Company's cash and cash equivalents in excess of the Federal Deposit Insurance Corporation and the Securities Investor Protection Corporation insured limits at December 31, 2017, were approximately $86.7 million. The Company does not believe it is exposed to any significant credit risk due to the quality nature of the financial instruments in which the money is held. Pursuant to the Company's internal investment policy, investments must be rated A-1/P-1 or better by Standard and Poor's Rating Service and Moody's Investors Service at the time of purchase.

The Company sells its products in the United States primarily through SPs and SDs. Therefore, wholesale distributors and large pharmacy chains account for a large portion of its trade receivables and net product revenues. The creditworthiness of its customers is continuously monitored, and the Company has internal policies regarding customer credit limits. The Company estimates an allowance for doubtful accounts primarily based on the credit worthiness of our customers, historical payment patterns, aging of receivable balances and general economic conditions.

The Company's success depends on the ability to successfully commercialize NERLYNX. The Company currently has a single product with limited commercial sales experience, which makes it difficult to evaluate the current business, predict the future prospects and forecast financial performance and growth. The Company has invested a significant portion of its efforts and financial resources in the development and commercialization of the lead product, NERLYNX, which was approved by the FDA for the extended adjuvant treatment of early stage, HER2-positive breast cancer in the United States on July 17, 2017, and expect NERLYNX to constitute the vast majority of product revenue for the foreseeable future. The Company's success depends on its ability to effectively commercialize.

The Company relies exclusively on third parties to formulate and manu facture NERLYNX and its drug candidates. The commercialization of NERLYNX and any other drug candidates, if approved, could be stopped, delayed or made less profitable if those third parties fail to provide sufficient quantities of product or fail to do so at acceptable quality levels or prices . The Company has no experience in drug formulation or manufacturing and does not intend to establish its own manufacturing facilities. The Company lacks the resources and expertise to formulate or manufacture NERLYNX and other drug candidates. While the drug candidates were being developed by Pfizer, both the drug substance and drug product were manufactured by third-party contractors. The Company is using the same third-party contractors to manufacture, supply, store and distribute drug supplies for clinical trials and the commercialization of NERLYNX. If the Company is unable to continue its relationships with one or more of these third-party contractors, it could experience delays in the development or commercializa tion efforts as it locates and qualifies new manufacturers. The Company intends to rely on one or more third-party contractors to manufacture the commercial supply of drugs.

Research and Development Expenses:

Research and development expenses, or R&D, are charged to operations as incurred. The major components of research and development costs include clinical manufacturing costs, clinical trial expenses, consulting and other third-party costs, salaries and employee benefits, stock-based compensation expense, supplies and materials, and allocations of various overhead costs. Clinical trial expenses include, but are not limited to, investigator fees, site costs, comparator drug costs, and clinical research organization, or CRO, costs. In the normal course of business, the Company contracts with third parties to perform various clinical trial activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation and variations from contract to contract and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful enrollment of patients and the completion of portions of the clinical trial or similar conditions. The Company’s accruals for clinical trials are based on estimates of the services received and efforts expended pursuant to contracts with numerous clinical trial sites, cooperative groups and CROs. The objective of the Company’s accrual policy is to match the recording of expenses in the Consolidated Financial Statements to the actual services received and efforts expended. As actual costs become known, the Company adjusts its accruals in that period.

In instances where the Company enters into agreements with third parties for clinical trials and other consulting activities, upfront amounts are recorded to prepaid expenses and other in the accompanying Consolidated Balance Sheets and expensed as services are performed or as the underlying goods are delivered. If the Company does not expect the services to be rendered or goods to be delivered, any remaining capitalized amounts for non-refundable upfront payments are charged to expense immediately. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments and payments upon the completion of milestones or receipt of deliverables.

Costs related to the acquisition of technology rights and patents for which development work is still in process are charged to operations as incurred and considered a component of research and development costs.

Stock-Based Compensation:

Stock option awards:

ASC 718, *Compensation-Stock Compensation* , or ASC 718, requires the fair value of all share-based payments to employees, including grants of stock options, to be recognized in the statement of operations over the requisite service period. Under ASC 718, employee option grants are generally valued at the grant date and those valuations do not change once they have been established. The fair value of each option award is estimated on the grant date using the Black-Scholes Option Pricing Method. As allowed by ASC 718 for companies with a short period of publicly traded stock history, the Company’s estimate of expected volatility is based on the average expected volatilities of a sampling of six companies with similar attributes to the Company, including industry, stage of life cycle, size and financial leverage. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant valuation. Option forfeitures are calculated when the option is granted to reduce the option expense to be recognized over the life of the award and updated upon receipt of further information as to the amount of options expected to be forfeited. The option expense is “trued-up” upon the actual forfeiture of a stock option grant. Due to its limited history, the Company uses the simplified method to determine the expected life of the option grants.

Warrants:

Warrants (refer to Note 8 for further details) granted to employees are normally valued at the fair value of the instrument on the grant date and are recognized in the statement of operations over the requisite service period. When the requisite service period precedes the grant date and a market condition exists in the warrant, the Company values the warrant using the Monte Carlo Simulation Method. When the terms of the warrant become fixed, the Company values the warrant using the Black-Scholes Option Pricing Method. As allowed by ASC 718 for companies with a short period of publicly traded stock history, the Company's estimate of expected volatility is based on the average volatilities of a sampling of eight to nine companies with similar attributes to the Company, including industry, stage of life cycle, size and financial leverage. The risk-free rate for periods within the contractual life of the warrant is based on the U.S. Treasury yield curve in effect at the time of grant valuation. In determining the value of the warrant until the terms are fixed, the Company factors in the probability of the market condition occurring and several possible scenarios. When the requisite service period precedes the grant date and is deemed to be complete, the Company records the fair value of the warrant at the time of issuance as an equity stock-based compensation transaction. The grant date is determined when all pertinent information, such as exercise price and quantity are known.

Restricted stock units:

The restricted stock units, or RSUs, are valued on the grant date and the fair value of the RSUs is equal to the market price of the Company's common stock on the grant date. The RSU expense is recognized over the requisite service period. When the requisite service period begins prior to the grant date (because the service inception date occurs prior to the grant date), the Company is required to begin recognizing compensation cost before there is a measurement date (i.e., the grant date). The service inception date is the beginning of the requisite service period. If the service inception date precedes the grant date, accrual of compensation cost for periods before the grant date shall be based on the fair value of the award at the reporting date. In the period in which the grant date occurs, cumulative compensation cost shall be adjusted to reflect the cumulative effect of measuring compensation cost based on fair value at the grant date rather than the fair value previously used at the service inception date (or any subsequent reporting date).

Income Taxes:

The Company follows ASC 740, *Income Taxes* , or ASC 740 *,* which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Under this method, deferred tax assets and liabilities are based on the differences between the consolidated financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent management concludes it is more likely than not that the asset will not be realized. 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 standard addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the consolidated financial statements. Under ASC 740, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position should be measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. ASC 740 also provides guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. A s of December 31, 2017, the Company has established a reserve of 20% of its research and development ("R&D") credit carryover balance.

On December 22, 2017, H.R. 1/Public Law No. 115-97 known as the Tax Cuts and Jobs Act (the "Tax Act"), was signed into law. The effects of this new federal legislation are recognized upon enactment, which is the date a bill is signed into law. The Act includes numerous changes in existing tax law, including a permanent reduction in the federal corporate income tax rate from 35% (as the top corporate tax rate) to 21%. As a result of the Tax Act, the Company has revalued its net deferred tax assets as of December 31, 2017 to reflect the rate reduction.

Pursuant to the SEC Staff Accounting Bulletin ("SAB") No. 118, "Income Tax Accounting Implications of the Ta x Cuts and Jobs Act" ("SAB 118"), a company may select between one of three scenarios to determine a reasonable estimate arising from the Tax Act. Those scenarios are (i) a final estimate which effectively closes the measurement window; (ii) a reasonable e stimate leaving the measurement window open for future revisions; and (iii) no estimate as the law is still being analyzed. The Company was able to provide a reasonable estimate for the revaluation of deferred taxes by recording a net tax provision of $141 .1 million in the period ending December 31, 2017, which is offset by a full valuation allowance. Other impacts of the Act including, but not limited to, a limitation of the deduction for net operating losses, expensing of qualified property and additional limitations on the deductibility of executive compensation are not expected to have a material impact to the financial statement presentation or disclosures. The final impact of the Tax Act may be different from the provisional amounts reported due to cha nges in interpretations and assumptions of the current guidance available as well as the issuance of new regulatory guidance in the future. The Company anticipates the full financial impact will be determined at the time its 2017 U.S. corporate income tax return is filed in 2018.

Segment Reporting:

Management has determined that the Company operates in one business segment which is the development and commercialization of innovative products to enhance cancer care.

Net Loss per Common Share:

Basic net loss per common share is computed by dividing net loss applicable to common stockholders by the weighted average number of common shares outstanding during the periods presented as required by ASC 260, *Earnings per Share* . Diluted earnings per common share are the same as basic earnings per share because the assumed exercise of the Company's outstanding options are anti-dilutive. For the year ended December 31, 2017, potentially dilutive securities excluded from the calculations were 6,134,513 shares issuable upon exercise of options, 1,637,662 shares issuable upon the vesting of restricted stock units and 2,116,250 shares issuable upon exercise of a warrant. For the years ended December 31, 2016 and 2015, potentially dilutive securities excluded from the earnings per common share calculation were 9,325,381 and 7,668,007 shares, respectively, issuable upon exercise of options and warrants or issuable as performance awards.

Recently Issued Accounting Standards:

In May 2014, the Financial Accounting Standards Board ("FASB"), issued a new accounting standard that amends the guidance for the recognition of revenue from contracts with customers to transfer goods and services. The FASB has subsequently issued additional, clarifying standards to address issues arising from implementation of the new revenue recognition standard. The new revenue recognition standard and clarifying standards are effective for interim and annual periods beginning on January 1, 2018, but could have been adopted early beginning January 1, 2017. The Company has chosen to adopt this standard as of January 1, 2017 as it began to generate revenue, with no revenue recognized in prior years. The Company has also identified and implemented changes to its accounting policies, business processes, and internal controls to support the new accounting and disclosure requirements.

In January 2016, the FASB issued ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities* . ASU No. 2016-01 requires equity investments to be measured at fair value with changes in fair value recognized in net income; simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment; eliminates the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet; requires public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes; requires an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments; requires separate presentation of financial assets and financial liabilities by measurement category and form of financial assets on the balance sheet or the accompanying notes to the condensed consolidated financial statements and clarifies that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. ASU No. 2016-01 is effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company is currently evaluating the impact that ASU No. 2016-01 will have on its consolidated financial statements and related disclosures.

In February 2016, the FASB issued Accounting Standards Update, or ASU, No. 2016-02, *Leases* . The amendments in ASU 2016-02 will require organizations that lease assets, with lease terms of more than 12 months, to recognize on their balance sheet the assets and liabilities for the rights and obligations created by those leases. Consistent with current GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, unlike current GAAP which requires only capital leases to be recognized on the balance sheet, ASU No. 2016-

02 will require both types of leases to be recognized on the balance sheet. ASU 2016-02 will be effective for fiscal years beginning after December 15, 2018, including interim period s within those fiscal years. Early adoption is permitted. The Company is currently in the process of evaluating the impact of ASU 2016-02 on the Company's outstanding leases and expects that adoption will have an impact on the consolidated balance sheets r elated to recording right-of-use assets and corresponding lease liabilities.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting, which was intended to simplify various aspects of accounting for share-based payment transactions. The new guidance requires immediate recognition of all excess tax benefits and deficiencies in the income statement; requires classification of excess tax benefits as an operating activity as opposed to a financing activity in the statements of cash flows; requires the classification of cash paid by an employer when directly withholding shares for tax-withholding purposes be classified as a financing activity on the statements of cash flows; and allows the Company to make an accounting policy election to either estimate the number of awards expected to vest or account for forfeitures when they occur. The standard is effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual reporting periods. The Company applied an accounting policy election to estimate forfeitures and then true up actual forfeitures as they occur. Because this treatment was in line with the Company's current treatment of forfeitures, the impact was insignificant as of December 31, 2017. This adoption resulted in a one-time net increase to the net operating losses deferred tax asset and the corresponding valuation allowance of $184.1 million at the federal and state level, which is a primarily cumulative adjustment for the previously unrecognized windfall tax benefits related to previous vesting and exercises of stock-based awards. The Company applied this standard in the first quarter of 2017 using the modified retrospective transition method of adoption. Due to the full valuation allowance on the deferred tax assets, the adoption did not have any impact on the Company's consolidated financial statements on the adoption date. In addition, under the new standard, the Company will prospectively reflect the tax deficiencies and benefits as an operating activity, rather than as a financing activity under the previous standard, in the Company's Consolidated Statements of Cash Flows.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows* (*Topic 230*) *: Classification of Certain Cash Receipts and Cash Payments* (*a consensus of the Emerging Issues Task Force*), which addresses the diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. ASU 2016-15 will be effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact of adopting ASU 2016-15 on its consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows* (*Topic 230*): *Restricted Cash* that changes the presentation of restricted cash and cash equivalents on the statement of cash flows. Restricted cash and restricted cash equivalents will be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This amendment is effective for the Company in the fiscal year beginning after December 15, 2017, but early adoption is permissible. The Company is currently evaluating the effect that the adoption of ASU 2016-18 will have on its consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Inventory (Topic 330)* : *Simplifying the Measurement of Inventory* , which requires an entity to measure inventory at the lower of cost and net realizable value, and eliminates current GAAP options for measuring market value. ASU 2015-11 defines realizable value as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. ASU 2015-11 was adopted by the Company in fiscal year 2017, and interim periods therein without a material impact to the financial statements. The Company measures its inventory at the lower of cost and net realizable value.

Note 3—Prepaid Expenses and Other:

Prepaid expenses and other consisted of the following at December 31 (in thousands):

	December 31, 2017	December 31, 2016
Current:		
CRO services	$ 7,188	$ 3,471
Other clinical development	878	1,069
Insurance	1,306	1,159
Other	3,625	1,299
	12,997	6,998
Long-term:		
CRO services	860	5,077
Other clinical development	886	1,243
Insurance	26	40
Other	217	486
	1,989	6,846
Totals	$ 14,986	$ 13,844

Note 4—Property and Equipment:

Property and equipment consisted of the following at December 31 (in thousands):

Property and Equipment:	December 31, 2017	December 31, 2016
Leasehold improvements	$ 3,878	$ 3,878
Computer equipment	2,147	1,822
Telephone equipment	302	256
Furniture and fixtures	2,206	2,146
	8,533	8,102
Less: accumulated depreciation and amortization	(4,063)	(2,949)
Totals	$ 4,470	$ 5,153

Note 5—Intangible Assets:

Intangible assets consisted of the following at December 31 (in thousands):

	December 31, 2017	Estimated useful life
Acquired and in-licensed rights	$ 50,000	13 Years
Less: accumulated amortization	(1,645)	
Total intangible asset, net	$ 48,355	

Estimated future intangible amortization expense as of December 31, 2017 is as follows (in thousands):

2018	$ 3,947
2019	3,947
2020	3,947
2021	3,947
2022	3,947
Thereafter	28,620
Total	$ 48,355

Note 6—Accrued Expenses:

Accrued expenses consisted of the following at December 31 (in thousands):

	December 31, 2017	December 31, 2016
Accrued CRO services	$ 8,335	$ 6,609
Accrued other clinical development	3,438	7,015
Accrued legal fees	2,046	706
Accrued compensation	2,797	1,986
Accrued bonus	3,376	1,072
Accrued royalties	3,922	—
Other	6,734	38
Totals	$ 30,648	$ 17,426

Accrued CRO services represent the Company's estimate of such costs and will be adjusted in the period the actual costs become known. Accrued compensation includes estimated bonus and earned but unused vacation for full-time employees. When actual performance bonuses are paid out to employees, the bonus expense will be adjusted to reflect the actual expense for the year. Additionally, vacation is accrued at the rate the employee earns vacation and reduced as vacation is used by the employee and accrued royalties represent royalties incurred in connection with the Company's license agreement with the Licensor.

Note 7—Debt:

Long term debt consisted of the following at December 31, 2017 (in thousands):

	Twelve Months Ended	Maturity Date
Long term debt	$ 50,000	October 31, 2022
Less: deferred financing costs	(1,523)	
Total long term debt, net	$ 48,477	

On October 31, 2017 (the "Effective Date"), the Company entered into a loan and security agreement (the "credit facility") with Silicon Valley Bank, as administrative and collateral agent ("SVB"), and the lenders party thereto from time to time, including Oxford Finance LLC and SVB, pursuant to which the lenders agreed to make term loans available to the Company in an aggregate amount of $100 million, consisting of (i) an aggregate amount of $50 million available on the Effective Date and (ii) an aggregate amount of $50 million available to be drawn at the Company's option between March 31, 2018 and June 30, 2018, provided the Company has achieved a specified minimum revenue milestone and no event of default is occurring. Proceeds from the term loans may be used for working capital and general business purposes. The credit facility is secured by substantially all of the Company's personal property other than its intellectual property. We also pledged 65% of the issued and outstanding capital stock of its subsidiary, Puma Biotechnology Ltd. The credit facility limits its ability to grant any interest in its intellectual property to certain permitted licenses and permitted encumbrances set forth in the agreement.

The term loans under the credit facility bear interest at an annual rate equal to the greater of (i) 7.75% and (ii) the sum of (a) the "prime rate," as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. The Company is required to make monthly interest-only payments on each outstanding term loan commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month there after through December 1, 2019. Commencing on December 1, 2019, and continuing on the first calendar day of each calendar month thereafter, the Company is required to make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each lender, calculated pursuant to the credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan is due and payable in full on October 31, 2022. Upon repayment of the term loans, the Company is also required to make a final payment to the lenders equal to 7.5% of the original principal amount of term loans funded.

At the Company's option, it may prepay the outstanding principal balance of any term loan in whole but not in part, subject to a prepayment fee of 2.0% of any amount prepaid if the prepayment occurs through and including the first anniversary of the funding date of such term loan, or 1.0% of the amount prepaid if the prepayment occurs after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan.

The credit facility includes affirmative and negative covenants applicable to the Company, its current subsidiary and any subsidiaries it may create in the future. The affirmative covenants include, among others, covenants requiring the Company to maintain its corporate existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. The Company must also achieve product revenue, measured as of the last day of each fiscal quarter on a trailing three-month basis, that is (i) greater than or equal to 70% of its revenue target set forth in its board-approved projections for the 2017 fiscal year, (ii) greater than or equal to 50% of its revenue target set forth in its board-approved projections for the 2018 fiscal year, and (iii) greater than or equal to 50% of its revenue target set forth in its board-approved projections for the 2019 fiscal year. New minimum revenue levels will be established for each subsequent fiscal year by mutual agreement of the Company, SVB, as administrative agent, and the lenders. The negative covenants include, among others, restrictions on the Company's transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens, selling assets and suffering a change in control, in each case subject to certain exceptions.

The credit facility also includes events of default, the occurrence and continuation of which could cause interest to be charged at the rate that is otherwise applicable plus 5.0% and would provide SVB, as collateral agent, with the right to exercise remedies against us and the collateral securing the credit facility, including foreclosure against the property securing the credit facilities, including its cash. These events of default include, among other things, any failure by the Company to pay principal or interest due under the credit facility, a breach of certain covenants under the credit facility, the Company's insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than $500,000 and one or more judgments against the Company in an amount greater than $500,000 individually or in the aggregate.

Note 8—Stockholders' Equity:

Common Stock:

October 2016 Common Stock Offering. On October 19, 2016, the Company entered into an underwriting agreement in connection with the public offering, issuance and sale by the Company of 3,750,000 shares of the Company's common stock, par value $0.0001 per share, at a public offering price of $40.00 per share, less underwriting discounts and commissions. Under the terms of the underwriting agreement, the Company also granted the underwriters an option exercisable for 30 days to purchase up to an additional 562,500 shares of its common stock at the public offering prices, less underwriting discounts and commissions. On October 20, 2016, the underwriters exercised their option to purchase additional shares in full. The Company received net proceeds from the offering of approximately $161.9 million, after deducting underwriting discounts and commissions and estimated offering expenses.

The Company issued 557,080, 46,668, and 757,038 shares of common stock upon exercise of stock options during the years ended December 31, 2017, 2016 and 2015, respectively. The Company issued 211,761 shares of common stock upon vesting of restricted stock units during the year ended December 31, 2017.

Authorized Shares:

The Company had 110,000,000 shares of stock authorized for issuance, of which 100,000,000 were common stock, par value $0.0001 per share, and 10,000,000 were preferred stock, par value $0.0001 per share. On October 4, 2011, the Board of Directors of the Company and the stockholders owning 100% of the Company's issued and outstanding common stock approved an Amended and Restated Certificate of Incorporation, or the Amended Certificate, which eliminated the Company's entire authorized class of preferred stock and reduced the total number of shares of capital stock that the Company may issue from 110,000,000 shares to 100,000,000 shares, all of which are designated as common stock, par value $0.0001 per share. The Amended Certificate became effective on November 14, 2011, upon the filing of the Amended Certificate with the Secretary of State of the State of Delaware.

Warrants:

Following the October 2011 common stock offering, Alan Auerbach, the Company's founder and chief executive officer, held approximately 21% of the 18,666,733 outstanding shares of the Company's common stock. Pursuant to the terms of the securities purchase agreement, the Company issued an anti-dilutive warrant to Mr. Auerbach. The warrant was issued to provide Mr. Auerbach with the right to maintain ownership of at least 20% of the Company's common stock in the event that the Company raised capital through the sale of its securities in the future.

In connection with the closing of a public offering on October 24, 2012, the exercise price and number of shares underlying the warrant issued to Mr. Auerbach were established and, accordingly, the final value of the warrant became fixed. Pursuant to the terms of the warrant, Mr. Auerbach may exercise the warrant to acquire 2,116,250 shares of the Company's common stock at $16 per share until October 4, 2021.

Stock Options and Restricted Stock Units:

The Company's 2011 Incentive Award Plan, or the 2011 Plan, was adopted by the Board of Directors on September 15, 2011. Pursuant to the 2011 Plan, the Company may grant incentive stock options and nonqualified stock options, as well as other forms of equity-based compensation. Incentive stock options may be granted only to employees, while consultants, employees, officers and directors are eligible for the grant of nonqualified options under the 2011 Plan. The maximum term of stock options granted under the 2011 Plan is 10 years. The exercise price of incentive stock options granted under the 2011 Plan must be at least equal to the fair value of such shares on the date of grant. Through December 31, 2017, a total of 12,529,412 shares of the Company's common stock have been reserved for issuance under the 2011 Plan.

The Company awarded only "plain vanilla options" as determined by the SEC Staff Accounting Bulletin 107, or *Share Based Payment* . As of December 31, 2017, 7,538,925 shares of the Company's common stock are issuable upon the exercise of outstanding awards granted under the 2011 Plan and 2,643,121 shares of the Company's common stock are available for future issuance under the 2011 Plan. The fair value of options granted to employees was estimated using the Black-Scholes Option Pricing Method (see Note 2) with the following weighted-average assumptions used during the years ended December 31:

The Company's 2017 Employment Inducement Incentive Award Plan, or the 2017 Plan, was adopted by the board of directors on April 27, 2017. Pursuant to the 2017 Plan, the Company may grant stock options and restricted stock units, as well as other forms of equity-based compensation to employees, as an inducement to join the Company. The maximum term of stock options granted under the 2017 Plan is 10 years. The exercise price of stock options granted under the 2017 Plan must be at least equal to the fair market value of such shares on the date of grant. As of December 31, 2017, a total of 1,000,000 shares of the Company's common stock have been reserved for issuance under the 2017 Plan. As of December 31, 2017, 233,250 shares have been awarded under the 2017 Plan.

	2017	2016
Dividend yield	0.0%	0.0%
Expected volatility	70.2%	68.1%
Risk-free interest rate	2.0%	1.7%
Expected life in years	5.83	5.80

Employee stock-based compensation was as follows for the years ended December 31 (in thousands except per share data):

	Twelve Months Ended December 31,		
	2017	2016	2015
Stock-based compensation:			
Options -			
Research and development, or R&D	$ 67,299	$ 88,049	$ 76,995
Selling, general and administrative, or SG&A	23,024	25,043	17,166
Performance shares - R&D	—	(528)	773
Restricted stock units -			
Selling, general and administrative, or SG&A	8,170	1,580	—
Research and development, or R&D	10,242	3,120	—
Total stock-based compensation expense	$ 108,735	$ 117,264	$ 94,934

Activity with respect to options granted under the 2011 and 2017 Plan is summarized as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2014	3,978,126	$ 89.55	8.7	$ 431,635
Granted	2,606,183	$ 117.62	9.4	—
Forfeited	(277,140)	$ 177.98	—	—
Exercised	(757,038)	$ 36.19	—	$ 102,149
Expired	(7,846)	$ 105.42		
Outstanding at December 31, 2015	5,542,285	$ 105.59	8.6	$ 87,632
Granted	1,658,465	$ 42.34	9.3	
Forfeited	(446,544)	$ 122.50		
Exercised	(43,751)	$ 13.16		$ 1,360
Expired	(131,933)	$ 185.10		
Outstanding at December 31, 2016	6,578,522	$ 87.52	8.0	$ 18,442
Granted	519,791	$ 38.87	8.4	
Forfeited	(285,377)	$ 50.11		
Exercised	(557,080)	$ 48.71		$ 27,185
Expired	(121,343)	$ 125.40		
Outstanding at December 31, 2017	6,134,513	$ 87.91	7.2	$ 220,060
Nonvested at December 31, 2017	1,788,436	$ 55.52	8.6	$ 82,445
Exercisable at December 31, 2017	4,346,077	$ 101.24	6.6	$ 137,615

At December 31, 2017, total estimated unrecognized employee compensation cost related to non-vested stock options granted prior to that date was approximately $51.3 million, which is expecte d to be recognized over a weighted-average period of 1.3 years. At December 31, 2017, the total estimated unrecognized employee compensation cost related to non-vested restricted stock units was approximately $116.0 million, which is expected to be recogni zed over a weighted-average period of 2.6 years. The weighted-average grant date fair value of options granted during the years ended December 31, 2017, 2016 and 2015, was $24.30, $25.69 and $68.30 per share, respectively. The weighted average grant date fair value of restricted stock units awarded during the year ended December 31, 2017 was $94.93.

Stock options	Shares	Weighted Average Grant-Date Fair Value
Nonvested shares at December 31, 2015	3,572,202	$ 73.59
Granted	1,658,465	25.69
Vested/Issued	(1,678,040)	77.69
Forfeited	(446,544)	73.22
Nonvested shares at December 31, 2016	3,106,083	47.78
Granted	519,791	24.30
Vested/Issued	(1,552,061)	59.76
Forfeited	(285,377)	30.21
Nonvested shares at December 31, 2017	1,788,436	$ 33.37

Restricted stock units	Shares	Weighted Average Grant-Date Fair Value
Nonvested shares at December 31, 2015	-	$ -
Granted	640,644	54.35
Vested/Issued	(2,917)	54.35
Forfeited	(7,219)	54.35
Nonvested shares at December 31, 2016	630,508	54.35
Granted	1,277,081	94.93
Vested/Issued	(211,761)	55.17
Forfeited	(58,166)	63.02
Nonvested shares at December 31, 2017	1,637,662	$ 85.58

Note 9—401(k) Savings Plan:

During 2012, the Company adopted a 401(k) savings plan for the benefit of its employees. The Company is required to make matching contributions to the 401(k) plan equal to 100% of the first 3% of wages deferred by each participating employee and 50% on the next 2% of wages deferred by each participating employee. The Company incurred expenses for employer matching contributions of approximately $0.9 million, $1.0 million and $0.7 million for the years ended December 31, 2017, 2016 and 2015, respectively.

N ote 10—Income Taxes:

We did not have any provision for income taxes for the years ended December 31, 2017, 2016 and 2015.

Temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes give rise to the Company's deferred income taxes. The components of the Company's net deferred tax assets as of December 31, 2017 and 2016 are as follows (in thousands):

	2017	2016
Deferred tax assets—2017:		
Net operating loss carry forwards	$ 257,121	$ 209,308
Business credit carryforwards	29,695	21,256
Organization costs	180	177
Compensation	76,423	84,341
Deferred rent - leasehold improvement	680	1,194
Other	806	997
	364,905	317,273
Deferred tax liabilities	(758)	(1,269)
Total deferred tax assets	364,147	316,004
Valuation allowance	(364,147)	(316,004)
Net deferred tax assets	$ —	$ —

As the ultimate realization of the potential benefits of the Company's deferred tax assets is considered unlikely by management, the Company has offset the deferred tax assets attributable to those potential benefits through valuation allowances. Accordingly, the Company did not recognize any benefit from income taxes in the accompanying Consolidated Statements of Operations to offset its pre-tax losses. The valuation allowance increased $48.1 million and $106.2 million for the years ended December 31, 2017 and 2016, respectively. At December 31, 2017, the Company had federal and state net operating loss carryforwards respectively of approximately $923.0 million and $870.0 million , which will begin to expire in 2027 and 2030. At December 31, 2017, the Company also has federal research and development credit carryforwards of approximately $19.1 million. If not utilized, the carryforwards will begin expiring in 2032. The Company has state research and development credit carryforwards or approximately $13.2 million which do not expire. Pursuant to the Internal Revenue Code, Sections 382 and 383, use of the Company's net operating loss and credit carryforwards could be limited if a cumulative change in ownership of more than 50% occurs within a three-year period. The Company has not yet performed an assessment on the potential limitation on net operating loss and credit carryforwards.

The provision (credit) for income taxes in the accompanying Consolidated Statements of Operations differs from the amount calculated by applying the statutory income tax rate to income (loss) from continuing operations before income taxes. The primary components of such differences are as follows as of December 31 (in thousands):

	2017	2016	2015
Tax computed at the federal statutory rate	$ (99,234)	$ (93,839)	$ (81,356)
State taxes	(15,890)	(15,693)	(16,620)
Permanent items	(1,404)	6,152	4,225
R&D credits	(6,217)	(2,728)	(5,029)
Deferred tax asset adjustment	6,805	—	—
Other	(20)	(113)	(2,571)
Impact of federal statutory rate change related to the 2017 Tax Act	141,147	—	—
Change in valuation allowance	(25,187)	106,221	101,351
Total provision	$ —	$ —	$ —

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits at December 31:.

(in thousands)	2017	2016	2015
Unrecognized tax benefits—January 1	$ 5,315	$ 4,475	$ 2,482
Gross decreases—tax positions in prior period	—	—	—
Gross increases—tax positions in current period	1,836	840	1,993
Unrecognized tax benefits—December 31	$ 7,151	$ 5,315	$ 4,475

The unrecognized tax benefits that, if recognized, would affect the effective tax rate is $7.2 million at December 31, 2017. The Company does not have tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefit will significantly increase or decrease within 12 months of the reporting date.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by the federal and state jurisdictions where applicable. There are currently no pending income tax examinations. The Company's tax years for 2007 and forward are subject to examination by the federal and California tax authorities due to the carryforward of unutilized net operating losses and research and development credits.

Note 11—Commitments and Contingencies:

Office Leases:

On December 7, 2011, the Company, entered into a non-cancelable operating lease for office space in Los Angeles, California. The initial term of the lease is for seven years and commenced on December 10, 2011. The base rent was approximately $44,400 per month during the first year and will increase each year during the initial term, up to approximately $53,000 per month during the seventh year. The lease has an expiration date of December 9, 2018. In addition, the Company has an option to extend the lease for an additional five-year term. The lease is subject to additional charges for common area maintenance and other costs. Concurrent with the execution of the lease, the Company provided the landlord an automatically renewable stand-by letter of credit in the amount of $2,500,000. The stand-by letter of credit is collateralized by a high-yield savings account which is classified as restricted cash on the accompanying Consolidated Balance Sheets. Rent expense for the years ended December 31, 2017, 2016, and 2015, was approximately $3,879,929, $3,547,300 and $1,597,200, respectively.

On June 7, 2012, the Company entered into a long-term lease agreement for office space in South San Francisco, California. The initial term of the lease is seven years and commenced on November 1, 2012. The base rent was approximately $20,250 per month during the first year and will increase over the course of the initial term, up to approximately $30,820 per month during the seventh year. In addition, the Company has an option to extend the lease for an additional five-year term, which would commence upon the expiration of the initial term. In the event the Company elects to extend the lease, the minimum monthly rent payable for the additional term will be the then-current fair market rent calculated in accordance with the terms of the lease. The Company provided the landlord an automatically renewable stand-by letter of credit in the amount of $1,591,400. The stand-by letter of credit is collateralized by a high-yield savings account which is classified as restricted cash on the accompanying Consolidated Balance Sheets.

On November 28, 2012, the Company entered into an amendment to the lease for its office space in Los Angeles, California. This amendment added approximately 3,500 rentable square feet to the existing lease of approximately 13,250 square feet. Pursuant to the amendment, the Company's monthly rent increased by approximately $12,145 per month following the execution of the amendment and will be increased to approximately $14,080 per month at the end of the lease term.

On December 1, 2013, the Company entered into a second amendment to the lease for its office space in Los Angeles, California. This amendment added approximately 5,949 rentable square feet to the existing lease of approximately 16,750 square feet. Pursuant to the amendment, the Company's monthly rent increased by approximately $10,400 per month following the execution of the amendment and will be increased to approximately $25,100 per month at the end of the lease term.

On March 18, 2014, the Company entered into a third amendment to the lease of its office space in Los Angeles, California. This amendment added approximately 2,908 rentable square feet to the existing lease of approximately 22,775 square feet. Pursuant to the amendment, the Company's monthly rent expense increased by approximately $11,487 per month following the execution of the amendment and will be increased to approximately $12,928 per month at the end of the lease term.

On May 19, 2014, the Company entered into a first amendment to the lease of its office space in South San Francisco, California. This amendment added approximately 7,152 rentable square feet to the existing lease of approximately 9,560 square feet. Pursuant to the amendme nt, the Company's monthly rent expense increased by approximately $22,886 per month following the execution of the amendment and will be increased to approximately $27,328 per month during the last year of the lease term.

In July 2015, the Company amended its lease to expand the rented square feet in its Los Angeles office by approximately 26,000 square feet. The lease commenced April 1, 2016, and increased the monthly rent in the Los Angeles location by approximately $150,000 per month with annual increases of approximately 3% per year for the 10-year lease term. The amendment also extended the term of the lease until March 2026.

In addition, in July 2015, the Company amended its office lease with to expand the rented square feet in its South San Francisco location by approximately 13,000 square feet. The lease commenced April 1, 2016, and increased the monthly rent in the South San Francisco location by approximately $51,400 with annual increases of approximately 3% per year for the 10-year lease term. The amendment also extended the term of the lease until March 2026.

In addition, in October 2017, the Company amended its office lease to expand the rented square feet in its Los Angeles location by approximately 14,000 square feet. The lease commences May 1, 2018, and increases the monthly rent in the Los Angeles location by approximately $71,000 with annual increases of approximately 3.5% per year for the 9-year lease term. The amendment also extended the term of the lease until March 2026. The Company also plans to sublease a portion of its existing Los Angeles office space in early 2018.

Future minimum lease payments for each of the years subsequent to December 31, 2017, are as follows (in thousands):

Year Ending December 31,	Amount
2018	$ 4,472
2019	4,859
2020	5,141
2021	5,300
Thereafter	24,090
Total	$ 43,862

License Agreement:

In August 2011, the Company entered into an agreement pursuant to which Pfizer, Inc., or the Licensor, agreed to grant it a worldwide license for the development, manufacture and commercialization of PB272 neratinib (oral), PB272 neratinib (intravenous) and PB357, and certain related compounds. The license is exclusive with respect to certain patent rights owned by or licensed to the Licensor. Under the agreement, the Company is obligated to commence a new clinical trial for a product containing one of these compounds within a specified period of time and to use commercially reasonable efforts to complete clinical trials and to achieve certain milestones as provided in a development plan. From the closing date of the agreement through December 31, 2011, the Licensor continued to conduct the existing clinical trials on behalf of the Company at the Licensor's sole expense. At the Company's request, the Licensor has agreed to continue to perform certain services in support of the existing clinical trials at the Company's expense. These services will continue through the completion of the transitioned clinical trials. The license agreement "capped" the out of pocket expense the Company would be responsible for completing the then existing clinical trials. All agreed upon costs incurred by the Company above the "cost cap" would be reimbursed by the Licensor. The Company exceeded the "cost cap" during the fourth quarter of 2012. In accordance with the license agreement, the Company billed the Licensor for agreed upon costs above the "cost cap" until December 31, 2013.

On July 18, 2014, the Company entered into an amendment to the license agreement with the Licensor. The amendment amends the License Agreement to (1) reduce the royalty rate payable by the Company to the Licensor on sales of licensed products; (2) release the Licensor from its obligation to pay for certain out-of-pocket costs incurred or accrued on or after January 1, 2014 to complete certain ongoing clinical studies; and (3) provide that the Licensor and the Company will continue to cooperate to effect the transfer to the Company of certain records, regulatory filings, materials and inventory controlled by Licensor as promptly as reasonably practicable.

As consideration for the license, the Company is required to make substantial payments upon the achievement of certain milestones totaling approximately $187.5 million if all such milestones are achieved. In connection with the FDA approval of NERLYNX in July of 2017, the Company triggered a one-time milestone payment pursuant to the agreement. Should the Company commercialize any more of the compounds licensed from the Licensor or any products containing any of these compounds, the

Company will be obligated to pay to the Licensor annual royalties at a fixed rate in the low-to-mid teens of net sales of all such products, subject to certain reductions and offse ts in some circumstances. The Company's royalty obligation continues, on a product-by-product and country-by-country basis, until the later of (1) the last to expire licensed patent covering the applicable licensed product in such country, or (2) the earli er of generic competition for such licensed product reaching a certain level in such country or expiration of a certain time period after first commercial sale of such licensed product in such country. In the event that the Company sublicenses the rights g ranted to the Company under the license agreement with the Licensor to a third party, the same milestone and royalty payments are required. The Company can terminate the license agreement at will at any time after April 4, 2013, or for safety concerns, in each case upon specified advance notice.

Clinical Trial Contracts:

The Company engages with clinical research organizations and contract manufacturing organizations, or CMOs, in addition to engaging in contracts for the management of its ongoing clinical trials and pre-commercialization efforts. The Company may cancel these agreements with a 30 to 45 day written notice to the outside vendor. The Company would be obligated to pay for services rendered up to that point. The contracts also contain variable costs that are hard to predict as they are based on such things as patients enrolled and clinical trial sites, which can vary and therefore, are not included in the table below. The contracts held by the Company as of December 31, 2017, are summarized as follows (in thousands):

Indication	Estimated Contractual Obligation as of December 31, 2017	Months Remaining on Contract
HER2 Overexpressed/Amplified Breast Cancer (Extension)	$ 20,323	24
HER2 Overexpressed/Amplified Breast Cancer (Licensor Legacy Clinical Trials)	1,137	12
HER2 Mutated Non-Small Cell Lung Cancer	185	12
HER2 Mutated Breast Cancer and HER2 Mutated Breast Cancer with Brain Mets	5,478	23
Metastatic & Adjuvant Breast Cancer	34,982	32
Neoadjuvant Breast Cancer	3,636	12
Preclinical Research	20,150	40
HER2 Mutated Solid Tumors	10,359	24
Other	20,736	24
Total	$ 116,986	

Included in the above are payments to be made when milestones are reached. As of December 31, 2017, Company obligations for potential milestone payments totaled approximately $22.2 million. This amount will be paid by the Company if all milestones are reached and would reduce the overall contractual obligation if one or more milestone is never reached.

Legal Proceedings

The Company and certain of our executive officers were named as defendants in the lawsuits detailed below. Due to the stage of these proceedings, the Company cannot reasonably predict the outcome, nor can it estimate the amount of loss or range of loss, if any, that may result. The Company records a liability in the consolidated financial statements for loss contingencies when a loss is known or considered probable and the amount can be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a loss is reasonably possible but not known or probable, and can be reasonably estimated, the estimated loss or range of loss is disclosed. When determining the estimated loss or range of loss, significant judgment is required to estimate the amount and timing of a loss to be recorded. An adverse outcome in these proceedings would likely not have a material adverse effect on the Company's results of operations, cash flows or financial condition.

Hsu vs. Puma Biotechnology, Inc., et. al.

On June 3, 2015, Hsingching Hsu or the "plaintiff," individually and on behalf of all others similarly situated, filed a class action lawsuit against the Company and certain of the Company's executive officers in the United States District Court for the Central District of California (Case No. 8:15-cv-00865-AG-JCG). On October 16, 2015, lead plaintiff Norfolk Pension Fund filed a consolidated complaint on behalf of all persons who purchased the Company's securities between July 22, 2014 and May 29, 2015. The consolidated complaint alleges that the Company and certain of its executive officers made false or misleading statements and

failed to disclose material adverse facts about its business, operations, prospects and performance in violation of Sections 10(b) (and Rule 10b-5 promulgated thereund er) and 20(a) of the Exchange Act. The plaintiff seeks damages, interest, costs, attorneys' fees, and other unspecified equitable relief. On September 30, 2016, the court denied the defendants' motion to dismiss the consolidated complaint. On June 6, 201 7, the lead plaintiff filed a first amended complaint that included new claims about additional statements that plaintiff alleges are false or misleading. On June 19, 2017, the defendants moved to dismiss the new claims in the amended complaint. On July 25, 2017, the court denied the motion to dismiss. A trial date is currently set for November 6, 2018. The Company intends to vigorously defend against this matter.

Eshelman vs. Puma Biotechnology, Inc., et. al.

On February 2, 2016, Fredric N. Eshelman filed a lawsuit against the Company's Chief Executive Officer and President, Alan H. Auerbach, and the Company in the United States District Court for the Eastern District of North Carolina (Case No. 7:16-cv-00018-D). The complaint generally alleges that Mr. Auerbach and the Company made defamatory statements regarding Dr. Eshelman in connection with a proxy contest. Dr. Eshelman seeks compensatory and punitive damages and expenses and costs, including attorneys' fees. On April 4, 2016, the Company filed a motion to dismiss the complaint. On May 2, 2016, Dr. Eshelman filed a notice of voluntary dismissal of the claims against Mr. Auerbach. On February 6, 2017, the court denied the Company's motion to dismiss. Discovery ended in September 2017. The Company intends to vigorously defend against Dr. Eshelman's claims.

Derivative Actions

On April 12 and April 14, 2016, alleged shareholders filed two derivative lawsuits purportedly on behalf of the Company against certain of the Company's officers and directors in the Superior Court of the State of California, Los Angeles, captioned Xing Xie v. Alan H. Auerbach, No. BC616617, and Kevin McKenney v. Auerbach, No. BC617059. The complaints assert claims for breach of fiduciary duty, unjust enrichment, abuse of control, mismanagement and waste of corporate assets arising from substantially similar allegations as those contained in the securities class action described above. The complaints seek an unspecified sum of damages and equitable relief. The Company intends to vigorously defend against this matter.

Separately, on February 9, 2018, another alleged shareholder filed a derivative lawsuit purportedly on behalf of the Company against certain of its officers and directors in the United States District Court, Central District of California, captioned Arnaud Van Der Gracht De Rommerswael vs. Alan H. Auerbach, et al., No. 8:18-cv-00236. The complaint asserts claims for violation of securities law, breach of fiduciary duty, waste of corporate assets, and unjust enrichment arising from substantially similar allegations as those contained in the securities class action described above. The complaint seeks an unspecified sum of damages, corporate reforms, equitable relief, and restitution. The Company intends to vigorously defend against this matter.

Stockholder Demand

On September 13, 2017, a purported stockholder filed a complaint in the Court of Chancery of the State of Delaware seeking an equitable apportionment of attorneys' fees in an unspecified amount. The purported stockholder alleges that his actions caused Company's board of directors to implement certain governance reforms and enhancements to its director compensation program, and that, as a result of his actions, the purported stockholder is entitled to attorneys' fees in an amount commensurate to those purported benefits. The Company filed an answer to the complaint on October 20, 2017. The Company intends to vigorously defend against this matter.

The pending proceedings described in this section involve complex questions of fact and law and will require the expenditure of significant funds and the diversion of other resources to defend. The results of legal proceedings are inherently uncertain, and material adverse outcomes are possible.

Note 12—Qua rterly Financial Data:

Quarterly financial data (in thousands except share and per share data):
(unaudited)

	Three Months Ended			
	March 31,	June 30,	September 30,	December 31,
2017				
Revenues	$ —	$ —	$ 6,077	$ 21,608
Net loss	72,865	77,832	77,180	64,078
Net loss attributable to common stock	72,865	77,832	77,180	64,078
Net loss per share—basic and diluted	$ 1.97	$ 2.10	$ 2.07	$ 1.71
Weighted-average common shares outstanding—basic and diluted	36,931,167	36,992,017	37,214,002	37,534,410
2016				
Revenues	$ —	$ —	$ —	$ —
Net loss	(70,972)	(66,597)	(65,781)	(72,661)
Net loss attributable to common stock	(70,972)	(66,597)	(65,781)	(72,661)
Net loss per share—basic and diluted	$ (2.19)	$ (2.05)	$ (2.02)	$ (2.04)
Weighted-average common shares outstanding—basic and diluted	32,478,408	32,493,092	32,497,168	35,694,193
2015				
Revenues	$ —	$ —	$ —	$ —
Net loss	(52,454)	(64,694)	(60,417)	(61,719)
Net loss attributable to common stock	(52,454)	(64,694)	(60,417)	(61,719)
Net loss per share—basic and diluted	$ (1.66)	$ (2.01)	$ (1.87)	$ (1.90)
Weighted-average common shares outstanding—basic and diluted	31,588,315	32,158,108	32,303,203	32,444,270

Note 13—Subsequent Events:

On January 30, 2018, the Company entered into an agreement with CANbridge Life Sciences, a biopharmaceutical company focused on developing Western drug candidates in China and North Asia, have entered into an exclusive agreement under which CANbridge will develop and commercialize NERLYNX in mainland China, Taiwan, Hong Kong, and Macau (the "Territory"). CANbridge will be responsible for seeking the requisite regulatory approval and, once approved, for commercializing NERLYNX in the Territory. Pursuant to the terms of the agreement, the Company is entitled to receive an upfront payment of $30 million and potential milestone payments totaling up to $40 million upon achievement of certain regulatory milestones and sales-based milestone payments totaling up to $185 million. In addition, the Company is entitled to receive significant double-digit royalties calculated as a percentage of net sales of NERLYNX in the Territory.

CONFIDENTIAL

LICENSE AGREEMENT

BETWEEN

PUMA Biotechnology, Inc.

AND

SPECIALISED THERAPEUTICS ASIA PTE LTD (Singapore)

LICENSE AGREEMENT

This License Agreement (this " **Agreement** ") is made and entered into effective as of November 20, 2017 (the " **Effective Date** ") by and between **PUMA Biotechnology, Inc.** , a company incorporated in Delaware, United States of America, with its principal place of business at 10880 Wilshire Blvd., Suite 2150, Los Angeles, CA 90024 (" **PUMA** "), as licensor, and **Specialised Therapeutics Asia Pte Ltd.** , a proprietary limited company incorporated under the laws of the Republic of Singapore, with its principal place of business at 50 Raffles Place, #32-01, Singapore Land Tower, Singapore, 048623 (" **STA** "), as licensee. PUMA and STA are sometimes referred to herein individually as a " **Party** " and collectively as the " **Parties** ".

RECITALS

A. WHEREAS, PUMA has entered into a License Agreement with Pfizer, Inc. (" **Pfizer** ") dated August 18, 2011, as amended (the " **Pfizer License Agreement** "), pursuant to which PUMA received an exclusive, worldwide license, with the right to grant sublicenses, to develop and commercialize neratinib;

B. WHEREAS, PUMA has obtained regulatory approval of neratinib in the United States; and

C. WHEREAS, PUMA is entitled to, and wishes to grant to STA, and STA wishes to take, a license under intellectual property rights controlled by PUMA to commercialize neratinib in certain countries, in accordance with the terms and conditions set forth below;

NOW, THEREFORE, in consideration of the premises and the mutual promises and conditions hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, do hereby agree as follows:

ARTICLE 1
DEFI NITIONS

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

1.1 " **Additional Indications** " means the treatment of HER2+ metastatic breast cancer.

1.2 " **Affiliate** " means, with respect to a Party, any Person that, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such Party. For purposes of this definition, "control" and, with correlative meanings, the terms "controlled by" and "under common control with" means (a) the possession, directly or indirectly, of the power to

direct the management or policies of a business entity, whether through the ownership of voting securities, by contract relating to voting rights or corporate governance, or otherwise, o r (b) the ownership, directly or indirectly, of 50% or more of the voting securities or other ownership interest of a business entity (or, with respect to a limited partnership or other similar entity, its controlling entity).

1.3 " **Agreement** " has the meaning set forth in the preamble hereto.

1.4 " **Alliance Manager** " has the meaning set forth in Section 3.3.

1.5 " **Applicable Law** " means applicable laws, rules and regulations, including any rules, regulations, guidelines or other requirements of the Regulatory Authorities that may be in effect from time to time.

1.6 " **ARTG** " shall mean the Australian Register of Therapeutic Goods and any successor governmental authority having substantially the same function.

1.7 " **Business Day** " means a day other than a Saturday or Sunday on which banking institutions in Singapore or New York, USA are not closed.

1.8 " **Calendar Quarter** " means each successive period of three calendar months commencin g on January 1, April 1, July 1 and October 1.

1.9 " **Clinical Data** " means all data, reports and results with respect to the Licensed Product.

1.10 " **Clinical Studies** " means human clinical trials for the Licensed Product and any other tests and studies for the License d Product in human subjects.

1.11 " **Commercialization** " means any and all activities (whether before or after Regulatory Approval) directed to the marketing, promotion and sale of the Licensed Product in the Field in the Territory after all the Regulatory Approvals for commercial sale in the Territory have been obtained. When used as a verb, " **Commercializing** " means to engage in Commercialization and " **Commercialize** " and " **Commercialized** " shall have corresponding meanings.

1.12 " **Commercially Reasonable Efforts** " means the level of efforts and resources comparable to the efforts and resources commonly used by companies in the Territory with resources and expertise similar to those of STA (including its Affiliates) for compounds or products of similar market potential as the Licensed Product and at a similar stage in development or product life as the Licensed Product, taking into consideration market exclusivity, profitability, market potential, potential competition and intellectual property protection. "Commercially Reasonable Efforts" shall be determined on a product-by-product and an indication-by-indication basis.

1.13 " **Competing Product** " means any pharmaceutical product for use in any Indications in the Field in the Territory.

1.14 **"Compound** " means the compound known as "neratinib", which has the chemical structure described in **Exhibit B** attached hereto.

1.15 " **Confidential Information** " has the meaning set forth in Section 9.1.

1.16 " **Controlled** " means, with respect to any Information and Invention, Regulatory Documentation, Patent or other intellectual property right, that a Party or one or more of its Affiliates owns or has a license to such Information and Invention, Regulatory D ocumentation, Patent or intellectual property right and has the ability to grant to the other Party access, a license or a sublicense (as applicable) thereto as provided for herein without violating the terms of any agreement or other arrangements with any Third Party existing at the time such Party would be first required hereunder to grant the other Party such access, license or sublicense. " **Control** " and shall have a corresponding meaning.

1.17 " **CTD** " means Common Technical Document, which reflects harmonized structure and format for presenting Chemistry, Manufacturing and Controls information in a registration dossier for pharmaceutical products.

1.18 " **Disclosing Party** " has the meaning set forth in Section 9.1.

1.19 " **DMF** " shall mean a Drug Master File maintained with the FDA or its equivalent maintained with any Regulatory Authority.

1.20 " **Dollars** " or " **$** " means United States Dollars.

1.21 " **Drug Approval Application** " means (i) a New Drug Application (an " **NDA** ") as defined in the US Food, Drug and Cosmetic Act and the regulations promulgated thereunder (including all additions, supplements, extensions and modifications thereto); (ii) a Marketing Authorization Application (an " **MAA** ") filed with the European Medicines Agency (" **EMA** ") pursuant to the centralized approval procedure or with the applicable Regulatory Authority of a country in Europe with respect to the mutual recognition or any other national approval procedure; and (iii) any corresponding substantially equivalent application in the Territory.

1.22 " **Effective Date** " has the meaning set forth in the preamble hereto.

1.23 " **EMA** " has the meaning set forth in the definition of "Drug Approval Application".

1.24 " **FDA** " means the United States Food and Drug Administration and any successor agency thereto.

1.25 " **Field** " means the Indications.

1.26 " **First Commercial Sale** " means, with respect to the Licensed Product in the Territory, the first commercial sale in the Territory for monetary value for use or consumption by the general public of the Licensed Product in the Territory in the Field after all the Regulatory Approvals from the relevant Regulatory Authorities have been obtained for the Licensed Product in the Territory, including the approval of the Drug Approval Application and the pricing and reimbursement approval by the relevant Regulatory Authority. Sales prior to the approval of the applicable Drug Approval Application, such as so-called "treatment IND sales", "named patient sales" and "compassionate use sales", shall not constitute a First Commercial Sale.

1.27 " **GAAP** " means the generally accepted accounting principles in the United States, consistently applied.

1.28 " **IND** " means an application for Clinical Trial Notification filed with the ARTG or an invest igational new drug application filed with the FDA, the EMA or other Regulatory Authorities for authorization to commence Clinical Studies in the applicable jurisdiction (including all additions, supplements, extensions and modifications thereto).

1.29 " **Indemnified Party** " has the meaning set forth in Section 11.3.

1.30 " **Indemnifying Party** " means the Party from whom indemnification is sought pursuant to Section 11.3.

1.31 " **Indications** " means the Initial Indication and the Additional Indications.

1.32 " **Information and Inventions** " means, to the extent required to enable STA to Commercialize the Licensed Product in the Territory in the Field, all technical, scientific and other know-how and information, trade secrets, knowledge, technology, means, methods, protocols, assays, structures, sequences, processes, practices, formulas, instructions, skills, techniques, procedures, experiences, ideas, technical assistance, designs, drawings, assembly procedures, computer programs, apparatuses, specifications, data, results and other material, including pre-clinical trial results and Clinical Study results, (whether or not confidential, proprietary, patented or patentable) in written, electronic or any other form now known or hereafter developed, and all other discoveries, developments, inventions (whether or not confidential, pr oprietary, patented or patentable), and tangible embodiments of any of the foregoing.

1.33 " **Initial Indication** " means the extended adjuvant treatment of women with HER2+ early stage breast cancer.

1.34 " **Joint Inventions** " has the meaning set forth in Section 7.3.

1.35 " **Licensed Know-How** " shall mean, whether patentable or not, all the research and development information or data that is necessary or useful to the Commercialization of the Licensed Product that are not generally known and that are Controlled by PUMA or its Affiliates as of the Effective Date or thereafter become Controlled by PUMA or its Affiliates.

1.36 " **Licensed Patents** " means (a) the national, regional and international patents and patent applications that are necessary or useful for the Commercialization of the Licensed Product, including provisional patent applications, in each case, that are Controlled by PUMA or one or more of its Affiliates as of the Effective Date, or that thereafter become Controlled by PUMA or its Affiliates, including but not limited to those set forth on **Exhibit A** attached hereto, (b) all patent applications filed from any of the foregoing provisional patent applications in sub-section (a), (c) all patent applications that claim priority to any patent or patent applications in sub-section (a) or sub-section (b), including divisionals, continuations, continuations-in-part, provisionals, converted provisionals, and continued prosecution applications, (d) any and all patents that have issued or in the future issue from any of foregoing patent applications in sub-section (a), sub-section (b) or sub-section (c), including utility models, petty patents and design patents and certificates of invention, and (e) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of any of the foregoing patents or patent applications in sub-section (a), sub-section (b), sub-section (c) or sub-section (d).

1.37 " **Licensed Product** " means any pharmaceutical product containing the Compound, in finished form.

1.38 " **Losses** " has the meaning set forth in Section 11.1.

1.39 " **MAA** " has the meaning set forth in the definition of "Drug Approval Application".

1.40 " **Markings** " has the meaning set forth in Section 4.7.

1.41 " **Milestone Event** " has the meaning set forth in Section 6.2.

1.42 " **Milestone Payment** " has the meaning set forth in Section 6.2.

1.43 " **NDA** " has the meaning set forth in the definition of "Drug Approval Application."

1.44 " **Nerlynx Staff** " has the meaning set forth in Section 4.2.4(b).

1.45 " **Net Sales** " means the gross amount invoiced by or on behalf of STA, its Affiliates and their respective Sublicensees for sales of any Licensed Product in the Territory (other than sales among STA, its Affiliates or Sublicensees for subsequent resale in which case the first sale to a Third Party that is not a Sublicensee shall be used for calculation of Net Sales), less the following deductions if and to the extent they are (i) included in the gross invoiced sales price of the Licensed Product or otherwise directly incurred by STA, its Affiliates and their respective Sublicensees with respect to the sale of the Licensed Product, (ii) normal and customary, and (iii) not otherwise deducted in computing other amounts hereunder: (a) rebates, quantity and cash discounts, and other discounts to customers, (b) taxes (except income taxes) and tariffs or duties paid, absorbed or allowed which are directly related to the sale of the Licensed Product, (c) credits, allowances, discounts and rebates to, and chargebacks for, spoiled, damaged, out-dated, rejected or returned Licensed Product (including in connection with Licensed Product withdrawals, expired Licensed Product and Licensed Product recalls), (d) actual freight and insurance costs, including without limitation the costs of export licenses, shipping, postage and handling charges, incurred in transporting the Licensed Product to customers, (e) discounts or rebates or other payments required by Applicable Law, including any governmental special medical assistance programs, (f) customs duties, surcharges and other governmental charges incurred in connection with the exportation or importation of the Licensed Product, and (g) bad debts actually written off in connection with such Licensed Products.

Subsections (a) through (g) shall be collectively referred to as " **Deductions** ". The following principles shall apply in the calculation of Net Sales:

- In the case of any sale of Licensed Product which is not invoiced or is delivered before invoice, Net Sales shall be calculated at the time of shipment or when the Licensed Product is paid for, if paid for before shipment or invoice.

- In the case of any sale or other disposal of Licensed Product for non-cash consideration, Net Sales shall be calculated as the fair market price of the Licensed Product in the country of sale or disposal. Notwithstanding the foregoing, provision of the Licensed Product for the purpose of conducting pre-clinical or clinical research shall not be deemed to be a sale. For clarity, any Licensed Product provided as free samples or as charitable donations shall not give rise to any Net Sales.

- Net Sales shall be determined in accordance with GAAP.

1.46 " **Ongoing Clinical Trials** " means those Clinical Studies listed on **Exhibit C** attached hereto.

1.47 " **Party** " and " **Parties** " each has t he meaning set forth in the preamble hereto.

1.48 " **Patents** " means (a) all national, regional and international patents and patent applications, including provisional patent applications, (b) all patent applications filed from any of the foregoing provisional patent applications in sub-section (a), (c) all patent applications that claim priority to any patent or patent applications in sub-section (a) or sub-section (b), including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (d) any and all patents that have issued or in the future issue from any of foregoing patent applications in sub-section (a), sub-section (b) or sub-section (c), including utility models, petty patents and design patents and certificates of invention, and (e) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of any of the foregoing patents or patent applications in sub-section (a), sub-section (b), sub-section (c) or sub-section (d).

1.49 " **PBS** " means the Pharmaceutical Benefits Scheme administered by the Australian Department of Health and any successor scheme.

1.50 " **Person** " means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, proprietary company, proprietary limited company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

1.51 " **Pfizer** " has the meaning set forth in Recital hereto.

1.52 " **Pfizer License Agreement** " has the meaning set forth in Recital A hereto.

1.53 " **Product Infringement** " has the meaning set forth in Section 7.7.2.

1.54 " **Product Labeling** " means, with respect to the Licensed Product, (a) the full prescribing information approved by the TGA for the Licensed Product in the Territory, including any required patient information and (b) all labels and other written, printed or graphic matter upon a container, wrapper or any package insert utilized with or for the Licensed Product in the Territory.

1.55 " **PUMA** " has the meaning set forth in the preamble hereto.

1.56 " **PUMA Data** " has the meaning set forth in Section 3.6.1.

1.57 " **PUMA Inventions** " has the meaning set forth in Section 7.4.

1.58 " **Receiving Party** " has the meaning set forth in Section 9.1.

1.59 " **Regulatory Approval** " means, with respect to the Licensed Product, any and all approvals (including Drug Approval Applications), licenses, registrations or authorizations of any Regulatory Authority necessary to commercially distribute, sell or market the Licensed Product in the Territory when used with reference to STA, or outside the Territory when used with reference to PUMA, including, (a) pricing or reimbursement approval, (b) pre- and post-approval marketing authorizations, and (c) Product Labeling approval.

1.60 " **Regulatory Authority** " means any applicable supra-national, national, regional, state, provincial or local regulatory agencies, departments, bureaus, commissions, councils or other government entities regulating or otherwise exercising authority with respect to the Commercialization of the Licensed Product in the T erritory when used in the context of STA, or outside the Territory when used with reference to PUMA.

1.61 " **Regulatory Documentation** " means all (a) applications (including all INDs and Drug Approval Applications), registrations, licenses, authorizations and approvals (including all Regulatory Approvals), (b) correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all regulatory drug lists, advertising and promotion documents, adverse event files and complaint files and (c) Clinical Data and any other data contained in any of the foregoing, in each case ((a), (b) and (c)) relating to the Licensed Product.

1.62 " **Related Party** " shall mean any Affiliate of a Party and any licensee or Sublicensee of such Party, but excluding distributors. For clarity, PUMA shall not be a Related Party of STA and STA will not be a Related Party of PUMA.

1.63 " **Royalty Term** " means, on a Licensed Product-by-Licensed Product and country-by-country basis in the Territory, the period commencing on the First Commercial Sale of the Licensed Product in such country and expiring upon the later of: (a) expiration or abandonment of the last Valid Claim of the Patent which covers the Licensed Product in such country, or (b) the earlier of (x) the time when Generic Competitors to the Licensed Product have achieved [***] or more market share in such country based on unit volume, or (y) ten (10) years following the date of First Commercial Sale of the Licensed Product in such country. "Generic Competitors" means, with respect to the Licensed Product being sold in any country, [***].

1.64 " **STA** " has the meaning set forth in the preamble hereto.

1.65 " **STA Data** " has the meaning set forth in Section 3.6.2.

1.66 " **STA Indemnitee** " has the meaning set forth in Section 11.1.

1.67 " **STA Inventions** " has the meaning set forth in Section 7.2.

1.68 " **Sublicensee** " means a Person, other than an Affiliate of STA, that is granted a sublicense by STA under and in accordance and compliance with this Agreement.

1.69 " **Supply Agreement** " means the agreement, contemplated by the Parties as of the date of this Agreement, between PUMA and STA, pursuant to which PUMA shall supply the Licensed Product to STA, as the same shall be executed and amended from time-to-time during the term of this Agreement, and any successor or replacement agreement providing for the sale of the Licensed Product to STA.

1.70 " **Supporting Documents** " has the meaning set forth in Section 12.5.2.

1.71 " **TGA** " means the Therapeutic Goods Administration of the Department of Health of the Commonwealth of Australia.

1.72 " **Territory** " shall mean Australia, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, New Zealand, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste and Vietnam

1.73 " **Third Party** " means any Person other than PUMA, STA and their respective Affiliates.

1.74 " **Third Party License** " has the meaning set forth in Section 6.4.

1.75 " **Trademark** " means (i) "Nerlynx™" and any registrations thereof or any pending applications relating thereto in the Territory, subject to its approval in the Territory and (ii) any other trademark selected by the Parties pursuant to Section 4.6.

1.76 " **United States** " means the United States of America.

1.77 " **Valid Claim** " means either: (a) a claim of an issued and unexpired patent included within the Patents, which has not been permanently revoked or declared unenforceable or invalid by an unreversed and unappealable or unreversed and unappealed decision of a court or other appropriate body of competent jurisdiction, or (b) a claim of a pending patent application included within the Patent, which claim was filed in good faith, has not been pending for more than [***] from its priority date, and has not been abandoned or finally disallowed without the possibility of appeal or refiling of such application.

ARTICLE 2
GRANT OF RIGHTS

2.1 **Grant to STA.** Subject to the terms and conditions of this Agreement, PUMA hereby grants to STA an exclusive license (including with regard to PUMA and its Affiliates), with the right to grant sublicenses in accordance with Section 2.2, to exploit the Licensed Patents, the Licensed Know-How, the Joint Inventions and the Trademark to the extent necessary to permit STA to Commercialize the Licensed Product in the Field in the Territory for the duration of the Royalty Term.

2.2 **Sublicenses** . The rights and licenses granted to STA under Section 2.1 shall includ e the right to grant sublicenses to its Affiliates and/or Third Parties through multiple tiers, solely to Commercialize the Licensed Product in the Field in the Territory, provided that:

2.2.1 in the case of a grant of sublicense to an Affiliate of STA, STA shall give [***] prior written notice to PUMA;

2.2.2 in the case of a grant of sublicense to a Third Party, STA may not grant such sublicense without the prior written consent of PUMA, which consent may not be unreasonably withheld or delayed; and

2.2.3 provided that in each of Sections 2.2.1 and Section 2.2.2, STA shall remain responsible jointly and severally for the performance or non-performance of any such Sublicensee and any such sublicenses shall be consistent with the terms and conditions of this Agreement.

2.3 **STA's Obligations as Licensee.** STA shall use, and it shall cause its Affiliates and its Sublicensees to use, Commercially Reasonable Efforts to Commercialize the Licensed Product in the Territory in the Field, in order to maximize the Net Sales derived from th e Licensed Product throughout the term and continuance of this Agreement. In particular, STA shall use and it shall cause its Affiliates and its Sublicensees to use Commercially Reasonable Efforts: (i) apply for and obtain all required Regulatory Approval s in the Territory; (ii) make the First Commercial Sale of the Licensed Product in the Territory within [***] following the receipt of the Regulatory Approvals for the Initial Indication by the TGA and PBS, (iii) maintain a sales force and provide for rele vant staff to manage the pre- and post-launch activities required to Commercialize the Licensed Product in the Territory in the Field; and (iv) seek to maximize sales of the Licensed Product in the Territory in the Field.

2.4 **No Implied Rights.** For the avoidance of doubt, STA, its Sublicensees and its and their respective Affiliates shall have no right, express or implied, with respect to the Licensed Patents, the Licensed Know-How, the Joint Inventions or the Trademark, except as expressly provided in Section 2.1 and Section 2.2, as applicable.

2.5 **Retained Rights.** Except for the license expressly granted in Sections 2.1 and 2.2 of this Agreement, PUMA retains all rights under its intellectual property and no other rights shall be deemed granted by PUMA to STA under this Agreement (whether expressly, by implication, or by estoppel).

2.6 **The Pfizer License Agreement.** STA acknowledges that the rights granted to STA under this Agreement that constitute a sublicense under the Pfizer License Agreement are, in addition to being limited by and are subject to the terms and conditions of this Agreement, further limited by the terms and conditions of the Pfizer License Agreement. Notwithstanding Article 9, pursuant to the Pfizer License Agreement, STA acknowledges that PUMA will furnish to Pfizer a true and complete copy of this Agreement and any current and future amendments thereto, which Agreement may be redacted to omit information not directly relevant to the performance of PUMA's obligations under the Pfizer License Agreement, within thirty (30) days after the Effective Date of this Agreement or any amendments hereto have been executed. To the extent requested by PUMA from time-to-time, STA will take reasonable steps to support PUMA's compliance with obligations under the Pfizer License Agreement.

ARTICLE 3
REGULATORY APPROVALS

3.1 **Drug Approval Applications.**

3.2 **In General.** STA shall have the right and obligation, at its own cost and expense, to prepare Drug Approval Applications and to submit such applications to the appropriate Regulatory Authorities. Such Drug Approval Applications shall be sufficient, if granted, to permit STA to Commercialize the Licensed Product in the Field in the Territory.

3.3 **Alliance Managers.** Within [***] after the Effective Date, each Party shall appoint and notify the other Party of the identity of a representative having the appropriate qualif ications, including a general understanding of pharmaceutical development and commercialization issues, to act as its alliance manager under this Agreement (the " **Alliance Manager** "). The Alliance Managers shall serve as the primary contact points between th e Parties for the purpose of providing PUMA with information on the progress of STA's Commercialization activities under this Agreement, in general, and the progress of its activities pursuant to Section 3.1 of this Agreement, in particular. The Alliance Managers shall also be primarily responsible for facilitating the flow of information and otherwise promoting communication, coordination and collab oration between the Parties. Each Party may replace its Alliance Manager at any time upon written notice to the other Party , provided that the replacement representatives have appropriate qualifications.

3.4 **Diligence.** STA shall use Commercially Reasonable Efforts to obtain and maintain Regulatory Approvals for the Licensed Product for the Initial Indication in the Territory once STA has received (i) the file in support of the NDA filed by PUMA for Licensed Product for the Initial Indication or (ii) the CTD filed by PUMA or its licensee with the EMA for Licensed Product for the Initial Indication, whichever shall occur first, and to the extent that STA Commercializes the Licensed Product for an Additional Indication, it shall also use Commercially Reasonable Efforts to obtain and maintain Regulatory Approvals for the Licensed Product for such Additional Indication in the Territory. Without limiting the generality of the preceding sentence, STA shall file its Drug Approval Application with the applicable Regulatory Authorities within [***] (or such other longer period agreed by the Parties) following the date on which PUMA provides STA with the requisite MAA file submitted to the EMA in support of the MAA for the Initial Indication, as well as all other documents and materials required for the said Drug Approval Application. The obligations of STA referenced in the foregoing sentence and otherwise with respect to the Licensed Product are expressly conditioned upon the continuing absence of any material adverse condition or event relating to the safety or efficacy of the Licensed Product.

3.5 **Regulatory Matters.** STA shall have the responsibility for preparing, obtaining and maintaining Drug Approval Applications and any other Regulatory Approvals and other submissions, and for conducting communications with the Regulatory Authorities, for the Licensed Product in the Territory. STA will promptly notify PUMA of all such material communications or correspondence with Regulatory Authorities and STA will provide to PUMA copies of all substantive written communications received by STA (or its Related Parties) from any Regulatory Authority, or submitted by STA (or its Related Parties) to any Regulatory Authority. STA shall allow PUMA to participate in meetings with Regulatory Authority where permitted by Applicable Laws, and consult with PUMA, and consider in good faith any comments PUMA may have regarding, any and all such communications and correspondence. STA's responsibility shall be to implement such activities on the basis of materials and documents provided by PUMA, and in any case STA will not be required to assemble data, conduct trials or the like unless such trial or other activities are specifically requested by an authority within the Territory, in which event STA shall be responsible for doing so. All Regulatory Approvals relating to the Licensed Product with respect to the Territory shall be owned by, and shall be the sole property and held in the name of, STA or its designated Affiliate or Sublicensee. STA shall have the right to reference any regulatory filings or Regulatory Approvals Controlled by PUMA made or obtained in territories outside the Territory, including without limitation the DMF and master files maintained and

Controlled by PUMA in territories outside the Territory. PUMA, its Affiliates and its Related Parties shall have the right to refere nce any regulatory filings or Regulatory Approvals made or obtained by STA or its Affiliates or Related Parties in the Territory, including without limitation the DMF and master files maintained by STA or its Affiliates or Related Parties.

3.6 Data Exchange.

3.6.1 **PUMA Data.** PUMA shall provide STA [***], copies of technical and scientific data Controlled by PUMA and produced in the development of the Licensed Product. PUMA shall also provide a copy of the NDA submitted to the EMA for the Licensed Product (" **PUMA Data** "). Likewise, PUMA will assist STA, as reasonably requested by STA, to supply additional information to answer questions that may arise from the Regulatory Authorities as well as to use reasonable efforts to provide certifications and declarations which may be requested by such Regulatory Authorities.

3.6.2 **STA Data.** STA shall provide to PUMA, promptly after such items are generated by or on behalf of STA, [***], copies of technical and scientific data obtained by STA in its preparation of Drug Approval Applications for the Licensed Product in the Territory, and abstracts and summaries of documents, in each case submitted to or filed with the Regulatory Authorities for the Licensed Product in the Territory (" **STA Data** "). PUMA, its Affiliates and its licensees or Sublicensees or independent contractors shall be free to use the foregoing information provided by STA for the sole purpose of supporting its registrations with the Regulatory Authorities for its development or commercialization of the Licensed Product outside the Territory.

ARTICLE 4
COMMERCIALIZATION

4.1 **In General.** STA shall Commercialize the Licensed Product in the Field in the Territory at its own cost and expense, including but not limited to pricing (subject to Section 4.5), distribution and booking sales. STA shall not Commercialize or attempt to Commercialize the Licensed Product outside the Territory. Without limiting the generality of the foregoing, STA shall not import or attempt to import the Licensed Product into any territory outside of the Territory or sell or attempt to sell the Licensed Product into any territory outside of the Territory.

4.2 Promotion and Marketing.

4.2.1 STA shall promote and distribute the Licensed Product in accordance with the Licensed Product profile and positioning approved in writing by PUMA and shall regularly supply PUMA [***] with the marketing and promotion plans that STA intends to implement with respect to the marketing and promotion of the Licensed Products within the Field in the Territory [***]. Such marketing and promotion plans shall be discussed with PUMA

via its Alliance Manager or such other PUMA representative as PUMA may designate from time to time, and be approved by PUMA in writing before use thereof. A marketing strategy for the Licensed Products shall be develo ped and prepared by STA consistently with the Regulatory Documentation as well as in accordance with the international profile of the Licensed Products as established by PUMA, and shall have to be discussed with and approved in writing by PUMA before imple mentation thereof. STA shall keep PUMA regularly and fully informed on all its promotional and marketing activities regarding the Licensed Product in the Territory and regular meetings shall be organised between the Parties in order to discuss any and all aspects relevant to the promotion and marketing of the Licensed Product within the Field in the Territory.

4.2.2 Marketing, advertising and promotional materials concerning the Licensed Product and training manuals for STA's medical representatives shall be developed and prepared by STA in accordance with PUMA's trademark and other guidelines, and provided to PUMA for review at least [***] in advance of any intended use. STA shall make all changes requested by PUMA provided that such changes are consistent with Applicable Law. If PUMA does not provide any comments on such materials within [***] of their receipt, PUMA will be deemed to have approved such materials. Any and all such materials and manuals may be used by STA strictly in accordance with the terms of this Agreement and any further instructions that PUMA or its Affiliates may provide with those materials.

4.2.3 Upon PUMA's reasonable request, STA shall promptly supply to PUMA [***] original copies of all marketing, advertising and promotional materials relevant to the Licensed Product and all training manuals being used by STA's sales representatives with respect to the promotion and marketing of the Licensed Product for the Indications in the Territory. STA agrees to assign, and hereby assigns, to PUMA all right, title and interest, including all intellectual property rights, in and to such materials and training manuals. STA shall execute any documents and take all actions reasonably required by PUMA to perfect the foregoing assignment. PUMA hereby grants to STA an exclusive, royalty-free license to reproduce, distribute, perform, display, use, modify and exploit, directly or indirectly, any such marketing, advertising and promotional materials in connection with Licensed Product in the Field and in the Territory for the sole purpose of fulfilling STA's obligations under this Agreement during the Royalty Term.

4.2.4 Staffing

(a) Throughout the term of this Agreement, STA shall, at its sole cost and expense, (i) maintain adequate numbers of appropriately qualified personnel for marketing the Licensed Product for the Indications throughout the Territory, (ii) continuously maintain an adequate and representative stock of the Licensed Product to meet market demand in the Territory and (iii) effectively distribute, advertise, market, and promote the sale and use, of the Licensed Product to approved dispensers for the Indications throughout the Territory.

(b) Without limiting the generality of the obligations set forth in Sub-section 4.2.4(a), STA will allocate in Australia a sufficient number of appropriately qualified persons experienced in the promotion and distribution of oncology products to successfully distrib ute and promote the Licensed Product (" **Nerlynx Staff** "). The Nerlynx Staff will dedicate the percentage of their work hours set forth in Sub-section 4.2.4(c) below (calculated annually) to promoting and distributing the Licensed Product. [***] may be promoted or distributed by an oncology specialist representative member of the Nerlynx Staff. The Licensed Product will be in the first position on all details performed by the oncology specialist representatives for a minimum of [***] following the First Commercial Sale, and for a minimum of [***] following the receipt of the necessary Regulatory Approvals for the Additional Indications. PUMA will have the right to audit all call reports.

(c) At a minimum, unless agreed otherwise by the parties in accordance with this Section 4.2, the Nerlynx Staff will include,

(1) [***], at least the following full time equivalent personnel in the following positions:

Position and number of full time equivalent personnel (FTE)	**Percentage of work hours dedicated to promotion Licensed Product**
[***]	[***]%
[***]	[***]%

(2) [***], the following full time equivalent personnel in the following positions:

Position and number of full time equivalent personnel (FTE)	Percentage of work hours dedicated to promotion Licensed Product
[***]	[***]%

4.3 **Diligence.** STA shall use Commercially Reasonable Efforts to Commercialize the Licensed Product in the Territory after having obtained all the Regulatory Approvals to do so. The obligations of STA referenced in the foregoing sentence and otherwise with respect to the Licensed Product are expressly conditioned upon the continuing absence of any material adverse condition or event relating to the safety or efficacy of the Licensed Product. STA will provide PUMA a written report in reasonable detail regarding STA's progress in Commercialization of the Licensed Product in the Territory, including a summary of activities conducted, significant events or milestones achieved, and other activities under this Article 4.

4.4 **Compliance with Applicable Law.** STA shall, and shall cause its Sublicensees and its and their respective Affiliates to, comply with all Applicable Laws with respect to the Commercialization of the Licensed Product.

4.5 **Sales, Pricing and Distribution.** STA shall be solely responsible for invoicing and booking sales, establishing all terms of sale (including pricing and discounts) and warehousing and distributing the Licensed Product in the Field in the Territory and shall perform all related services, in each case, in a manner consistent with the terms and conditions of this Agreement. STA agrees to make best efforts to ensure that the pricing of the Licensed Product in the Territory shall be the highest fair market price subject to relevant Regulatory Approvals. PUMA must approve all pricing approvals or non-reimbursed listed prices in the Territory. STA shall be solely responsible for handling all returns, recalls and withdrawals, order processing, invoicing and collection, distribution and inventory and receivables with respect to the Licensed Product in the Territory.

4.6 **Trademark.** STA shall Commercialize the Licensed Product in the Field in the Territory using the Trademark. Notwithstanding the foregoing, if a Regulatory Authority in the Territory refuses to approve the Commercialization of the Licensed Product in the Field in the Territory using the Trademark, the Parties will agree on a substitute trademark(s) and will submit the same for approval. PUMA will make application for registration of the substitute trademark in the Territory and will, [***], prosecute such application until the substitute trademark is registered for the Commercialization of the Licensed Product in the Field. PUMA will own all intellectual property rights to the substitute trademark, if any.

4.7 **Markings.** The promotional materials, packaging and Product Labeling for the Licensed Product used by STA or its Related Parties in connection with the Licensed Product in the Territory shall contain a reference to the fact that the Licensed Product and the Trademark are licensed from PUMA (collectively, the " **Markings** "). The manner in which such reference is to be presented on promotional materials, packaging and Product Labeling for the Licensed Product shall be subject to prior review and approval by PUMA, such approval not to be unreasonably conditioned, withheld or delayed.

ARTICLE 5
MANUFACTURE AND SUPPLY

5.1 PUMA shall have the sole right and responsibility to manufacture or have manufactured the Licensed Product for Commercialization in the Territory. The Parties shall execute a Supply Agreement within [***] in relation to the Licensed Product, pursuant to which PUMA shall supply to STA sufficient quantities of the Licensed Product to permit STA to perform its obligations hereunder. STA shall notify PUMA if STA has reason to believe that a Third Party is selling pharmaceutical products containing the active pharmaceutical ingredient contained in the Licensed Product in the Territory in the Field and that the active pharmaceutical ingredient was sourced by such Third Party from PUMA, providing with such notice all details regarding such matter that STA has obtained. Promptly following receipt of such notice, PUMA will investigate the matter and report its findings to STA. If PUMA confirms that the facts alleged in the notice are correct, PUMA will, [***], take reasonable actions that PUMA, in its sole discretion, believes are necessary and appropriate, under any agreements between PUMA and such Third Party, to cause such Third Party to cease and desist from selling such pharmaceutical products in the Territory.

ARTICLE 6
MILESTONE PAYMENTS; ROYALTIES

6.1 **Signature Payment.** Simultaneously with the execution and delivery of this Agreement, STA is paying to PUMA in consideration of the licenses granted pursuant to this Agreement the sum of [***], which payment the Parties agree shall be non-refundable.

6.2 **Milestone Events.** Each Party who learns of the achievement of a milestone event described below shall immediately notify the other Party in writing upon the achievement of the corresponding milestone event (each, a " **Milestone Event** ") and PUMA shall then issue to STA a signed pro-forma invoice for the applicable Milestone Payment. In partial consideration for assistance and collaboration pursuant to Section 3.6.1 in obtaining Regulatory Approvals in the Territory and for the rights granted to STA under this Agreement, STA shall pay PUMA the applicable non-refundable Milestone Payment within [***] after its receipt of the applicable pro-forma invoice signed by PUMA.

Milestone Event	Milestone Payment
(a)[***]	US$[***]
(b)[***]	US$[***]
(c)[***]	US$[***]

6.3 **Royalties.** STA shall pay PUMA a royalty equal to a percentage of the Net Sales of the Licensed Product in the Territory as specified in the following table in each Calendar Quarter during the Royalty Term and, in respect of any Net Sales comprising sales of the Lic ensed Product for use in a named patient access program, in each Calendar Quarter during any period prior to and including the Royalty Term, until the expiration of the Royalty Term:

Condition	Royalty Rate
(a)Annual revenue [***]	[***]
(b)Annual revenue [***]	[***]
(c)Annual revenue [***]	[***]

6.4 **Third Party License** . If, during the Royalty Term and following the Effective Date, STA becomes aware that its Commercialization of the Licensed Product in the Territory may infringe the intellectual property rights of a Third Party, STA shall immediately notify PUMA in writing and the Parties shall jointly consider whether the Commercialization of the Licensed Product in the Territory by STA would infringe the intellectual property rights of such Third Parry unless a license is obtained from such Third Party (a " **Third Party License** "). If such Third Party License is necessary to allow STA to exploit the Licensed Product in the Territory, and STA obtains such Third Party License on arms' length terms, then, subject to satisfactory proof of payment, STA shall have the right to [***] of the amounts [***] by STA pursuant to the terms of any such Third Party License during a particular [***]; provided that [***] shall not be taken in any [***] to reduce the royalties otherwise due under this Agreement by more than [***] or the royalties payable with respect to Licensed Product pursuant to the Pfizer License Agreement .

6.5 **General Principles of Royalty Calculation.** All royalties payable under this Agreement shall be subject to the following conditions:

6.5.1 that [***] shall be due with respect to [***] the Licensed Product;

6.5.2 that no royalties shall be due upon the sale or other transfer of the Licensed Product among STA or its Related Parties, but in such cases the royalty shall be due and calculated upon STA's or its Related Party's Net Sales of the Licensed Product to the first independent Third Party;

6.5.3 no royalties shall accrue on [***] of the Licensed Product by STA or its Related Parties for use [***]; for the avoidance of doubt, nothing in this Section is intended to prevent royalties from accruing [***] of the Licensed Product by STA or its Related Parties [***];

6.5.4 no royalties shall accrue on the disposition of the Licensed Product [***] by STA or its Related Parties as [***].

6.6 **Payment Dates and Reports** . Royalty payments shall be made by STA within [***] after the end of each Calendar Quarter commencing with the Calendar Quarter in which the First Commercial Sale occurs. STA shall also provide to PUMA, at the same time each such payment is made, a report showing: reasonably detailed info rmation regarding a total monthly sales calculation, on a country-by-country basis, of Net Sales of Licensed Product (including gross sales and all Deductions) and all Royalties payable to PUMA for the applicable Calendar Quarter (including any foreign exc hange rates employed and conversation calculations).

6.7 **Mode of Payment.** All payments to PUMA under this Agreement shall be made by deposit of Dollars in the requisite amount to the bank account designated by PUMA by written notice to STA. Within [***] after its receipt of the payment, PUMA shall issue a receipt in a form required by STA.

6.8 **Currency Conversion.** Conversion of sales recorded in local currencies to Dollars will be performed using an exchange rate for conversion of the foreign currency into Dollars calculated using the [***], or such other exchange rate or by reference to such other method of calculation of conversation rates as agreed from time to time by the parties in writing.

6.9 **Taxes** . Any and all payments by STA under this Agreement shall be made free and clear of and without deduction or withholding for any taxes, except as required by Applicable Law. If STA shall be required by Applicable Law to deduct or withhold any taxes from or in respect of any sum payable under this Agreement to PUMA, then STA shall (i) make such deduction or withholding, (ii) timely pay the full amount of taxes deducted or withheld to the relevant taxing authorities in accordance with Applicable Law, (iii) notwithstanding anything in this Agreement to the contrary, pay to PUMA such additional amounts as necessary so that PUMA receives (for the avoidance of doubt, after deduction or withholding applicable to such additional amounts) the full amount it would have been entitled to if no such deduction or withholding applied, and (iv) send to PUMA proof of payment of such taxes , together with any document necessary to permit PUMA to seek a refund of such tax, if a refund is authorized by Applicable Law, within [***] following such payment. If PUMA determines, in its sole discretion, [***]. All sales, use, value added, consumption and other taxes imposed with respect to the transactions contemplated by this Agreement, and any taxes imposed on STA or with respect to STA's business operations or activities hereunder, shall be borne by STA (and, for the avoidance of doubt, all amounts stated in this Agreement exclusive of such taxes), and STA shall indemnify and hold harmless PUMA from and against all such taxes, including any penalties or interest associated therewith.

6.10 **Interest on Late Payments.** If any payment due to PUMA under this Agreement is not paid when due, then STA shall pay interest thereon and on any unpaid accrued interest (before and after any judgment) at [***] above the Prime Rate of interest as reported in the Wall Street Journal on the date payment is due, such interest to run from the date upon which payment of such amount became due until payment thereof in full together with such accrued interest.

6.11 **Confidentiality.** PUMA shall treat all information subject to review under this Article 6 as Confidential Information of STA in accordance with the confidentiality provisions of Article 9 and PUMA shall cause any accountant retained by PUMA to enter into a reasonably acceptable confidentiality agreement that includes an obligation to retain all such financial information in confidence.

6.12 **Relevant Records.** STA shall keep, and shall cause its Affiliates and Sublicensees to keep accurate financial books and records pertaining to: STA's and its Affiliates' a nd Sublicensees' sale of Licensed Product, including any and all calculations of payments due to PUMA hereunder and STA's prosecution, maintenance and enforcement of Patents (collectively, " **Relevant Records** "). STA, its Affiliates and Sublicensees shall mai ntain the Relevant Records for the longer of: (a) the period of time required by Applicable Law, or (b) [***] following expiration or termination of this Agreement. STA shall require its Sublicensees to provide to STA (so that STA may provide the same to P UMA) copies of all Relevant Records relating to such Sublicensees' sale of Licensed Products as necessary to allow PUMA or if applicable Pfizer (under the Pfizer License Agreement) to review such Relevant Records when conducting an audit of STA or PUMA, as applicable, pursuant to Section 6.13. Notwithstanding Section 6.11 and Article 9, pursuant to the Pfizer License Agreement, Pfizer will be allowed to review such Relevant Records.

6.13 **Audit Rights.** PUMA shall have the right during the term and for [***] thereafter to engage, at its own expense, an independent auditor reasonably acceptable to STA to examine the Relevant Records in STA's or its Related Parties' possession from time-to-time, but no more frequently than [***], as may be necessary to verify compliance with the terms of this Agreement. Such audit shall be requested in writing at least [***] in advance, and shall be conducted during STA's (or its Related Parties', as applicable) normal business hours and otherwise in manner that minimizes any interference to STA's (or its Related Parties', as applicable) business operations. PUMA shall bear any and all fees and expenses it may incur in connection with any such audit of the Relevant Records; provided, however, in the event an audit reveals an underpayment by STA of more than [***] as to the period subject to the audit, STA shall reimburse PUMA for any [***] costs and expenses of the audit within [***] after receiving invoices thereof. If any audit establishes that STA underpaid any amounts due to PUMA under this Agreement, then STA shall pay PUMA any such deficiency within [***] after receipt of written notice thereof. For the avoidance of doubt, such payment will be considered a late payment, subject to Section 6.10. If any audit establishes that STA overpaid any amounts due to PUMA under this Agreement, then STA shall be entitled to take a credit against future amounts becoming due to PUMA equal to the overpaid amount.

ARTICLE 7
INTELLECTUAL PROPERTY

7.1 **Updated Licensed Patents and Licensed Know-How.** PUMA shall advise STA of any Information and Inventions Controlled by PUMA that are Licensed Know-How and necessary or useful to the Commercialization of the Licensed Product or its use in the Field in the Territory and that are made by either PUMA or any of its Affiliates, licensees or Third Parties contracted by PUMA, as well as the status of each Licensed Patent and acquisition of any new Licensed Patents with respect to the Licensed Product on a [***] basis.

7.2 **STA Inventions .** Except as provided in Section 7.4, STA shall solely own the proprietary right to all the improvements to Information and Inventions, and all intellectual property rights therein, made solely by STA and/or any of its Related Parties or T hird P arties acting on its behalf with respect to the Licensed Product (" **STA Inventions** ") and shall have the right to file a patent in and outside the Territory on such STA Inventions. STA shall be solely responsible, at its discretion [***], for all decisions and actions with respect to the preparation, filing, prosecution and maintenance of Patents Controlled by STA ; *provided, however* that (i) STA shall provide copies of STA's proposed decisions and actions to PUMA at least [***] prior to any filing or response deadlines and (ii) PUMA may provide comment s and suggestions with respect to such decisions and actions, and STA shall take such comments into good faith consideration and [***]. STA shall grant PUMA a non-exclusive, perpetual paid-up license, with the right to sublicense, outside the Territory to exploit STA Inventions solely to research, develop, make, have made, import, use, offer for sale and sell the Licensed Product outside of the Territory . STA shall inform PUMA promptly of any STA Inventions and patent applications covering the STA Invention s.

7.3 **Joint Inventions.** Subject to Section 7.4, any Information and Inventions made jointly by employees of PUMA and STA or others acting on behalf of PUMA and STA jointly, and all intellectual property rights therein, will be owned jointly by PUMA and STA (" **Joint Inventions** "). Both Parties shall file, prosecute and maintain any patents for Joint Inventions worldwide under the names of both PUMA and STA, upon appropriate consultation between the Parties; provided , however , that STA or its Affiliates shall have the primary responsibility for handling all the proceedings relating to filing, prosecuting and maintaining any patents for Joint Inventions under the names of both PUMA and STA in the Territory and PUMA shall have the primary responsibility for handling all the proceedings relating to filing, prosecuting and maintaining any patents or filing and seeking to obtain patent term extensions or other equivalents for Joint Inventions under the names of both PUMA and STA outside the Territory. [***]. Each Party shall be free to use and exploit Joint Inventions without an accounting to the other and without the obligation to obtain permission from the other Party to grant licenses thereunder. To the extent necessary to effect the foregoing each Party hereby grants to the other Party a nonexclusive, worldwide, royalty-free, sublicensable license under its interest in all such Joint Inventions.

7.4 Notwithstanding Sections 7.2 and 7.3, Puma shall solely own (a) all STA Inventions and Joint Inventions that relate to the Licensed Product or the composition, use, administration, or manufacture thereof regardless of the inventorship of such STA Inventions or Joint Inventions, and (b) all Information and Inventions made by PUMA or its Related Parties or Third Parties acting on their behalf, and all intellectual property rights therein (" **PUMA Inventions** "). For clarity, any Information and Inventions and intellectual property rights therein described in Section 7.4(a) shall be included in the Licensed Know-How and Licensed Patents, as applicable. STA shall, and shall cause its Sublicensees and Affiliates, and all independent contractors, employees and agents, to cooperate with PUMA and take all reasonable actions and execute such agreements, declarations, assignments, legal instruments and documents as may be reasonably required to perfect PUMA's right, title and interest in and to such PUMA Inventions.

7.5 **Application and Maintenance of Patents .** PUMA shall, [***], file, prosecute and maintain all the Licensed Patents in the Territory upon appropriate consultation with STA . PUMA shall keep STA advised of the status of the actual and prospective Licensed Patent filings and, upon request, shall provide advance copies of any papers related to the filing, prosecution and maintena nce of such Licensed Patent filings. PUMA shall also, in its sole discretion, have the right to file, prosecute and maintain patents in the Territory regarding improvements to the Licensed Product, if any, which can be patented. The Parties' rights and ob ligations with respect to rights licensed to PUMA pursuant to the Pfizer License Agreement that are sublicensed to STA under this Agreement are expressly subject to the terms of the Pfizer License Agreement. The Parties agree to cooperate reasonably with P fizer with respect to matters described under this Agreement to the extent required by the Pfizer License Agreement.

7.6 If STA decides not to apply for a patent on a STA Invention owned solely by STA or decides not to file, prosecute or maintain any patent covering such a STA Invention in and/or outside the Territory, STA shall so notify PUMA in a timely fashion and shall permit PUMA, in its sole discretion, to apply for a patent in or outside the Territory in the name of PUMA [***] or to file, prosecute or maintain the patent or file for and seek to obtain patent term extensions or their equivalents in or outside the Territory in the name of PUMA [***]. In such event, STA shall execute such documents and perform such acts [***] as may be reasonably necessary in a timely manner to allow PUMA to continue such filing, prosecution or maintenance on behalf of and in the name of PUMA, and PUMA shall grant to STA a nonexclusive, royalty-free, worldwide license under such STA Invention.

7.7 **Patent Enforcement** .

7.7.1 **Rights of Pfizer.** All rights of PUMA and STA under this Section 7.7 are expressly subject to the terms of the Pfizer License Agreement with respect to rights sublicensed to STA under the Pfizer License Agreement, with the terms and conditions of the Pfizer License Agreement being given effect prior to the terms and conditions of this Section 7.7. The Parties agree to cooperate reasonably with Pfizer with respect to matters described in this Section 7.7 to the extent required by the Pfizer License Agreement.

7.7.2 **Notification.** If either Party becomes aware of any existing or threatened Infringement of the Licensed Patents in the Territory, which infringing activity involves the manufacture, use, import, offer for sale or sale of the Licensed Product in the Territory (a " **Product Infringement** "), it shall promptly notify the other Party in writing to that effect, and the Parties will consult with each other regarding any actions to be taken with respect to such Product Infringement.

7.7.3 **Right to Enforce** . STA shall have the first right, but shall not be obligated, to bring an infringement action against any person or entity engaged in a Product Infringement of the (a) Licensed Patents in the Territory, (b) Patents on jointly owned Joint Inventions in the Territory and (c) Patents on STA Inventions owned solely by STA [***]. If STA fails to bring such an action with respect to (i) a Licensed Patent in the Territory, or (ii) Patents

on jointly owned Joint Inventions in the Territory (or to settle or otherwise secure the abatement o f such Product Infringement) prior to the earlier of: (X) [***] following STA's receipt or delivery of the notice under Section 7.7.2 or (Y) [***] before the deadline, if any, set forth in the Applicable Laws for the filing of such actions, PUMA shall have the right to bring and control any such action, [***] and by counsel of its own choice. The same first right shall correspondingly apply in reverse in favor of PUMA for a Patent on a jointly owned Joint Invention outside the Territory. For clarity, PUMA retains the sole right to enforce Licensed Patents outside the Field in the Territory, and outside the Territory.

7.7.4 **Cooperation** . Each Party shall provide to the enforcing Party reasonable assistance in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff, if required by applicable Laws to pursue such action. The enforcing Party shall keep the other Party regularly informed of the status and progress of such enforcement efforts, shall reasonably consider the other Party's comments on any such efforts, and shall seek consent of the other Party in any important aspects of such enforcement, including determination of litigation strategy and filing of material papers to the competent court, which consent shall not be unreasonably withheld or delayed. The non-enforcing Party shall be entitled to separate representation in such matter [***], but such Party shall at all times cooperate fully with the enforcing Party. Neither Party shall have the right to settle any patent infringement litigation under this Section 7.7 in a manner that diminishes or adversely affects the rights or interests of the other Party without the prior written consent of such other Party, such consent not to be unreasonably withheld or delayed.

7.7.5 **Expenses and Recoveries** . The enforcing Party bringing a claim, suit or action under Section 7.7.3 shall be solely responsible for any expenses incurred by such Party as a result of such claim, suit or action. If such Party recovers monetary damages in such claim, suit or action, such recovery shall be allocated first to the reimbursement of any expenses incurred by the Parties in such litigation (including, for this purpose, a reasonable allocation of expenses of internal counsel), and any remaining amounts shall be shared as follows:

(a) in respect of Licensed Patents in the Territory: (i) if PUMA is the enforcing Party: the remaining amount will be shared [***] to PUMA and [***] to STA, or (ii) if STA is the enforcing Party: the remaining amount will be [***];

(b) in respect of Patents on jointly owned Joint Inventions inside or outside the Territory the remaining amount [***];

(c) in respect of Patents on PUMA Inventions described in Section 7.4(b) shall be retained solely by PUMA;

(d) in respect of Patents on STA Inventions owned solely by STA inside or outside the Territory shall be retained solely by STA.

7.8 Patent Oppositions and Other Proceedings .

7.8.1 Rights of Pfizer. All rights of PUMA and STA under this Section 7.8 are expressly subject to the terms of the Pfizer License Agreement with respect to rights sublicensed to STA under the Pfizer License Agreement, with the terms and conditions of the Pfizer License Agreement being given effect prior to the terms and conditions of this Section 7.8. The Parties agree to cooperate reasonably with Pfizer with respect to matters described in this Section 7.8 to the extent required by the Pfizer License Agreement.

7.8.2 If a Licensed Patent becomes the subject of any proceeding commenced in the Territory by a Third Party in connection with an opposition, action for declaratory judgment, nullity action, interference or other attack upon the validity, title or enforceability thereof, then PUMA shall have the first right, but not the obligation, to control such defense [***] using counsel of its own choice. If PUMA decides that it does not wish to defend against such action, it shall notify STA reasonably in advance of all applicable deadlines, and STA shall thereafter have the right, but not the obligation, to assume defense of such action [***].

7.8.3 The Party controlling any defense under this Section 7.8 shall permit the non-controlling Party to participate in the proceedings to the extent permissible under applicable Laws and to be represented by its own counsel [***]. Notwithstanding any of the foregoing, the Party controlling any enforcement action pursuant to Section 7.7 shall also have the sole right to control the response to any attack on the validity, title, or enforceability of a Patent that is asserted by the alleged infringer(s) as a counterclaim or affirmative defense in such action. Neither Party shall have the right to settle any proceeding under this Section 7.8 in a manner that adversely affects, or diminishes the rights or interests of, the other Party without the prior written consent of such other Party, such consent not to be unreasonably withheld or delayed.

7.8.4 Each Party shall assist and cooperate with the other Party as such other Party may reasonably request from time to time in connection with its activities set forth in Section 7.8.2, including by providing access to relevant documents and other evidence and making its employees available at reasonable business hours; provided that neither Party shall be required to disclose legally privileged information unless and until procedures reasonably acceptable to such Party are in place to protect such privilege. In connection

with any such defense or claim or counterclaim, the controlling Party shall consider in good faith any comments from the other Party and shall keep the other Party reasonably informed of any steps taken, and shall provide copies of all documents filed, in connection with such defense, claim or counterclaim. In connection with the activities set forth in Section 7.8.2, each Party shall consult with the other as to the strategy for the defense of the Licensed Patents.

7.8.5 **Patent Marking** . STA shall mark the package containing the Licensed Product marketed and sold by STA or its Affiliates or their Sublicensees or subcontractors hereunder in accordance with all Applicable Laws relating to patent marking.

7.8.6 **Infringement of Third Party Rights** . If any Licensed Product used or sold by STA or its Affiliates or their Sublicensees or subcontractors becomes the subject of a Third Party's claim or assertion of infringement of such Third Party's Patent granted by a jurisdiction within the Territory, STA shall promptly notify PUMA, and the Parties shall, if so advised by their respective legal counsels, agree on and enter into a "common interest agreement" wherein the Parties agree to their shared, mutual interest in the outcome of such potential dispute, and thereafter, the Parties shall promptly meet to consider the claim or assertion and the appropriate course of action. Unless agreed otherwise by the Parties, STA shall be solely responsible for defending against any such claim or assertion, [***]. STA shall keep PUMA fully informed of such claim and its defense, and shall reasonably consider and seek to accommodate any timely comments of PUMA with respect thereto.

7.8.7 **Third Party Licenses.** If, [***], the Commercialization of the Licensed Product in the Field in the Territory by STA, its Sublicensees or its or their respective Affiliates infringes or misappropriates any Patent or any intellectual property right of a Third Party in the Territory, such that STA, its Sublicensees or its or their respective Affiliates cannot Commercialize the Licensed Product in the Territory without infringing the Patent or intellectual property right of such Third Party, then STA shall have the first right, but not the obligation, to take the lead on negotiating the terms of each such license for the Territory in consultation with PUMA, and [***]; provided that such terms shall not in a manner that diminishes the rights or interests of either Party without the prior written consent of such Party, such consent not to be unreasonably withheld or delayed.

7.9 **Trademark.**

7.9.1 **Ownership and Reservation of Rights.** PUMA shall own all right, title, and interest to the Trademarks in the Territory, and shall be responsible for the registration, prosecution, maintenance and enforcement thereof. All costs and expenses of registering, prosecuting, maintaining and enforcing the Trademark shall be [***]. This Agreement provides STA

with no right to use any trademark or other intellectual property of PUMA or its Affiliates, except for the Trademark and as expressly pe rmitted by and subject to this Agreement. All rights in the Trademark other than the rights expressly granted to STA by this Agreement are hereby reserved to PUMA.

7.9.2 Intellectual Property Rights

(a) STA acknowledges and agrees that, as between STA and PUMA, PUMA is the sole and exclusive owner of all right, title and interest in and to the Trademark and is entitled to all goodwill associated therewith, and that all uses of the Trademark by STA and any Sublicensees and the goodwill generated thereby shall inure solely to the benefit of and be on behalf of PUMA. STA acknowledges and agrees that nothing in this Agreement shall give STA or any Sublicensees any right, title or interest in or to the Trademark or the goodwill associated therewith, other than the right to use the Trademark solely in accordance with and subject to this Agreement. To the extent that any rights in or to the Trademark are deemed to accrue to STA or any Sublicensees anywhere in the world pursuant to this Agreement, any use of the Trademark or otherwise, STA hereby assigns, and shall specify in any sublicense agreement that such Sublicensee shall, assign all such rights, at such time as they may be deemed to accrue, to PUMA.

(b) STA shall, upon PUMA's reasonable request [***], execute and deliver to PUMA all documents that are necessary or useful to: (A) secure or preserve PUMA's rights in and to the Trademark (including PUMA's ownership of the Trademark and any goodwill associated therewith); (B) protect and enforce PUMA's rights in and to the Trademark (including in any action taken by PUMA with regard to third parties); (C) record this Agreement or to record STA or any Sublicensees as registered user(s) of the Trademark, as appropriate; or (D) cancel such registered-user recordations when appropriate.

(c) STA shall not, and shall specify in any sublicense agreement that such Sublicensee shall not, at any time during or after the Royalty Term:

(1) challenge, contest or attack, directly or indirectly, PUMA's right, title or interest in or to the Trademark in any jurisdiction, or do or cause to be done or intentionally omit to do anything, the doing, causing or omitting of which would contest or in any way impair the rights of PUMA in or to the Trademark, or that could affect the validity of the Trademark or any registrations or applications thereof, including in any action in which

enforcement of a provision of this Agreement is sought; or willingly become a party adverse to PUMA in any claim, action, suit, arbitration, litigation or other proceeding in whi ch a third party contests the value, validity and/or enforceability of the Trademark or PUMA's rights therein;

(2) use (A) any trademark that is confusingly similar to the Trademark; or (B) any word, symbol, character or set of words, symbols or characters, which in any language or any characters would be identified as the Trademark or which is otherwise confusingly similar to the Trademark; or

(3) adopt, use, reserve, register or attempt to register (or allow others within its control to do the same), in any state or country or other jurisdiction throughout the world, any trademark that is confusingly similar to, misleading or deceptive with respect to, or dilutes or damages, the Trademark.

(d) All uses of the Trademark by STA, its Affiliates or its Sublicensees shall reasonably include any notices and legends required by applicable Law or as reasonably requested by PUMA to preserve the validity of or PUMA's rights in and to the Trademark, including where applicable the ® and TM notices.

7.9.3 Restrictions on Use. The use by STA of the Trademark is subject to the following restrictions:

(a) Except as expressly set forth in this Agreement, neither STA nor an Affiliate nor any Sublicensee shall use the Trademark: (i) as part of any composite trademark bearing STA's or any Affiliate's or Sublicensee's trademarks; (ii) as part of any composite trademark bearing any trademark of any other Person; or (iii) as a part of any other combination or composite mark.

(b) Except as expressly set forth in this Agreement, the Trademark shall not be used by STA, its Affiliates or its Sublicensees to identify products other than the Licensed Product within the Field.

(c) STA shall not, and shall specify in any sublicense agreement that such Sublicensee shall not, register or apply for any Internet domain name that contains the Trademark or any trademark that is confusingly similar thereto.

7.9.4 Quality Control .

(a) Subject to all local laws and regulations, STA shall ensure that the Trademark is used in a manner that (i) complies with PUMA's branding guidelines as may be reasonably updated and provided to STA by PUMA from time-to-time, and any other reasonable standards, guidelines and formats provided to STA from time-to-time and (ii) is in accordance with good trademark practice in the Territory. PUMA will bear the costs resulting from any such updates that require changes to packaging, marketing materials or the like.

(b) STA acknowledges the high standards, quality, style and image of the Trademark and that the quality control provisions of this Agreement are designed to ensure that all uses of the Trademark are consistent with the reputation for high quality symbolized by the Trademark and attributed to PUMA. Accordingly, STA shall ensure that: (i) the Licensed Product shall be offered for sale, sold, labeled, packaged and distributed, advertised and otherwise exploited, in accordance with all Applicable Law; (ii) the Trademark is not used by STA in any manner that would reflect adversely on the reputation for high quality symbolized by the Trademark or the reputation of PUMA or its Affiliates; (iii) neither STA nor any Sublicensees use the Trademarks in any manner that devalues, injures, demeans or dilutes the reputation of the Trademark or the reputation of PUMA or its Affiliates; and (iv) the use of the Trademark shall adhere to a level of quality at least as high as the highest standard used by the STA in connection with its use of any Trademarks it may own, develop or acquire.

(c) Upon the reasonable request of PUMA, STA shall deliver to PUMA representative samples of any of its uses of the Trademark (including any uses in or on advertising materials) and the Licensed Product as is necessary to ensure the above standards are being maintained.

7.9.5 Infringement.

(a) In the event that either Party learns of any actual or threatened unauthorized use of the Trademark by a Third Party, such Party shall promptly notify the other Party of such use and any details thereof of which such Party is aware. Within [***] of such notice (or sooner, if reasonably justified under the circumstances), PUMA, in its sole discretion, shall decide and inform STA whether PUMA will commence legal proceedings or take any other action in connection with such use. If PUMA makes such election, STA shall, [***], provide all information in its possession and reasonable assistance to PUMA or its authorized

representatives in connection therewith. If PUMA does not so elect and such unauthorized use is materially impairing STA's rights under this Agreement, STA may, in its sole discretion, in consultation w ith PUMA, commence legal proceedings in its own name and/or take other action in connection with such use and PUMA shall, [***], provide all information in its possession and reasonable assistance to STA or its authorized representatives (including all act ions reasonably required to assist STA in enforcing its rights) in connection therewith. Absent a future agreement to the contrary, the Party bringing an action under this Section shall control such action, [***]; provided, however, that neither Party sha ll enter into any settlement that would prejudice the other Party's rights in or to the Trademark or otherwise impose any liability or obligations on the other Party, without the prior written consent of such Party.

7.10 **Further Actions** . Each Party shall, and shall cause its Sublicensees and Affiliates, and all independent contractors, employees and agents of such Party, to cooperate with the other Party and take all reasonable actions and execute such agreements, declarations, assignments, legal instruments and documents as may be reasonably required to perfect the other Party's right, title and interest in and to all intellectual property rights as set forth in this Article 7.

ARTICLE 8
PHARMACOVIGILANCE AND SAFETY

8.1 Each Party shall provide to the other Party information regarding adverse drug experiences associated with its Clinical Studies and/or the sale of the Licensed Product in its respective territory.

8.2 The Parties shall execute a separate pharmacovigilance reporting agreement to specify the details of the Parties' obligations with respect to pharmacovigilance within [***].

ARTICLE 9
CONFIDENTIALITY AND NON-DISCLOSURE

9.1 **Confidentiality Obligations.** At all times during the Royalty Term and for a period of [***] following termination or expiration of this Agreement, each Party shall, and shall cause its Affiliates and, in the case of STA as the Receiving Party, its Sublicensees, and its and their respective officers, directors, employees and agents to, keep completely confidential and not publish or otherwise disclose and not use, directly or indirectly, for any purpose, any Confidential Information furnished or otherwise made known to it, directly or indirectly, by the other Party, except to the extent such disclosure or use is expressly permitted by the terms of this Agreement or such use is reasonably necessary for the performance of its obligations or the exercise of its rights under this Agreement, provided that such disclosure or use must be bound by similar

obligations of confidentiality and non-use at least equivalent in scope to those set forth in this Article 9. " **Confidential Information** " means any information provided by one Party (the " **Disc losing Party** ") to the other Party (the " **Receiving Party** ") under or in connection with this Agreement and the Supply Agreement, including the terms of this Agreement and the Supply Agreement or any information relating to the Licensed Product (including the Regulatory Documentation and Regulatory Approvals and any information or data contained therein), any Commercialization of the Licensed Product in the Territory or the scientific, regulatory or business affairs or other activities of either Party. Notwit hstanding the foregoing, Confidential Information shall not include any information that:

9.1.1 is or hereafter becomes part of the public domain by public use, publication, general knowledge or the like through no wrongful act, fault or negligence on the part of the Receiving Party;

9.1.2 can be demonstrated by written documentation or other competent proof to have been in the Receiving Party's possession prior to disclosure by the Disclosing Party without any obligation of confidentiality with respect to such information;

9.1.3 is subsequently received by the Receiving Party from a Third Party who is not bound by any obligation of confidentiality with respect to such information; or

9.1.4 can be demonstrated by written documentation or other competent evidence to have been independently developed by or for the Receiving Party without reference to the Disclosing Party's Confidential Information.

9.1.5 Specific aspects or details of Confidential Information shall not be deemed to be within the public domain or in the possession of the Receiving Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the Receiving Party. Further, any combination of Confidential Information shall not be considered in the public domain or in the possession of the Receiving Party merely because individual elements of such Confidential Information are in the public domain or in the possession of the Receiving Party unless the combination and its principles are in the public domain or in the possession of the Receiving Party.

9.2 **Permitted Disclosures.** Each Receiving Party may disclose Confidential Information disclosed to it by the Disclosing Party to the extent that such disclosure by the Receiving Party is:

9.2.1 made in response to a valid order of a court of competent jurisdiction or other supra-national, federal, national, regional, state, provincial or local governmental or regulatory body of competent jurisdiction or, if in the reasonable opinion of the Receiving Party's legal counsel, such disclosure is otherwise required by Applicable Law; provided that the Receiving Party shall first have given notice, to the extent legally permitted, to the Disclosing Party and given the Disclosing Party a reasonable opportunity to quash such

order and to obtain a protective order requiring that the Confidential Information and documents that are the subject of such order be held in confidence by such court or agency or, if disclosed, be used only for the purposes for which the order was issued; and provided further that if a disclosure order is not quashed or a protective order is not obtained, the Confidential Information disclosed in response to such court or governmental order shall be limited to the information that is legally required to be dis closed in response to such court or governmental order;

9.2.2 made by the Receiving Party to a Regulatory Authority as required in connection with any filing, application or request for Regulatory Approval; provided that reasonable measures shall be taken to obtain confidential treatment of such information;

9.2.3 with respect to this Agreement or the Supply Agreement, made by PUMA by filing this Agreement or the Supply Agreement with the U.S. Securities and Exchange Commission on a non-confidential basis for the purposes of complying with its disclosure obligations under applicable securities laws and regulations; provided, however, that if this Agreement and/or the Supply Agreement is so filed, PUMA shall use reasonable efforts to seek confidential treatment of portions of this Agreement and/or the Supply Agreement that it reasonably deems (upon advice by counsel) appropriate to be afforded confidential treatment;

9.2.4 made by the Receiving Party as necessary to file or prosecute Patent applications pursuant to Article 7, prosecute or defend litigation or otherwise establish rights or enforce obligations under this Agreement; provided that reasonable measures shall be taken to obtain confidential treatment of such information;

9.2.5 made by the Receiving Party to actual or prospective acquirers, merger candidates, investors, Sublicensees, consultants, agents, subcontractors (and to its and their respective Affiliates, representatives and financing sources); provided that each such Third Party to whom information is disclosed shall (i) be subject to reasonable obligations of confidentiality, (ii) be informed of the confidential nature of the Confidential Information so disclosed, and (iii) agree to hold such Confidential Information subject to the terms thereof.

9.3 **Use of Name.** Except as expressly provided in this Agreement, neither Party shall mention or otherwise use a trademark of the other Party or its Affiliates (or any abbreviation or adaptation thereof) in any publication, press release, marketing and promotional material or other form of publicity without the prior written approval of such other Party in each instance, such approval not be unreasonably conditioned, withheld or delayed. The restrictions imposed by this Section 9.3 shall not prohibit either Party from making any disclosure (a) identifying the other Party as a counterparty to this Agreement, (b) that is required by Applicable Law or the requirements of a

n ational securities exchange or another similar regulatory body (provided that any such disclosure shall be governed by this Article 9) or (c) with respect to which written consent has previously been obtained. Further, the restrictions imposed on each Party under this Section 9.3 are n ot intended, and shall not be construed, to prohibit a Party from identifying the other Party in its internal business communications, provided that any Confidential Information in such communications remains subject to this Article 9 .

9.4 **Press Releases.** As soon as practicable on or shortly following the Effective Date, the Parties shall issue the joint press release set forth as **Exhibit D** to this Agreement. Neither Party shall issue any other press release or other similar public communication relating to this Agreement, its subject matter or the transactions covered by it, or the activities of the Parties under or in connection with this Agreement, without the prior written approval of the other Party, except (a) for communications required by Applicable Law or rules of a national securities exchange as reasonably advised by the issuing Party's counsel (provided that where practicable the other Party is given a reasonable opportunity to review and comment on any such press release or public communication in advance thereof to the extent legally permitted and the issuing Party shall act in good faith to incorporate any comments provided by the other Party on such press release or public communication), (b) for information that has been previously disclosed publicly or (c) as otherwise set forth in this Agreement.

9.5 **Publications.** STA and PUMA each acknowledge the other Party's interest in publishing the results of its research in order to obtain recognition within the scientific community and to advance the state of scientific knowledge. Each Party also recognizes the mutual interest in obtaining valid Patent protection and in protecting business interests and trade secret information. Consequently, except for disclosures permitted pursuant to Section 9.2, a Party, its employees or consultants, wishing to make a publication shall deliver to the other Party a copy of the proposed written publication or an outline of an oral disclosure in English at least [***] prior to submission for publication or presentation. The reviewing Party shall have the right (a) to propose modifications to the publication or presentation for Licensed Patent reasons, trade secret reasons or business reasons and (b) to request a reasonable delay in publication or presentation in order to protect patentable information. If the reviewing Party requests a delay, the publishing Party shall delay submission or presentation for a period of [***] to enable patent applications protecting each Party's rights in such information to be filed. Upon expiration of such [***], the publishing Party shall be free to proceed with the publication or presentation. If the reviewing Party requests modifications to the publication or presentation, the publishing Party shall edit such publication to prevent disclosure of trade secret or proprietary business information prior to submission of the publication or presentation.

9.6 **Return or Destruction of Confidential Information.** Within [***] after the termination of this Agreement, or upon the written request of the Disclosing Party, the Receiving Party shall, at the Disclosing Party's discretion, promptly destroy or return to the Disclosing Party all documentary, electronic or other tangible embodiments of the Disclosing Party's Confidential Information to which the Receiving Party does not retain rights hereunder and any and all copies thereof, and destroy those portions of any documents that incorporate or are derived from the Disclosing Party's Confidential Information to which the Receiving Party does not retain rights hereunder, and provide a written certification of such destruction, except that the Receiving Party may retain one copy thereof, to the extent that the Receiving Party requires such Confidential Information for

the purpose of performing any obligations or exercising any rights under this Agreement that may survive such expiration or termination, or for archival purposes. Notwithstanding the foregoing, the Receiving Party also shal l be permitted to retain such additional copies of any computer records or files containing the Disclosing Party's Confidential Information that have been created solely by the Receiving Party's automatic archiving and back-up procedures, to the extent cre ated and retained in a manner consistent with the Receiving Party's standard archiving and back-up procedures, but not for any other use or purpose.

ARTICLE 10
REPRESENTATIONS AND WARRANTIES

10.1 Representations and Warranties of each Party to the other Party

Each Party represents and warrants to the other Party that:

10.1.1 it has the corporate power and authority to execute and deliver this Agreement, and to perform its obligations hereunder;

10.1.2 the execution, delivery and performance of this Agreement have been duly and validly authorized and approved by proper corporate action on the part of such Party; and

10.1.3 it has no legal obligations or commitments to Third Parties inconsistent with this Agreement.

10.2 PUMA Additional Representations and Warranties.

PUMA hereby represents and warrants to STA that:

10.2.1 to PUMA's knowledge, at the time of execution of this Agreement, except for rights of Pfizer in certain intellectual property rights licensed to PUMA pursuant to the Pfizer License Agreement, no claim of ownership, invalidity or infringement has been asserted by any Third Party, Affiliate, employee or agent of PUMA against PUMA with respect to the Licensed Patents, the Licensed Know-How or the Trademark with respect to the Territory;

10.2.2 PUMA has the full right, power and authority to grant the licenses under this Agreement, and its licenses to the Licensed Product shall be valid and in effect throughout the term of this Agreement;

10.2.3 PUMA has not previously assigned, transferred, conveyed or otherwise encumbered its right, title and interest in the Licensed Patents, the Licensed Know-How or the Trademark for or with respect to Licensed Products in the Territory;

10.2.4 to PUMA's knowledge, the exercise of the license granted to STA pursuant to this Agreement with respect to the Licensed Patents, t he Licensed Know-How and the Trademark, and the Commercialization of the Licensed Product do not interfere with or infringe any intellectual property rights owned or possessed by any Third Party (other than the rights of Pfizer that are licensed to PUMA pu rsuant to the Pfizer License Agreement).

10.2.5 there are no claims, judgments or settlements against or owed by PUMA and no pending or, to PUMA's knowledge, threatened claims or litigation relating to the Licensed Patents, the Licensed Know-How and the Trademark that would have a material adverse effect on the ability of PUMA to grant the license to STA in the Territory contemplated by this Agreement; and

10.2.6 PUMA has complied with any applicable Regulatory Authority regulations and requirements relating to the INDs, development, and Clinical Studies (as well as Good Laboratory Practices, Good Clinical Practices and Good Manufacturing Practices (as such terms are defined in applicable law)) for the Licensed Product, for which the failure to so comply would materially adversely affect the Commercialization of the Licensed Product in the Territory.

10.3 STA Additional Representations and Warranties.

STA hereby represents and warrants to PUMA that:

10.3.1 STA currently has, and will maintain during the term, (i) sufficient qualified and trained personnel and resources, and (ii) necessary financial and technical capacity to effectively fulfill its obligations related to the Licensed Products as contemplated in this Agreement;

10.3.2 as of the Effective Date, STA and its Related Parties do not, and are not contractually obligated to, developed, promote, offer for sale, sell or distribute any Competing Products;

10.3.3 STA shall, and shall ensure its Related Parties and all Third Parties that it engages with respect to activities directed to the Licensed Products shall, comply in all material respects with all Applicable Laws with respect to its activities and the performance of its obligations hereunder;

10.3.4 without limiting the generality of Section 10.3.3, STA shall comply with the U.S. Foreign Corrupt Practices Act of 1977 (as modified or amended). STA represents and warrants that it has not and will not directly or indirectly offer or pay, or authorize such offer or payment of, any money, or transfer anything of value, to improperly seek to influence any government official;

10.3.5 STA will not utilize, and shall ensure its Related Parties and all Third Parties it engages, in conducting its obligations related to the Licensed Product, any Person that at such time are debarred by FDA, or that, at such time, ar e under investigation by FDA for debarment action pursuant to the provisions of the Generic Drug Enforcement Act of 1992 (21 U.S.C. § 355) or by the analogous Applicable Laws of any Regulatory Authority;

10.3.6 all employees, officers, contractors, and consultants of STA or its Related Parties working under this Agreement shall execute agreements requiring assignment to STA of all right, title and interest in and to their inventions and discoveries invented or otherwise discovered or generated during the course of and as a result of their association with STA, whether or not patentable, if any, to STA as the sole owner thereof; and

10.3.7 there is no pending or, to STA's knowledge, threatened claim, litigation or any other proceeding brought by a Third Party against STA claiming that STA's, its Related Parties' and all Third Parties' STA engages in, commercialization of any pharmaceutical products constitutes or would constitute infringement of such Third Party's intellectual property right(s).

10.4 **No Other Warranties.** EXCEPT AS EXPRESSLY STATED IN THIS ARTICLE 10, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF TITLE, NON-INFRINGEMENT, VALIDITY, ENFORCEABILITY, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ANY INFORMATION PROVIDED BY PUMA OR ITS AFFILIATES IS MADE AVAILABLE ON AN "AS IS" BASIS WITHOUT WARRANTY WITH RESPECT TO COMPLETENESS, COMPLIANCE WITH REGULATORY STANDARDS, REGULATIONS OR APPLICABLE LAW OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER KIND OF WARRANTY WHETHER EXPRESS OR IMPLIED.

ARTICLE 11
INDEMNITY

11.1 **Indemnification by PUMA.** Subject only to the provisions of this Agreement, PUMA hereby agrees to indemnify and hold harmless STA, and its Affiliates, and the officers, directors, agents, representatives and employees of each of them (each, a **"STA Indemnitee"**), upon demand, against all losses, costs, claims, proceedings, actions, damages, liabilities, penalties and expenses, including reasonable legal fees and expenses, suffered or incurred by any of them (collectively, **"Losses"**) to the extent arising out of, resulting from or in connection with claims brought by a Third Party against an STA Indemnitee (excluding, for the purposes of this Article 11, any of STA's Sublicensees) that are based upon: (i) the breach of any representation, warranty or obligation under this Agreement or the Supply Agreement by PUMA, (ii) the registration,

distribution, sale, marketing and promotion or other exploitation of the Licensed Product outside the Territory by or on behalf of P UMA or its Related Parties, or (iii) the gross negligence or willful misconduct of PUMA; in each case, except to the extent caused by breach of representations, warranties or obligations under this Agreement by STA, or the gross negligence or willful misco nduct of STA.

11.2 **Indemnification by STA.** Subject only to the provisions of this Agreement, STA hereby agrees to indemnify and hold harmless PUMA, its Affiliates, and the officers, directors, agents, representatives and employees of each of them (each, an **"PUMA Indemnitee"**), upon demand, against all Losses to the extent arising out of, resulting from or in connection with claims brought by a Third Party against an PUMA Indemnitee that are based upon: (i) the breach of any representation, warranty or obligation under this Agreement or the Supply Agreement by STA, (ii) the registration, distribution, sale, marketing and promotion or other exploitation of the Licensed Product in the Territory by or on behalf of STA or its Related Parties, or (iii) the gross negligence or willful misconduct of STA; in each case, except to the extent caused by breach of representations, warranties or obligations under this Agreement by PUMA, or the gross negligence or willful misconduct of PUMA.

11.3 **Procedure.** If any Third Party notifies either Party hereto (the " **Indemnified Party"**) with respect to any matter that may give rise to a claim for indemnification against the other Party hereto (the **"Indemnifying Party"**) under this Article 11 , then the Indemnified Party will notify the Indemnifying Party thereof promptly and in any event within [***] after receiving any written notice from a Third Party. Once the Indemnified Party has given notice of the matter to the Indemnifying Party, the Indemnified Party may defend against the matter in any manner it reasonably may deem appropriate. If the Indemnifying Party notifies the Indemnified Party within [***] after the date the Indemnified Party has given notice of the matter that the Indemnifying Party is assuming the defense of such matter, then (i) the Indemnifying Party will defend the Indemnified Party against the matter with counsel of its choice reasonably satisfactory to the Indemnified Party, (ii) the Indemnified Party may retain separate counsel at its sole cost and expense, (iii) the Indemnified Party will not consent to the entry of a judgment or enter into any settlement with respect to the matter without the written consent of the Indemnifying Party, which shall not be withheld or delayed unreasonably, and (iv) the Indemnifying Party will not consent to the entry of a judgment with respect to the matter or enter into any settlement that does not include a provision whereby the plaintiff or claimant in the matter releases the Indemnified Party from all liability with respect thereto, without the written consent of the Indemnified Party, which shall not be withheld or delayed unreasonably.

11.4 **Insurance.** During the term of this Agreement, the Parties shall maintain commercial general liability insurance coverage (including insurance covering contractual obligations) sufficient to cover their respective obligations to one another pursuant to the foregoing indemnification provisions. From and after the commencement of Commercialization of the Licensed Product, STA shall also maintain products liability insurance coverage in such amount and with such terms as are reasonable and customary for companies Commercializing oncology products. The coverage shall remain in place throughout the term of this Agreement and, if the insurance is written on a claims-made basis, for an additional [***] after expiration or termination of this Agreement. Each Party shall provide the other Party with a certificate of insurance within [***] of the date of the Effective Date and within [***] of each anniversary of the Effective Date.

ARTICLE 12
TERM AND TERMINATION

12.1 **Expiration.** This Agreement shall become effective as of the Effective Date and unless sooner terminated pursuant to other sections of this Agreement shall continue in effect until the expiration of the Royalty Term. For the avoidance of doubt, STA acknowledges that if PUMA terminates this Agreement in accordance with this Article 12, whether before or after expiration of the Royalty Term, STA shall cease to have and shall immediately lose all license and other rights he reunder.

12.2 **Termination for Breach.** Upon a material breach of any term of this Agreement by either Party, the other Party may give written notice of such breach to the breaching Party requesting cure of such breach within 90 days of such notice. Should the breaching Party fail to cure such breach within such 90-day cure period, the other Party may immediately terminate this Agreement by written notice; provided , however , in the event of a good faith dispute with respect to the existence of such material breach, the expiration of the 90-day cure period shall be suspended until such time as the dispute is resolved pursuant to Section 13.9.

12.3 **Termination for Bankruptcy.** This Agreement may be terminated, to the extent permitted by applicable law, by either Party upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided , however , that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party subject to such proceeding consents to the involuntary bankruptcy or such proceeding is not dismissed within 90 days after the filing thereof.

12.4 **Cross Termination.** The termination of the Supply Agreement shall result in the automatic termination of this Agreement.

12.5 **Consequences of Termination.**

12.5.1 Upon Termination or expiration of this Agreement, (i) except for the surviving provisions set forth in Section 12.8 and the accrued rights of the Parties, all other rights and obligations of the Parties under this Agreement shall terminate as of the effective date of such termination; (ii) each Party shall pay all amounts then due and owing as of the effective date of such termination; and (iii) no later than [***] after the effective date of such termination, each Party shall return or cause to be returned to the other Party all Confidential Information in tangible form received from the other Party and all copies thereof; provided , however , that each Party may retain, in accordance with Section 9.6, (i) one copy of Confidential Information received from the other Party in accordance with Section 9.6; (ii) such additional copies of any computer records or files containing the Disclosing Party's Confidential Information that have been created solely by the Party's automatic archiving and back-up procedures, to the extent created and retained in a manner consistent with the Party's standard archiving and back-up procedures; and (iii) copies that must be maintained for legal and regulatory purposes or to exercise rights or perform obligations that survive such termination; and

12.5.2 Upon the termination of this Agreement by PUMA pursuant to Section 12.2 , 12.3 or 12.4 , (i) STA shall to the extent permitted by Applicable Laws, transfer and assign to PUMA or its designees all data and documents, I NDs, NDAs, and other regulatory filings and approvals for the Licensed Product in the Territory in STA's Control as of the effective date of such termination that relate to and are reasonably necessary for PUMA to continue the development and commercializa tion of the Licensed Product in the Field in the Territory (collectively, " **Supporting Documents** "); provided that all Supporting Documents will be supplied by STA; (ii) STA hereby grants to PUMA a non-exclusive, fully paid-up, royalty-free, worldwide, transferable, perpetual and irrevocable license, with the right to sublicense through multiple tiers, under all intellectual property rights Controlled by STA that are necessary or reasonably useful to make, use, sell, offer for sale, or import the Licensed Product as they exist at the time of such termination of this Agreement; and (iii) PUMA shall have the option to purchase any remaining inventory of the Licensed Product at a price to be mutually agreed upon by the Parties, not to exceed the price paid by STA therefor pursuant to the Supply Agreement. The costs of assignments shall be borne by PUMA.

12.6 **Regulatory Responsibilities of Both Parties.** Even after the termination for any grounds, each Party shall comply with the regulatory requirements which the Regulatory Authority within its respective territory imposes on such Party, if any.

12.7 **Accrued Rights.** Termination of this Agreement shall not relieve the Parties of any liability or obligation that accrued under this Agreement prior to the termination. In addition, termination of this Agreement shall not preclude either Party from pursuing all rights and remedies it may have under this Agreement or at law or in equity with respect to any breach of this Agreement.

12.8 **Survival Clauses** . Even after this Agreement is terminated or has expired, the following Sections shall survive the expiration or termination of this Agreement: Articles 1, 7, 8, 9, 11, 12 and 13 until the third anniversary of the termination or expiration of this Agreement or such later date as such surviving Sections may expressly prescribe.

ARTICLE 13
MISCELLANEOUS

13.1 **Headings.** The headings and captions used in this Agreement to the several Articles, Sections and subsections hereof are for the convenience of the Parties only and are not to be construed to define, limit or affect the construction or interpretation hereof.

13.2 **Severability.** In the event that one or more provisions of this Agreement is held invalid, illegal or unenforceable in any respect, then such provision shall not render any other provision of this Agreement invalid or unenforceable, and all other provisions shall remain in full force and effect and shall be enforceable, unless the provisions that have been found to be invalid or unenforceable shall substantially affect the remaining rights or obligations granted or undertaken by either Party. The Parties agree to attempt to substitute for any invalid or unenforceable provision a provision which achieves to the greatest extent possible the economic objectives of the invalid or unenforceable provision.

13.3 **Amendment .** This Agreement may not be changed, modified, amended or supplemented except by a written agreement signed by both Parties.

13.4 **Assignment; Subcontracting.**

13.4.1 This Agreement is binding upon and will inure to the benefit of the Parties and their respective permitted assignees or successors in interest, including without limitation those that may succeed by assignment, transfer or otherwise to the ownership of either of the Parties or of the assets necessary to the conduct of the business to which this Agreement relates. This Agreement may not be assigned or otherwise transferred by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld, delayed or conditioned; provided, however, that either Party may, without such consent, assign this Agreement together with all of its rights and obligations hereunder to its Affiliates, or to a successor in interest in connection with the transfer or sale of all or substantially all of its business to which this Agreement relates, or in the event of its merger or consolidation or similar transaction, subject to the assignee agreeing to be bound by the terms of this Agreement. Any purported assignment in violation of the preceding sentences shall be void. Any permitted successor shall assume and be bound by all obligations of its assignor or predecessor under this Agreement.

13.4.2 Notwithstanding Section 13.4.1, STA may subcontract the exercise of its rights and the performance of its obligations under this Agreement; provided that (a) STA shall oversee the performance by its subcontractors of the subcontracted activities in a manner that would be reasonably expected to result in their timely and successful completion and shall remain responsible for the performance of such activities in accordance with this Agreement; (b) any agreement pursuant to which STA engages a subcontractor must (i) be consistent with this Agreement and (ii) contain terms obligating such subcontractor to comply with confidentiality provisions that are at least as restrictive as those set forth in Article 9 and ownership of inventions and intellectual property provisions consistent with Article 7; and (c) STA shall procure that each subcontractor also enters into a confidentiality and non-disclosure agreement directly with PUMA on terms at least as restrictive as set forth in Article 9.

13.5 **Binding Effect** . Subject to the provisions of Section 13.4.1 herein, this Agreement shall inure to the benefit of, and be binding upon, the respective successors of the Parties.

13.6 **Independent Party.** It is expressly agreed that PUMA and STA shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither PUMA nor STA shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other.

13.7 **Waiver .** The failure of either Party to enforce at any time any provision of this Agr eement, or any right with respect thereto, or to exercise any election herein provided, shall in no way be considered to be a waiver of such provision, right or election, or in any way affect the validity of this Agreement. The exercise by any Party of an y right or election under the terms or covenants herein shall not preclude or prejudice any Party from exercising the same or any other right it may have under this Agreement, irrespective of any previous action or proceeding taken by the Parties hereunder .

13.8 **Force Majeure.** Neither Party shall be liable to the other Party nor be deemed to have defaulted under or breached this Agreement for non-performance or delay in performance to the extent caused by or resulting from causes beyond the reasonable control of such Party, potentially including, without limitation, wars (whether declared or not), hostilities, acts of terrorism, revolutions, riots, civil disturbances, national emergencies, strikes, lockouts, unavailability of supplies, shortage of raw material or energy, computer viruses, epidemics, fires, floods, earthquakes, other forces of nature, explosions, embargoes, or any other Acts of God, or any laws, proclamations, regulations, ordinances, or other acts omissions or delays in acting by any court, government or governmental agency or government authority or the other Party. Any occurrence of Force Majeure shall be reported by the affected Party to the other Party as soon as reasonably practicable, and the affected party shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

13.9 **Dispute Resolution and Arbitration.** The Parties shall negotiate in good faith and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof. In the event that any such dispute after such good faith negotiation cannot be resolved by their respective staff, said dispute shall be referred promptly to the CEO of STA, and the President and Chief Executive Officer of PUMA, who shall make a good faith effort to resolve the matter within [***] from the date of any such referral. If the matter has not been fully resolved utilizing the process set forth above, and a Party wishes to pursue the matter, each such dispute shall be finally resolved through binding arbitration in [***] administered by the [***] under its arbitration rules in force when the Notice of Arbitration is submitted, unless the Parties agree on another neutral location before any of the Parties has submitted a Notice of Arbitration. The tribunal shall consist of three arbitrators, with each Party appointing one arbitrator and the third arbitrator to be selected by mutual agreement of the two arbitrators appointed by the Parties. The language of the arbitration shall be English. The arbitrators shall have no authority to award punitive or any other type of damages not measured by a Party's compensatory damages. Each Party [***].

Except to the extent necessary to confirm an award or as may be required by law, neither a Party nor an arbitrator may disclose the existence, content, or results of an arbitration without the prior written consent of both Parties.

The Parties agree that, in the event of a dispute over the nature or quality of performance under this Agreement, neither Party may terminate this Agreement until final resolution of the dispute through arbitration or other judicial determination. Nothing in this Section 13.9 will preclude either Party from seeking interim or provisional relief from a court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief, concerning a dispute either prior to or during any arbitration if necessary to protect the interests of such Party or to preserve the status quo pending the arbitration proceeding.

Notwithstanding the Parties' agreement to arbitrate, unless the Parties agree in writing in any particular case, claims and disputes between the Parties relating to or arising out of, or for which re solution depends in whole or in part on a determination of the interpretation, scope, validity, enforceability or infringement of, Patents shall not be subject to arbitration under this Agreement, and the Parties may pursue whatever rights and remedies may be available to them under law or equity, including litigation in a court of competent jurisdiction, with respect to such claims and disputes.

13.10 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York without referring to conflicts of law principles.

13.11 **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

13.12 **Cumulative Remedies.** No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

13.13 **Waiver of Rule of Construction.** Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

13.14 **Certain Conventions.** Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement, unless otherwise indicated. Unless the context of this Agreement otherwise requires, (a) words of any gender include each other gender, (b) words such as "herein", "hereof", and "hereunder" refer to this Agreement as a whole and not merely to the particular provision in which such words appear, and (c) words using the singular shall include the plural, and vice versa.

13.15 **Business Day Requirements.** In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a Business Day then such notice or other action or omission shall be deemed to be required to be taken on the next occurring Business Day.

13.16 **Notices** . Any notice, request, demand, waiver, consent, approval or other communication permitted or required under this Agreement shall be in writing, shall refer specifically to this Agreement and shall be deemed given only if delivered by hand or sent by facsimi le transmission (with transmission confirmed) or by internationally recognized overnight delivery service that maintains records of delivery, addressed to the Parties at their respective addresses specified below or to such other address as the Party to wh om notice is to be given may have provided to the other Party in accordance with this Section 13.16 . Such notice shall be deemed to have been give n as of the date delivered by hand or transmitted by facsimile (with transmission confirmed) or on the third Business Day (at the place of delivery) after deposit with an internationally recognized overnight delivery service. Any notice delivered by facsi mile shall be confirmed by a hard copy delivered as soon as practicable thereafter. This Section 13.16 is not intended to govern the day-to-day bu siness communications necessary between the Parties in performing their obligations under the terms of this Agreement.

13.16.1 If to STA, to:

Specialised Therapeutics Asia Pte Ltd
50 Raffles Place #32-01, Singapore Land Tower,

Singapore, 048623
Attention: [***]
Facsimile: [***]

13.16.2 If to PUMA, to:

PUMA Biotechnology, Inc.
10880 Wilshire Blvd, Suite 2150
Los Angeles, CA 90024, USA
Attention: [***]
Facsimile: [***]

With copies to:

Latham & Watkins
650 Town Center Drive, 20 th Floor
Costa Mesa CA 92626-1925, USA
Attention: [***]

Latham & Watkins
140 Scott Drive
Menlo Park, CA 94025-1008, USA
Attention: [***]

13.17 **No Benefit to Third Parties.** The representations, warranties, covenants and agreements set forth in this Agreement are for the sole benefit of the Parties and their successors and permitted assigns, and they shall not be construed as conferring any rights on any other Persons.

13.18 **Export Control.** This Agreement is made subject to any restrictions concerning the export of products or technical information from the U.S. or other countries which may be imposed upon or related to PUMA or STA from time to time. Each Party agrees that it will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate agency or other governmental entity.

13.19 **Further Assurance.** Each Party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents and instruments, as may be necessary or as the other Party may reasonably request in connection with this Agreement or to carry out more effectively the provisions and purposes hereof, or to better assure and confirm unto such other Party its rights and remedies under this Agreement.

13.20 **Entire Agreement.** This Agreement, together with its Exhibits and other agreements and documents contemplated hereby, constitutes and contains the entire understanding and agreement of the Parties respecting the subject matter hereof and cancels and supersedes any and all prior and contemporaneous negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter. Notwithstanding the foregoing, to the extent the terms and conditions of the body of this Agreement conflict with the terms and conditions of any Exhibit hereto, the terms and conditions of the body of this Agreement shall govern. No terms or provisions of this Agreement will be varied or modified by any prior or subsequent statement, conduct or act of either of the Parties, except that the Parties may amend this Agreement by written instruments specifically referring to and executed in the same manner as this Agreement.

[SIGNATURE PAGE FOLLOWS. **]**

THIS AGREEMENT IS EXECUTED by the authorized representatives of the Parties as of the date first written above.

PUMA Biotechnology, Inc.

By: /s/ Alan H. Auerbach

Name: Alan H. Auerbach
Title: Chief Executive Officer

Specialised Therapeutics Asia Pte Ltd

By: /s/ Carlo Montagner

Name: Carlo Montagner
Title: Chief Executive Officer

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT A – LIC ENSED PATENTS

[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B – LI CENSED PRODUCT

[***]

INN: [***]

CAS-Number: [***]

CAS-Number: [***]

Company Code: [***]

Additional Codes: [***]

Chemical Name:

[***]

Formula:

Code		Formula	Salt form
[***]	[***]	[***]	[***]
		[***]	[***]
[***]	[***]	[***]	[***]

Chemical Structure:

[***]

EXHIBIT C – ONGOI NG CLINICAL TRIALS

[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT D – FORM OF A GREED PRESS RELEASE

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (as the same may from time to time be amended, modified, supplemented or restated, this " **Agreement** ") dated as of October 31, 2017 (the " **Effective Date** ") among SILICON VALLEY BANK, a California corporation with an office located at 3003 Tasman Drive, Santa Clara, CA 95054 (" **Bank** " or " **SVB** "), as administrative and collateral agent (in such capacities, " **Administrative Agent** " and " **Collateral Agent** ", respectively), the Lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time including SVB in its capacity as a Lender and OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 (" **Oxford** ") (each a " **Lender** " and collectively, the " **Lenders** "), and PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (" **Borrower** "), provides the terms on which the Lenders shall lend to Borrower and Borrower shall repay the Lenders. The parties agree as follows:

1. ACCOUNTING AND OTHER TERMS

1.1 Accounting terms not defined in this Agreement shall be construed in accordance with GAAP. Calculations and determinations must be made in accordance with GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. All references to " **Dollars** " or " **$** " are United States Dollars, unless otherwise noted.

2. LOANS AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay each Lender, the outstanding principal amount of all Term Loans advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 Term Loans .

(a) Availability . (i) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Effective Date in an aggregate amount of Fifty Million Dollars ($50,000,000.00) according to each Lender's Term A Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a " **Term A Loan** ", and collectively as the " **Term A Loans** "). After repayment, no Term A Loan may be re-borrowed.

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Second Draw Period, to make term loans to Borrower in an aggregate amount equal to Fifty Million Dollars ($50,000,000.00) according to each Lender's Term B Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a " **Term B Loan** ", and collectively as the " **Term B Loans** "; each Term A Loan or Term B Loan is hereinafter referred to singly as a " **Term Loan** " and the Term A Loans and the Term B Loans are hereinafter referred to collectively as the " **Term Loans** "). After repayment, no Term B Loan may be re-borrowed.

(b) Repayment . Borrower shall make monthly payments of interest only commencing on the first (1 st) Payment Date following the Funding Date of each Term Loan, and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date. Borrower agrees to pay, on the Funding Date of each Term Loan, any initial partial monthly interest payment otherwise due for the period between the Funding Date of such Term Loan and the first Payment Date thereof. Commencing on the Amortization Date, and continuing on the Payment Date of each month thereafter, Borrower shall make consecutive equal monthly payments of principal, together with applicable interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender's Term Loan, (2) the effective rate of interest, as determined in Section 2.3(a), and (3) a repayment schedule equal to thirty-six (36) months. All unpaid principal and accrued and unpaid interest

with respect to each Term Loan is due and payable in full on the Maturity Date. Each Term Loan may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(c) Mandatory Prepayments . If the Term Loans are accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of: (i) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (ii) the Final Payment, (iii) the Prepayment Fee, plus (iv) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts. Notwithstanding (but without duplication with) the foregoing, on the Maturity Date, if the Final Payment had not previously been paid in full in connection with the prepayment of the Term Loans in full, Borrower shall pay to Collateral Agent, for payment to each Lender in accordance with its respective Pro Rata Share, the Final Payment in respect of the Term Loan(s).

(d) Permitted Prepayment of Term Loans . Borrower shall have the option to prepay all, but not less than all, of the Term Loans advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans at least ten (10) Business Days prior to such prepayment, and (ii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of (A) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (B) the Final Payment, (C) the Prepayment Fee, plus (D) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts.

2.3 Payment of Interest on the Credit Extensions .

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Term Loans shall accrue interest at a floating per annum rate equal to the Basic Rate, determined by Collateral Agent on the Funding Date of the applicable Term Loan, which interest shall be payable monthly in arrears in accordance with Sections 2.2(b) and 2.3(e). Interest shall accrue on each Term Loan commencing on, and including, the Funding Date of such Term Loan, and shall accrue on the principal amount outstanding under such Term Loan through and including the day on which such Term Loan is paid in full.

(b) Default Rate . Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall accrue interest at a floating per annum rate equal to the rate that is otherwise applicable thereto plus five percentage points (5.00%) (the " **Default Rate** "). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 360-Day Year . Interest shall be computed on the basis of a three hundred sixty (360) day year, and the actual number of days elapsed.

(d) Debit of Accounts . Collateral Agent and each Lender may debit (or ACH) the Designated Deposit Account, and second, any other deposit accounts maintained by Borrower, for principal and interest payments or any other amounts Borrower owes Collateral Agent or the Lenders under the Loan Documents when due. Any such debits (or ACH activity) shall not constitute a set-off.

(e) Payments . Except as otherwise expressly provided herein, all payments by Borrower under the Loan Documents shall be made to the respective Lender to which such payments are owed, at such Lender's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on the Payment Date of each month. Payments of principal and/or interest received after 2:00 p.m. Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

2.4 Secured Promissory Notes. The Term Loans shall be evidenced by a Secured Promissory Note or Notes in the form attached as Exhibit D hereto (each a " **Secured Promissory Note** "), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Term Loan or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note Record reflecting the making of such Term Loan or (as the case may be) the receipt of such payment. Absent manifest error, the outstanding amount of each Term Loan set forth on such Lender's Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's Secured Promissory Note Record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender as to the loss, theft, destruction, or mutilation of its Secured Promissory Note **,** Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

2.5 Fees. Borrower shall pay to Collateral Agent:

(a) Facility Fee . A fully earned, non-refundable facility fee of Seven Hundred Fifty Thousand Dollars ($750,000.00) to be shared between the Lenders pursuant to their respective Commitment Percentages payable on the Effective Date;

(b) Final Payment . The Final Payment, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares;

(c) Arrangement Fee . A fully earned, non-refundable arrangement fee of Seven Hundred Fifty Thousand Dollars ($750,000.00) payable to the Collateral Agent on the Effective Date;

(d) Prepayment Fee . The Prepayment Fee, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares; and

(e) Lenders' Expenses . All Lenders' Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

2.6 Withholding. Payments received by the Lenders from Borrower hereunder will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any governmental authority (including any interest, additions to tax or penalties applicable thereto). Specifically, however, if at any time any Governmental Authority, applicable law, regulation or international agreement requires Borrower to make any withholding or deduction from any such payment or other sum payable hereunder to the Lenders, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, each Lender receives a net sum equal to the sum which it would have received had no withholding or deduction been required and Borrower shall pay the full amount withheld or deducted to the relevant Governmental Authority. Borrower will, upon request, furnish the Lenders with proof reasonably satisfactory to the Lenders indicating that Borrower has made such withholding payment; provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings and as to which payment in full is bonded or reserved against by Borrower. The agreements and obligations of Borrower contained in this Section 2.6 shall survive the termination of this Agreement.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. Each Lender's obligation to make a Term A Loan is subject to the condition precedent that Administrative Agent and each Lender shall consent to or shall have received, in form and substance satisfactory to Administrative Agent and each Lender, such documents, and

completion of such other matters, as Administrative Agent and each Lender may reasonably deem necessary or appropriate, including, without limitation:

(a) original Loan Documents, each duly executed by Borrower;

(b) duly executed original Control Agreements with respect to any Collateral Accounts maintained by Borrower or any of its domestic Subsidiaries;

(c) duly executed original Secured Promissory Notes in favor of each Lender according to its Term A Loan Commitment Percentage;

(d) the certificate for the Shares, together with Assignment Separate from Certificate, duly executed in blank;

(e) the Operating Documents of Borrower and its Subsidiaries and good standing certificates of Borrower certified by the Secretary of State (or equivalent agency) of Borrower's jurisdiction of organization or formation and each jurisdiction in which Borrower is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(f) a completed Perfection Certificate for Borrower;

(g) the Annual Projections, for the current calendar year;

(h) duly executed original officer's certificate for Borrower that is a party to the Loan Documents, in a form acceptable to Administrative Agent and the Lenders;

(i) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(j) a landlord's consent executed in favor of Collateral Agent in respect of all of Borrower's and each Subsidiaries' leased locations;

(k) a bailee waiver executed in favor of Collateral Agent in respect of each third party bailee where Borrower or any Subsidiary maintains Collateral having a book value in excess of Five Hundred Thousand Dollars ($500,000.00);

(l) a duly executed legal opinion of counsel to Borrower dated as of the Effective Date;

(m) evidence satisfactory to Administrative Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Lenders; and

(n) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.2 Conditions Precedent to all Credit Extensions. The obligation of each Lender to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

(a) receipt by (i) the Lenders of an executed Disbursement Letter in the form of Exhibit B-1 attached hereto; and (ii) SVB of an executed Loan Payment/Advance Request Form in the form of Exhibit B-2 attached hereto;

(b) the representations and warranties in Section 5 hereof shall be true, accurate and complete in all material respects on the date of the Disbursement Letter (and the Loan Payment/Advance Request Form) and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in Section 5 hereof are true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;

(c) in such Lender's sole but reasonable discretion, there has not been any Material Adverse Change;

(d) to the extent not delivered at the Effective Date, duly executed original Secured Promissory Notes, in number, form and content acceptable to each Lender, and in favor of each Lender according to its Commitment Percentage, with respect to each Credit Extension made by such Lender after the Effective Date; and

(e) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.3 Covenant to Deliver. Borrower agrees to deliver to Administrative Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Administrative Agent or any Lender of any such item shall not constitute a waiver by Administrative Agent or any Lender of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in each Lender's sole but reasonable discretion.

3.4 Procedures for Borrowing. Subject to the prior satisfaction of all other applicable conditions to the making of a Term Loan set forth in this Agreement, to obtain a Term Loan, Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 2:00 p.m. Eastern time five (5) Business Days prior to the date the Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to the Lenders by electronic mail or facsimile a completed Disbursement Letter (and the Loan Payment/Advance Request Form, with respect to SVB) executed by a Responsible Officer or his or her designee. The Lenders may rely on any telephone notice given by a person whom a Lender reasonably believes is a Responsible Officer or designee. On the Funding Date, each Lender shall credit and/or transfer (as applicable) to the Designated Deposit Account, an amount equal to its Term Loan Commitment.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Collateral Agent, for the ratable benefit of the Lenders, and to each Lender, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Agent, for the ratable benefit of the Lenders, and to each Lender, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral, subject only to Permitted Liens that are permitted by the terms of this Agreement to have priority to Collateral Agent's or each Lender's Lien. If Borrower shall acquire a commercial tort claim (as defined in the Code) greater than Two Hundred Fifty Thousand Dollars ($250,000.00), Borrower, shall promptly notify Collateral Agent in a writing signed by Borrower, as the case may be, of the general details thereof (and further details as may be required by Collateral Agent) and grant to Collateral Agent, for the ratable benefit of the Lenders, and to each Lender, in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that may have superior priority to Bank's Lien in this Agreement).

If this Agreement is terminated, Collateral Agent's and each Lender's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as the Lenders' obligation to make Credit Extensions has terminated, Collateral Agent and each Lender shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (y) this Agreement is terminated, Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment consistent with Bank's then current practice for Bank Services, if any. Upon payment in full in Cash of the Obligations (other than inchoate indemnity obligations) and at such time as each Lender's obligations to make Credit Extensions has terminated, Collateral Agent and each Lender, shall, at Borrower's sole cost and expense and at Borrower's written request, take such action reasonably requested by Borrower in order to cause such Liens to be terminated of record (including filing UCC-3 or similar termination statements with respect to such Liens) and all rights therein shall revert to Borrower. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then one hundred five percent (105%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then one hundred ten percent (110%), of the Dollar Equivalent of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment), to secure all of the Obligations relating to such Letters of Credit.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Collateral Agent and each Lender, to file financing statements or take any other action required to perfect Collateral Agent's and each Lender's, security interests in the Collateral, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Collateral Agent's and each Lender's, interest or rights under the Loan Documents.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Collateral Agent, for the ratable benefit of the Lenders, and to each Lender, a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Effective Date, or, to the extent not certificated as of the Effective Date, within ten (10) days of the certification of any Shares, the certificate or certificates for the Shares will be delivered to Collateral Agent, accompanied by an instrument of assignment duly executed in blank by Borrower. To the extent required by the terms and conditions governing the Shares, Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence and during the continuance of an Event of Default hereunder, Collateral Agent and Lenders may affect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Collateral Agent and Lenders and cause new (as applicable) certificates representing such securities to be issued in the name of Collateral Agent and Lenders or their transferees. Borrower will execute and deliver such documents, and take or cause to be taken such actions, as Collateral Agent or any Lender may reasonably request to perfect or continue the perfection of Collateral Agent's and each Lender's, security interest in the Shares. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants to Administrative Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing as a Registered Organization in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with this Agreement, Borrower and each of its Subsidiaries has delivered to Collateral Agent a completed perfection certificate signed by an officer of Borrower or such Subsidiary (each a " **Perfection Certificate** " and collectively, the " **Perfection Certificates** "). Borrower represents and warrants that (a) Borrower and each of its Subsidiaries' exact legal name is that which is indicated on its respective Perfection Certificate and on the signature page of each Loan Document to which it is a party; (b) Borrower and each of its Subsidiaries is an organization of the type and is organized in the jurisdiction set forth on its respective Perfection Certificate; (c) each Perfection Certificate accurately sets forth each of Borrower's and its Subsidiaries' organizational identification number or accurately states that Borrower or such Subsidiary has none; (d) each Perfection Certificate accurately sets forth Borrower's and each of its Subsidiaries' place of business, or, if more than one, its chief executive office as well as Borrower's and each of its Subsidiaries' mailing address (if different than its chief executive office); (e) Borrower and each of its Subsidiaries (and each of its respective predecessors) have not, in the past five (5) years, changed its jurisdiction of organization, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificates pertaining to Borrower and each of its Subsidiaries, is accurate and complete in all material respects (it being understood and agreed that Borrower and each of its Subsidiaries may from time to time update certain information in the Perfection Certificates (including the information set forth in clause (d) above) after the Effective Date to the extent permitted by one or more specific provisions in this Agreement); such updated Perfection Certificates subject to the review and approval of Collateral Agent. If Borrower or any of its Subsidiaries is not now a Registered Organization but later becomes one, Borrower shall notify Collateral Agent of such occurrence and provide Collateral Agent with such Person's organizational identification number within five (5) Business Days of receiving such organizational identification number.

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any material applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected, (iv) require any material action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect) or are being obtained pursuant to Section 6.1(b), or (v) constitute an event of default under any material agreement by which Borrower or any of such Subsidiaries, or their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each of its Subsidiaries have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any of its Subsidiaries have any Deposit Accounts, Securities Accounts, Commodity Accounts or other investment accounts other than the Collateral Accounts or the other investment accounts, if any, described in the Perfection Certificates delivered to Collateral Agent in connection herewith with respect of which Borrower or such Subsidiary has given Collateral Agent notice and taken such actions as are necessary to give Collateral Agent a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

(b) On the Effective Date, and except as disclosed on the Perfection Certificate (i) the Collateral is not in the possession of any third party bailee (such as a warehouse), and (ii) no such third party bailee

possesses components of the Collateral with replacement value in excess of Five Hundred Thousand Dollars ($500,000.00). None of the components of the Collateral shall be maintained at locations other than as disclosed in the Perfection Certificates on the Effective Date or as permitted pursuant to Section 6.11.

(c) All Inventory is in all material respects of good and marketable quality, free from material defects.

(d) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own, free and clear of all Liens other than Permitted Liens. Except as noted on the Perfection Certificates or as otherwise disclosed pursuant to the terms of this Agreement, neither Borrower nor any of its Subsidiaries is a party to, nor is bound by, any material license or other material agreement with respect to which Borrower or such Subsidiary is the licensee that (i) prohibits or otherwise restricts Borrower or its Subsidiaries from granting a security interest in Borrower's or such Subsidiaries' interest in such material license or material agreement or any other property, or (ii) for which a default under or termination of could interfere with Collateral Agent's or any Lender's right to sell any Collateral.

5.3 Litigation. Except as disclosed (i) on the Perfection Certificates, or (ii) in accordance with Section 6.9 hereof, there are no actions, suits, investigations, or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than Five Hundred Thousand Dollars ($500,000.00).

5.4 No Material Deterioration in Financial Condition; Financial Statements. All consolidated financial statements for Borrower and its Subsidiaries, delivered to Administrative Agent fairly present, in conformity with GAAP, in all material respects the consolidated financial condition of Borrower and its Subsidiaries, and the consolidated results of operations of Borrower and its Subsidiaries. There has not been any material deterioration in the consolidated financial condition of Borrower and its Subsidiaries since the date of the most recent financial statements submitted to any Lender.

5.5 Solvency. Borrower and each of its Subsidiaries is Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' properties or assets has been used by Borrower or such Subsidiary or, to Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

None of Borrower, any of its Subsidiaries, or any of Borrower's or its Subsidiaries' Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower and any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.7 Investments . Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries has timely filed all required tax returns and reports, and Borrower and each of its Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower and such Subsidiaries, in all jurisdictions in which Borrower or any such Subsidiary is subject to taxes, including the United States, unless such taxes are being contested in accordance with the following sentence. Borrower and each of its Subsidiaries, may defer payment of any contested taxes, provided that Borrower or such Subsidiary, (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Collateral Agent in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the Governmental Authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a " **Permitted Lien** ." Neither Borrower nor any of its Subsidiaries is aware of any claims or adjustments proposed for any of Borrower's or such Subsidiaries', prior tax years which could result in additional taxes in excess of One Hundred Thousand Dollars ($100,000.00) becoming due and payable by Borrower or its Subsidiaries. Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries have, withdrawn from participation in, and have not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority. For purposes of this Section 5.8, "foreign, federal, state, and local tax, assessments, deposits and contributions" shall mean foreign, federal, state, and local taxes, assessments, deposits and contributions exceeding in the aggregate One Hundred Thousand Dollars ($100,000.00) in any fiscal year.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes.

5.10 Shares. Borrower has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. To Borrower's knowledge, there are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.11 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement given to Administrative Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Administrative Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not materially misleading (it being recognized that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.12 Definition of " Knowledge. " For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower's knowledge or awareness, to the "best of" Borrower's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent for the ratable benefit of the Lenders, and each Lender, in all of the Collateral. Borrower shall promptly provide copies to Administrative Agent of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries.

6.2 Financial Statements, Reports, Certificates.

(a) Deliver to each Lender:

(i) as soon as available, but no later than forty-five (45) days after the last day of each quarter, a company prepared consolidated and consolidating (if prepared) balance sheet, income statement and cash flow statement covering the consolidated operations of Borrower and its Subsidiaries for such month certified by a Responsible Officer and in a form reasonably acceptable to Collateral Agent;

(ii) as soon as available, but no later than ninety (90) days after the last day of Borrower's fiscal year or within five (5) days of filing with the SEC, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion (other than with respect to going concern so long as no Event of Default has occurred and is continuing) on the financial statements from an independent certified public accounting firm acceptable to Collateral Agent in its reasonable discretion **;**

(iii) as soon as available after approval thereof by Borrower's Board of Directors, but no later than thirty (30) days after the last day of each of Borrower's fiscal years, Borrower's annual financial projections for the entire current fiscal year as approved by Borrower's Board of Directors, which such annual financial projections shall be set forth in a month-by-month format (such annual financial projections as originally delivered to Collateral Agent and the Lenders are referred to herein as the " **Annual Projections** "; provided that, any revisions of the Annual Projections approved by Borrower's Board of Directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval);

(iv) within five (5) days of delivery, copies of all non-ministerial statements, reports and notices made available to Borrower's security holders or holders of Subordinated Debt;

(v) in the event that Borrower becomes subject to the reporting requirements under the Securities Exchange Act of 1934, as amended, within five (5) days of filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission; provided , however, that notwithstanding anything herein to the contrary, the posting of a link on Borrower's website on the internet to any annual, regular, periodic and special reports, registration statements and notices shall satisfy the delivery requirements hereunder so long as Borrower has provided Lenders with prior written notice of such link on the Borrower's website;

(vi) prompt notice of any material amendments of or other changes to the Operating Documents of Borrower or any of its Subsidiaries, together with any copies reflecting such amendments or changes with respect thereto;

(vii) prompt notice of any event that could reasonably be expected to materially and adversely affect the value of the Intellectual Property;

(viii) as soon as available, but no later than forty-five (45) days after the last day of each quarter, copies of the quarter-end account statements for each Collateral Account maintained by Borrower or its Subsidiaries, which statements may be provided to Collateral Agent and each Lender by Borrower or directly from the applicable institution(s), and

(ix) other information as reasonably requested by Administrative Agent, Collateral Agent or any Lender.

Notwithstanding the foregoing, documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the internet at Borrower's website address.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a)(i) above but no later than forty-five (45) days after the last day of each quarter, deliver to each Lender, a duly completed Compliance Certificate signed by a Responsible Officer.

(c) Keep proper books of record and account in accordance with GAAP in all material respects, in which full, true and correct entries shall be made of all dealings and transactions in relation to its business and activities. Borrower shall, and shall cause each of its Subsidiaries to, allow, at the sole cost of Borrower, Administrative Agent, Collateral Agent or any Lender, during regular business hours upon reasonable prior notice (provided that no notice shall be required when an Event of Default has occurred and is continuing), to visit and inspect any of its properties, to examine and make abstracts or copies from any of its books and records, and to conduct a collateral audit and analysis of its operations and the Collateral. Such audits shall be conducted no more often than once every year unless (and more frequently if) an Event of Default has occurred and is continuing.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects except for Inventory for which adequate reserves have been made. Returns and allowances between Borrower, or any of its Subsidiaries, and their respective Account Debtors shall follow Borrower's, or such Subsidiary's, customary practices as they exist at the Effective Date. Borrower must promptly notify Collateral Agent and the Lenders of all returns, recoveries, disputes and claims that involve more than Five Hundred Thousand Dollars ($500,000.00) individually or in the aggregate in any calendar year.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely file, all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.8 hereof, and shall deliver to Collateral Agent and Lenders, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans. Notwithstanding anything to the contrary contained in this Section 6.4, Borrower shall not be in breach of this Section 6.4 unless the aggregate amount of taxes covered by tax returns and reports that have not been filed, together with the aggregate amount of taxes that have not been timely paid, exceeds Fifty Thousand Dollars ($50,000.00).

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location and as Collateral Agent may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Collateral Agent and Lenders. All property policies shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee and waive subrogation against Collateral Agent, and all liability policies shall show, or have endorsements showing, Collateral Agent, as additional insured. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent, that it will give the Collateral Agent thirty (30) days prior written notice before any such policy or policies shall be materially altered or

canceled. At Collateral Agent's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any policy shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any property policy up to One Million Dollars ($1,000,000.00) with respect to any loss, but not exceeding One Million Dollars ($1,000,000.00), in the aggregate for all losses under all property policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Collateral Agent has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such property policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons, Collateral Agent and/or any Lender may make, at Borrower's expense, all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Maintain all of Borrower's and its domestic U.S. Subsidiaries' primary asset management Accounts with Bank or its Affiliates in accounts which are subject to a Control Agreement in favor of Collateral Agent and Lenders.

(b) Borrower shall provide Collateral Agent five (5) days' prior written notice before Borrower or any of its domestic Subsidiaries establishes any Collateral Account at or with any Person other than Bank or its Affiliates. In addition, for each Collateral Account that Borrower or any of its domestic Subsidiaries, at any time maintains, Borrower or such Subsidiary shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's and each Lender's Lien in such Collateral Account in accordance with the terms hereunder prior to the establishment of such Collateral Account, which Control Agreement may not be terminated without prior written consent of Collateral Agent. The provisions of the previous sentence shall not apply to (a) any accounts established (or otherwise maintained) solely with respect to 401(k) accounts, flexible spending reimbursement accounts and insurance accounts for the payment of employee health claims, (b) any trust accounts established (or otherwise maintained) solely with respect to withholding taxes and all payroll accounts (which are solely for such purposes), (c) any fiduciary or escrow accounts and (d) any disbursement accounts established solely for the payment of medical, dental, disability or other similar expenses in connection with insurance or benefit programs for the benefit of Borrower's, or any of its Subsidiaries', employees and identified to Collateral Agent by Borrower as such in the Perfection Certificates.

(c) Neither Borrower nor any of its domestic Subsidiaries shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with Sections 6.6(a) and (b).

6.7 Protection of Intellectual Property Rights. Borrower and each of its Subsidiaries shall: (a) use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to Borrower's business; (b) promptly advise Collateral Agent in writing of material infringement by a third party of its Intellectual Property; and (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent.

6.8 Litigation Cooperation. Commencing on the Effective Date and continuing through the termination of this Agreement, make available to Administrative Agent and the Lenders, without expense to Administrative Agent or the Lenders, Borrower and each of Borrower's officers, employees and agents and Borrower's Books, to the extent that Administrative Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Administrative Agent, Collateral Agent or any Lender with respect to any Collateral or relating to Borrower.

6.9 Notices of Litigation and Default. Borrower will give prompt written notice to Administrative Agent and the Lenders of any litigation or governmental proceedings pending or threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of Five Hundred Thousand Dollars ($500,000.00) or more or which could reasonably be expected to have a Material Adverse Change. Without limiting or contradicting any other more specific provision of this Agreement, promptly (and in any event within three (3) Business Days) upon Borrower becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, Borrower shall give written notice to Administrative Agent and the Lenders of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default.

6.10 Minimum Revenue. Borrower shall achieve revenue (determined in accordance with GAAP), measured as of the last day of each fiscal quarter on a trailing three (3) month basis (i) greater than or equal to seventy percent (70%) of the revenue target (as set forth in the Annual Projections delivered to Administrative Agent and the Lenders pursuant to Section 3.1(g) hereof and as set forth on Annex I attached hereto) for the 2017 fiscal year, (ii) greater than or equal to fifty percent (50%) of the revenue target (as set forth in Borrower's 2018 fiscal year projections delivered to Administrative Agent and the Lenders in accordance with Section 6.2(a)(iii) hereof by no later than January 30, 2018) for the 2018 fiscal year, and (iii) greater than or equal to fifty percent (50%) of the revenue target (as set forth in Borrower's 2019 fiscal year projections delivered to Administrative Agent and the Lenders in accordance with Section 6.2(a)(iii) hereof by no later than January 30, 2019) for the 2019 fiscal year. New minimum revenue levels for each subsequent fiscal year shall be set by the mutual agreement of Borrower, Administrative Agent and the Lenders based on the projections delivered by Borrower to Bank pursuant to Section 6.2(a)(iii) hereof and pursuant to an amendment to this Agreement which Borrower hereby agrees to execute no later than February 28th of each year. Such revenue projections shall be acceptable to Administrative Agent and the Lenders in their sole but reasonable discretion and in any case shall show year over year revenue growth (at a rate to be reasonably agreed) and it shall be an immediate Event of Default if Borrower, Administrative Agent and the Lenders (in each case acting reasonably) fail to enter into the aforementioned amendment on or prior to February 28th of each year.

6.11 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its domestic U.S. Subsidiaries, after the Effective Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral with, or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then Borrower or such Subsidiary will first notify, no later than twenty (20) days prior to moving into such new location, the Collateral Agent and, in the event that the Collateral at any new location is valued in excess of Five Hundred Thousand ($500,000.00) in the aggregate, such bailee or landlord, as applicable, must execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent prior to the addition of any new offices or business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.12 Creation/Acquisition of Subsidiaries. In the event Borrower, or any of its Subsidiaries creates or acquires any Subsidiary after the Effective Date, Borrower shall provide prior written notice to Collateral Agent and each Lender of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Collateral Agent or any Lender to cause each such Subsidiary to become a co-Borrower hereunder or to guarantee the Obligations of Borrower under the Loan Documents and, in each case, grant a continuing pledge and security interest in and to the assets of such Subsidiary (substantially as described on Exhibit A hereto); and Borrower (or its Subsidiary, as applicable) shall grant and pledge to Collateral Agent, for the ratable benefit of the Lenders, and to each Lender, a perfected security interest in the Shares; provided, however, that solely in the circumstance in which Borrower or any Subsidiary creates or acquires a Foreign Subsidiary, (i) such Foreign Subsidiary shall not be required to guarantee the Obligations of Borrower under the Loan Documents and grant a continuing pledge and security interest in and to the assets of such Foreign Subsidiary, and (ii) Borrower shall not be required to grant and pledge to Collateral Agent, for the ratable benefit of Lenders, and to each Lender, a perfected security interest in more than sixty-five percent (65%) of the stock, units or other evidence of ownership of such Foreign Subsidiary, if Borrower demonstrates to the reasonable satisfaction of Collateral Agent Lenders that such Foreign Subsidiary providing such guarantee or pledge and security interest or Borrower providing a perfected security interest in more than sixty-five percent (65%) of the stock, units or other evidence of ownership would create a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code.

6.13 Further Assurances .

(a) Execute any further instruments and take further action as Administrative Agent, Collateral Agent or any Lender reasonably requests to perfect or continue Collateral Agent's and each Lender's Lien in the Collateral or to effect the purposes of this Agreement.

(b) Deliver to Collateral Agent and Lenders, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Borrower's business or otherwise could reasonably be expected to have a Material Adverse Change.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries to, do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, " **Transfer** "), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn out or obsolete Equipment; (c) in connection with Permitted Liens, Permitted Investments and Permitted Licenses; (d) of cash and Cash Equivalents in connection with transactions not prohibited hereunder, in the ordinary course of business, and approved by the Borrower's Board of Directors; and (e) the Transfer of other assets for fair market value not to exceed Five Hundred Thousand Dollars ($500,000.00) in the aggregate.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses engaged in by Borrower as of the Effective Date or reasonably related thereto; (b) liquidate or dissolve; or (c) (i) any Key Person shall cease to be actively engaged in the management of Borrower unless written notice thereof is provided to Collateral Agent within ten (10) days of such change, or (ii) have a Change in Control. Borrower shall not, without at least twenty (20) days' prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations (ii) contain less than Two Hundred Fifty Thousand Dollars ($250,000.00) in assets or property of Borrower or any of its Subsidiaries and (ii) are not Borrower's or its Subsidiaries' chief executive office); (B) change its jurisdiction of organization, (C) change its organizational structure or type, (D) change its legal name, or (E) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock, shares or property of another Person, except (i) for Permitted Acquisitions, and (ii) that a Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a "co-Borrower" hereunder or has provided a secured Guaranty of Borrower's Obligations hereunder) or with (or into) Borrower provided Borrower is the surviving legal entity, and as long as no Event of Default is occurring prior thereto or arises as a result therefrom.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, or permit any Collateral not to be subject to the first priority security interest granted herein (except for Permitted Liens that are permitted by the terms of this Agreement to have priority over Collateral Agent's or any Lender's Lien or Liens arising by an agreement to the extent permitted hereunder and in respect of clauses (c) through (f), (h), (j), and (k) in the definition of Permitted Liens that may have priority over Collateral Agent's Lien), or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Agent, for the ratable benefit of the Lenders, or any Lender) with any Person which directly or indirectly prohibits or has

the effect of prohibiting Borrower, or any of its Subsidiaries, from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or such Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of " **Permitted Liens** " herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6 hereof.

7.7 Distributions; Investments. (a) Pay any dividends (other than dividends payable solely in capital stock or dividends by a Subsidiary of Borrower to Borrower) or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock in cash, except that Borrower may (i) repurchase the stock of former employees, consultants and directors pursuant to stock repurchase agreements entered into by Borrower in the ordinary course of business, as long as an Event of Default does not exist and is not continuing prior to such repurchase or would not exist after giving effect to such repurchase, and (ii) repurchase the stock of former employees, consultants and directors pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees to Borrower regardless of whether an Event of Default exists; not to exceed Five Hundred Thousand Dollars ($500,000.00) in the aggregate per fiscal year for (i) and (ii), above; or (b) directly or indirectly make any Investment other than Permitted Investments or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) Subordinated Debt or equity investments by Borrower's investors in Borrower or its Subsidiaries and (c) compensation and benefit arrangements (including the granting of options or other equity compensation arrangements) and any indemnification arrangements with employees, officers, directors or consultants approved by, or pursuant to, any plan approved by the Board of Directors of Borrower in the ordinary course of business and consistent with past practices.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to the Lenders.

7.10 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Change, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.11 Compliance with Anti-Terrorism Laws. Administrative Agent hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Administrative Agent's policies and practices, Administrative Agent is required to obtain, verify and record certain information and documentation that identifies Borrower and each of its Subsidiaries and their principals, which information includes the name and address of Borrower and each of its Subsidiaries and their principals and such other information that will allow Administrative Agent to identify such party in accordance with Anti-Terrorism Laws. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Borrower and each of its Subsidiaries shall immediately notify Administrative Agent if Borrower or such Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC

Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti -Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti -Terrorism Law.

7.12 Puma UK Assets . Permit the aggregate value of cash, Cash Equivalents and other assets held by Puma UK to exceed Two Million Dollars ($2,000,000.00) (or equivalent) at any time.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an " **Event of Default** ") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1 (a) hereof). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) Borrower or any of its Subsidiaries fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.7 (Protection of Intellectual Property Rights), 6.9 (Notice of Litigation and Default), 6.10 (Minimum Revenue), 6.11 (Landlord Waivers; Bailee Waivers), or 6.12 (Creation/Acquisition of Subsidiaries) or Borrower violates any covenant in Section 7 ; or

(b) Borrower, or any of its Subsidiaries, fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within twenty (20) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the twenty (20) day period or cannot after diligent attempts by Borrower be cured within such twenty (20) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this Section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

8.3 Material Adverse Change. A Material Adverse Change occurs;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries or of any entity under control of Borrower or its Subsidiaries on deposit with any Lender or any Lender's Affiliate or any bank or other institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment is filed against Borrower or any of its Subsidiaries or their respective assets by any government agency, and the same under subclauses (i) and (ii) hereof

are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting any part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is or becomes Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while Borrower or any Subsidiary is Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Thousand Dollars ($500,000.00) or that could reasonably be expected to have a Material Adverse Change;

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars ($500,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order or decree);

8.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Administrative Agent and/or Lenders or to induce Administrative Agent and/or the Lenders to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower or any of its Subsidiaries and any creditor of Borrower or any of its Subsidiaries that signed a subordination, intercreditor, or other similar agreement with Collateral Agent or the Lenders, or any creditor that has signed such an agreement with Collateral Agent or the Lenders breaches any terms of such agreement;

8.10 Guaranty. (a) Any Guaranty terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty; (c) any circumstance described in Sections 8.3, 8.4, 8.5, 8.7, or 8.8 occurs with respect to any Guarantor, or (d) the liquidation, winding up, or termination of existence of any Guarantor;

8.11 Governmental Approvals. Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course for a full term *and* such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Change; or

8.12 Lien Priority . Any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected Lien on any of the Collateral purported to be secured thereby, subject to no prior or equal Lien, other than Permitted Liens which are permitted to have priority in accordance with the terms of this Agreement; provided that such circumstance is not due to Collateral Agent's failure to file an appropriate continuation financing statement, amendment financing statement or initial financing statement.

8.13 Delisting . The shares of common stock of Borrower are delisted from NASDAQ Capital Market because of failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on any other nationally recognized stock exchange in the United States having listing standards at least as restrictive as the NASDAQ Capital Market.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Administrative Agent may, and at the written direction of Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Administrative Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Administrative Agent and/or the Lenders (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Administrative Agent and/or the Lenders shall be immediately terminated without any action by Administrative Agent or the Lenders).

(b) Without limiting the rights of Administrative Agent, Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) apply to the Obligations any (a) balances and deposits of Borrower that Collateral Agent or any Lender holds or controls, or (b) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of Borrower; and/or

(iii) commence and prosecute an Insolvency Proceeding or consent to Borrower commencing any Insolvency Proceeding.

(c) Without limiting the rights of Administrative Agent, Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing Borrower money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Collateral Agent requests and make it available in a location as Collateral Agent reasonably designates. Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, the Collateral. Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any account maintained with Administrative Agent, Collateral Agent or the Lenders and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries;

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Administrative Agent, Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof);

(viii) for any Letters of Credit, demand that Borrower (i) deposit cash with Bank in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then one hundred five percent (105%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then one hundred ten percent (110%), of the Dollar Equivalent of the aggregate face amount of all Letters of Credit remaining undrawn (plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment)), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit; and

(ix) terminate any FX Contracts.

9.2 Power of Attorney. Borrower hereby irrevocably appoints Collateral Agent as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's or any of its Subsidiaries' name on any checks or other forms of payment or security; (b) sign Borrower's or any of its Subsidiaries' name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Borrower hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower's or any of its Subsidiaries' name on any documents necessary to perfect or continue the perfection of Collateral Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Collateral Agent and the Lenders are under no further obligation to make Credit Extensions hereunder. Collateral Agent's foregoing appointment as Borrower's or any of its Subsidiaries' attorney in fact, and all of Collateral Agent's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Administrative Agent's, Collateral Agent's and the Lenders' obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders' Expenses and immediately due and payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between Borrower on the one hand and the Administrative Agent, Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lenders' Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of Borrower owing to the Administrative Agent, Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender's portion of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by Borrower. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to the Administrative Agent, Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders' claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Collateral Agent and other Lenders for purposes of perfecting Collateral Agent's security interest therein.

9.5 Liability for Collateral. So long as the Administrative Agent, Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by the Administrative Agent, Collateral Agent or any Lender, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of the Administrative Agent, Collateral Agent or any Lender thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by the Administrative Agent, Collateral Agent and the Required Lenders and then is only effective for the specific instance and purpose for which it is given. The rights and remedies of the Administrative Agent, Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. The Administrative Agent, Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by the Administrative Agent, Collateral Agent or any Lender of one right or remedy is not an election, and the Administrative Agent, Collateral Agent's or any Lender's waiver of any Event of Default is not a continuing waiver. The Administrative Agent's, Collateral Agent's or any Lender's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives, to the fullest extent permitted by law, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by the Administrative Agent, Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

Other than as provided in Section 6.2(a), all notices, consents, requests, approvals, demands, or other communication (collectively, " **Communication** ") by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by facsimile transmission or email; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Any of the Administrative Agent, Collateral Agent, Lender or Borrower may change its mailing or email address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower:	PUMA BIOTECHNOLOGY, INC. 10880 Wilshire Blvd., Ste. 2150 Los Angeles, CA 90024 Attn: [***] Fax: [***] Email: [***]
with a copy (which shall not constitute notice) to:	LATHAM & WATKINS LLP 355 South Grand Avenue, Suite 100 Los Angeles, CA 90071-1560 Attn: [***] Email: [***]
If to Administrative Agent or Collateral Agent:	SILICON VALLEY BANK 4370 La Jolla Village Drive, Suite 1050 San Diego CA 92122 Attn: [***] Fax: [***] Email: [***]
with a copy to	OXFORD FINANCE LLC 133 North Fairfax Street Alexandria, Virginia 22314 Attention: [***] Fax: [***] Email: [***]
with a copy (which shall not constitute notice) to:	DLA Piper LLP (US) 500 Eighth Street, NW Washington, DC, 20004 Attn: [***] Fax: [***] Email: [***]

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER, AND JUDICIAL REFERENCE

California law governs the Loan Documents without regard to principles of conflicts of law. Borrower, Administrative Agent, Collateral Agent and each Lender each submit to the exclusive jurisdiction of the State and

Federal courts in Santa Clara County, California; provided, however, that nothing in this Agreement shall be deemed to operate to preclude the Administrative Agent, Collateral Agent or any Lender from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of the Administrative Agent, Collateral Agent or any Lender. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 10 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER, ADMINISTRATIVE AGENT, COLLATERAL AGENT AND EACH LENDER EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR EACH PARTY TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHT TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Santa Clara County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure § 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not transfer, pledge or assign this Agreement or any rights or obligations under it without the Administrative Agent's, Collateral Agent's and each Lender's prior written consent (which may be granted or withheld in the Administrative Agent's, Collateral Agent's and each Lender's discretion, subject to Section 12.6). The Lenders have the right, without the consent of or notice to Borrower, to sell, transfer, assign, pledge, negotiate, or grant participation in **(any** such sale, transfer, assignment, negotiation **,** or grant of a participation, a **"Lender Transfer")** all or any part of, or any interest in, the Lenders' obligations, rights, and

benefits under this Agreement and the other Loan Documents; *provided* , *however* , that any such Lender Transfer (other than a transfer, pledge, sale or assignment to an Eligible Assignee) of its obligations, rights, and benefits under this Agreement and the other Loan Documents shall require the prior written consent of the Required Lenders (such approved assignee, an " **Approved Lender** ") **.** Borrower and Collateral Agent shall be entitled to continue to deal solely and directly with such Lender in connection with the interests so assigned until Collateral Agent shall have received and accepted an effective assignment agreement in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee or Approved Lender as Collateral Agent reasonably shall require. Notwithstanding anything to the contrary contained herein, so long as no Event of Default has occurred and is continuing, no Lender Transfer (other than a Lender Transfer in connection with (x) assignments by a Lender due to a forced divestiture at the request of any regulatory agency; or (y) upon the occurrence of a default, event of default or similar occurrence with respect to a Lender's own financing or securitization transactions) shall be permitted, without Borrower's consent, to any Person which is an Affiliate or Subsidiary of Borrower, a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent.

12.2 Indemnification. Borrower agrees to indemnify, defend and hold the Administrative Agent, Collateral Agent and the Lenders and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing the Administrative Agent, Collateral Agent or the Lenders (each, an " **Indemnified Person** ") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, " **Claims** ") asserted by any other party in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses or Lenders' Expenses incurred, or paid by Indemnified Person in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents between Administrative Agent, Collateral Agent, and/or the Lenders and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence, bad faith or willful misconduct. Borrower hereby further indemnifies, defends and holds each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including reasonable and documented the fees and disbursements of counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such proceeding initiated by or on behalf of Borrower, and the reasonable expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or compensation claimed by any broker (other than any broker retained by Administrative Agent, Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the loan proceeds except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person's gross negligence, bad faith or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.5 Correction of Loan Documents. The Administrative Agent, Collateral Agent and the Lenders may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties **.**

12.6 Amendments in Writing; Integration . (a) No amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, The Administrative Agent, Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender's Term Loan Commitment or Commitment Percentage shall be effective as to such Lender without such Lender's written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent's written consent or signature;

(iii) no such amendment, waiver or modification that would affect the rights and duties of the Administrative Agent shall be effective without Administrative Agent's written consent or signature;

(iv) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or of interest on any Term Loan (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term " **Required Lenders** " or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize Borrower to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the Obligations or its guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.6 or the definitions of the terms used in this Section 12.6 insofar as the definitions affect the substance of this Section 12.6; (F) consent to the assignment, delegation or other transfer by Borrower of any of its rights and obligations under any Loan Document or release Borrower of its payment obligations under any Loan Document, except, in each case with respect to this clause (F), pursuant to a merger or consolidation permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment, Commitment Percentage or that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral hereunder; (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations; or (I) amend any of the provisions of Section 12.10. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the preceding sentence;

(v) the provisions of the foregoing clauses (i), (ii) and (iii) are subject to the provisions of any interlender or agency agreement among the Lenders, Administrative Agent, and Collateral Agent pursuant to which any Lender may agree to give its consent in connection with any amendment, waiver or modification of the Loan Documents only in the event of the unanimous agreement of all Lenders.

(b) Other than as expressly provided for in Section 12.6(a)(i)-(iii), Collateral Agent may, if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

12.8 Survival . All covenants, representations and warranties made in this Agreement continue in full force and effect until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. Without limiting the foregoing, except as otherwise provided in Section 4.1, the grant of security interest by Borrower in Section 4.1 shall survive until the termination of all Bank Services Agreements. The obligation of Borrower in Section 12.2 to indemnify each Lender, the Administrative Agent, and Collateral Agent, as well as the confidentiality provisions in Section 12.9 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.9 Confidentiality. In handling any confidential information of Borrower, the Lenders, Administrative Agent, and Collateral Agent shall exercise the same degree of care that it exercises for their own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, to the Lenders', Administrative Agent's, and Collateral Agent's Subsidiaries or Affiliates, or in connection with a Lender's own financing or securitization transactions and upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; (b) to prospective transferees (other than those identified in (a) above) or purchasers of any interest in the Credit Extensions (provided, however, the Lenders, Administrative Agent, and Collateral Agent shall, except upon the occurrence and during the continuance of an Event of Default, obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to similar confidentiality terms); (c) as required by law, regulation, subpoena, or other order; (d) to Lenders', Administrative Agent, or Collateral Agent's regulators or as otherwise required in connection with an examination or audit; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents; and (f) to third party service providers of the Lenders, Administrative Agent, and/or Collateral Agent so long as such service providers have executed a confidentiality agreement with the Lenders, Administrative Agent, and Collateral Agent with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders', Administrative Agent's, and/or Collateral Agent's possession when disclosed to the Lenders, Administrative Agent, and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders, Administrative Agent, and/or Collateral Agent; or (ii) is disclosed to the Lenders, Administrative Agent, and/or Collateral Agent by a third party, if the Lenders, Administrative Agent, and/or Collateral Agent does not know that the third party is prohibited from disclosing the information. The Administrative Agent, Collateral Agent and the Lenders may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis so long as Collateral Agent and Lenders do not disclose Borrower's identity or the identity of any person associated with Borrower unless (x) in connection with disclosure under (a) through (f), above or (y) otherwise expressly permitted by this Agreement or consented to by Borrower. The provisions of the immediately preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.9 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.9.

12.10 Right of Set Off. Borrower hereby grants to Collateral Agent and to each Lender, a lien, security interest and right of set off as security for all Obligations to Collateral Agent and each Lender hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Collateral Agent or the Lenders or any entity under the control of Collateral Agent or the Lenders (including a Collateral Agent affiliate) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Collateral Agent or the Lenders may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

12.11 Cooperation of Borrower. If necessary, Borrower agrees to (i) execute any documents (including new Secured Promissory Notes) reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment or Loan to an assignee in accordance with Section 12.1, (ii) make Borrower's management available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments or Credit Extensions (which meetings shall be conducted no more often than once every twelve months unless an Event

of Default has occurred and is continuing), and (iii) assist Collateral Agent or the Lenders in the preparation of information relating to the financial affairs of Borrower as any prospective participant or assignee of a Term Loan Commitment or Term Loan reasonably may request. Subject to the provisions of Section 12.9, Borrower authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment, any and all information in such Lender's possession concerning Borrower and its financial affairs which has been delivered to such Lender by or on behalf of Borrower pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of Borrower in connection with such Lender's credit evaluation of Borrower prior to entering into this Agreement.

13. DEFINITIONS

13.1 Definitions. As used in this Agreement, the following terms have the following meanings:

" **Account** " is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

" **Account Debtor** " is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

" **Administrative Agent** " is, Silicon Valley Bank, not in its individual capacity, but solely in its capacity as agent on behalf of and for the benefit of the Lenders.

" **Affiliate** " of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

" **Agreement** " is defined in the preamble hereof.

" **Amortization Date** " is December 1, 2019.

" **Annual Projections** " is defined in Section 6.2(a).

" **Anti-Terrorism Laws** " are any laws relating to terrorism or money laundering, including Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

" **Approved Fund** " is any (i) investment company, fund, trust, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business or (ii) any Person (other than a natural person) which temporarily warehouses loans for any Lender or any entity described in the preceding clause (i) and that, with respect to each of the preceding clauses (i) and (ii), is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender.

" **Approved Lender** " is defined in Section 12.1.

" **Bank Services** " are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank's various agreements related thereto (each, a " **Bank Services Agreement** ").

" **Bank** " is defined in the preamble hereof.

" **Basic Rate** " is, with respect to the Term Loan, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the greater of (i) seven and three-quarter percent (7.75%) and (ii) the sum of (a) the Prime Rate, as reported in The Wall Street Journal on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) three and one-half percent (3.50%). Notwithstanding the foregoing, the Basic Rate for the Term Loan for the period from the Effective Date through and including October 31, 2017 shall be seven and three-quarter percent (7.75%).

" **Blocked Person** " is any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in Executive Order No. 13224, or (e) a Person that is named a "specially designated national" or "blocked person" on the most current list published by OFAC or other similar list.

" **Borrower** " is defined in the preamble hereof.

" **Borrower's Books** " are Borrower's or any of its Subsidiaries' books and records including ledgers, federal, and state tax returns, records regarding Borrower's or its Subsidiaries' assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

" **Business Day** " is any day that is not a Saturday, Sunday or a day on which Collateral Agent is closed.

" **Cash Equivalents** " are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc., and (c) certificates of deposit maturing no more than one (1) year after issue provided that the account in which any such certificate of deposit is maintained is subject to a Control Agreement in favor of Collateral Agent. For the avoidance of doubt, the direct purchase by Borrower or any of its Subsidiaries of any Auction Rate Securities, or purchasing participations in, or entering into any type of swap or other derivative transaction, or otherwise holding or engaging in any ownership interest in any type of Auction Rate Security by Borrower or any of its Subsidiaries shall be conclusively determined by the Lenders as an ineligible Cash Equivalent, and any such transaction shall expressly violate each other provision of this Agreement governing Permitted Investments. Notwithstanding the foregoing, Cash Equivalents does not include and Borrower, and each of its Subsidiaries, are prohibited from purchasing, purchasing participations in, entering into any type of swap or other equivalent derivative transaction, or otherwise holding or engaging in any ownership interest in any type of debt instrument, including, without limitation, any corporate or municipal bonds with a long-term nominal maturity for which the interest rate is reset through a dutch auction and more commonly referred to as an auction rate security (each, an " **Auction Rate Security** ").

" **Cash-Secured Obligations** " are Obligations owing to Bank on account of Automated Clearing House transactions, corporate credit card services, foreign exchange contracts, or other treasury management services provided by Bank, not to exceed, and secured by a segregated cash collateral account with Bank in the amount of, One Million Five Hundred Thousand Dollars ($1,500,000.00) at any time.

" **Change in Control** " means any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty nine percent (49%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's equity securities in a public offering, a private placement of public equity or to venture capital investors so long as Borrower identifies to Collateral Agent the venture capital investors prior to the closing of the transaction).

" **Claims** " are defined in Section 12.2.

" **Code** " is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of California; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of California, the term "Code" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions .

" **Collateral** " is any and all properties, rights and assets of Borrower described on Exhibit A .

" **Collateral Account** " is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Subsidiary at any time.

" **Collateral Agent** " is, Silicon Valley Bank, not in its individual capacity, but solely in its capacity as agent on behalf of and for the benefit of the Lenders.

" **Commitment Percentage** " is set forth in Schedule 1.1 , as amended from time to time.

" **Commodity Account** " is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made.

" **Communication** " is defined in Section 10.

" **Compliance Certificate** " is that certain certificate in the form attached hereto as Exhibit C .

" **Contingent Obligation** " is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "Contingent Obligation" does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

" **Control Agreement** " is any control agreement entered into among the depository institution at which Borrower or any of its Subsidiaries maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any of its Subsidiaries maintains a Securities Account or a Commodity Account, Borrower and such Subsidiary, and Collateral Agent pursuant to which Collateral Agent obtains control (within the meaning of the Code) for the benefit of the Lenders over such Deposit Account, Securities Account, or Commodity Account.

" **Copyrights** " are any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

" **Credit Extension** " is any Term Loan or any other extension of credit by Administrative Agent, Collateral Agent or Lenders for Borrower's benefit.

" **Default Rate** " is defined in Section 2.3(b).

“ **Deposit Account** ” is any “deposit account” as defined in the Code with such additions to such term as may hereafter be made.

“ **Designated Deposit Account** ” is Borrower’s deposit account, account number 2783846799, maintained with Wells Fargo Bank, N.A..

“ **Disbursement Letter** ” is that certain form attached hereto as Exhibit B-1 .

“ **Dollar Equivalent** ” is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

“ **Dollars** , ” “ **dollars** ” and “$” each mean lawful money of the United States.

“ **Effective Date** ” is defined in the preamble of this Agreement.

“ **Eligible Assignee** ” is (i) a Lender, (ii) an Affiliate of a Lender, (iii) an Approved Fund and (iv) any commercial bank, savings and loan association or savings bank or any other entity which is an “accredited investor” (as defined in Regulation D under the Securities Act of 1933, as amended) and which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which either (A) has a rating of BBB or higher from Standard & Poor’s Rating Group and a rating of Baa2 or higher from Moody’s Investors Service, Inc. at the date that it becomes a Lender or (B) has total assets in excess of Five Billion Dollars ($5,000,000,000.00), and in each case of clauses (i) through (iv), which, through its applicable lending office, is capable of lending to Borrower without the imposition of any withholding or similar taxes; provided that notwithstanding the foregoing, “Eligible Assignee” shall not include, unless an Event of Default has occurred and is continuing, (i) Borrower or any of Borrower’s Affiliates or Subsidiaries or (ii) a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent. Notwithstanding the foregoing, (x) in connection with assignments by a Lender due to a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party and (y) in connection with a Lender’s own financing or securitization transactions, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Collateral Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee as Collateral Agent reasonably shall require.

“ **Equipment** ” is all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“ **ERISA** ” is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

“ **Event of Default** ” is defined in Section 8.

“ **Final Payment** ” is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest) due on the earliest to occur of (a) the Maturity Date, or (b) the acceleration of any Term Loan, or (c) the prepayment of a Term Loan pursuant to Section 2.2(c) or (d), equal to the original principal amount of such Term Loan multiplied by the Final Payment Percentage. For the avoidance of doubt, the calculation of any Final Payment shall not include the principal amount prepaid in accordance with Section 2.2(d) if a Final Payment based on such principal amount was made at the time of such prepayment.

“ **Final Payment Percentage** ” is seven and one half of one percent (7.50%).

“ **Foreign Currency** ” means lawful money of a country other than the United States.

“ **Foreign Subsidiary** ” is a Subsidiary that is not an entity organized under the laws of the United States or any territory thereof.

“ **Funding Date** ” is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

“ **FX Contract** ” is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

“ **GAAP** ” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

“ **General Intangibles** ” are all “general intangibles” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

“ **Governmental Approval** ” is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

“ **Governmental Authority** ” is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

“ **Guarantor** ” is any Person providing a Guaranty in favor of Collateral Agent. For the avoidance of doubt, as of the Effective Date, no Foreign Subsidiary shall be a Guarantor.

“ **Guaranty** ” is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

“ **Indebtedness** ” is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

“ **Indemnified Person** ” is defined in Section 12.2.

“ **Insolvency Proceeding** ” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

" **Insolvent** " means not Solvent.

" **Intellectual Property** " means all of Borrower's or any Subsidiary's right, title and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to Borrower;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

" **Inventory** " is all "inventory" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

" **Investment** " is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance, payment or capital contribution to any Person.

" **Key Person** " is each of Borrower's (i) Chief Executive Officer, who is Alan Auerbach as of the Effective Date, (ii) SVP Finance and Administration, who is Charles Eyler as of the Effective Date, (iii) Chief Medical and Scientific Officer, who is Richard Bryce as of the Effective Date and (iv) Chief Commercial Officer, who is Steven Lo as of the Effective Date.

" **Lender** " is any one of the Lenders.

" **Lenders** " are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

" **Lenders' Expenses** " are all reasonable audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred by Administrative Agent, Collateral Agent and/or the Lenders in connection with the Loan Documents.

" **Letter of Credit"** is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement.

" **Lien** " is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

" **Loan Documents** " are, collectively, this Agreement, the Perfection Certificates, each Compliance Certificate, each Disbursement Letter, each Loan Payment/Advance Request Form and any Bank Services Agreement, the Post Closing Letter, any subordination agreements, any note, or notes or guaranties executed by

Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders, Administrative Agent and Collateral Agent in connection with this Agreement; all as amended, restated, or otherwise modified.

" **Loan Payment/Advance Request Form** " is that certain form attached hereto as Exhibit B-2 .

" **Material Adverse Change** " is (a) a material impairment in the perfection or priority of Collateral Agent's or a Lender's Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations or condition (financial or otherwise) of Borrower, or any Subsidiary; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

" **Maturity Date** " is, for each Term Loan, October 31, 2022.

" **Obligations** " are all of Borrower's obligations to pay when due any debts, principal, interest, Lenders' Expenses, the Prepayment Fee, the Final Payment, and other amounts Borrower owes the Lenders now or later, in connection with, related to, following, or arising from, out of or under, this Agreement or, the other Loan Documents, or otherwise (other than any warrants or any other equity instruments issued in favor of the Lenders), including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin (whether or not allowed) and debts, liabilities, or obligations of Borrower assigned to the Lenders, Administrative Agent and/or Collateral Agent, and the performance of Borrower's duties under the Loan Documents (other than any warrants or any other equity instruments issued in favor of the Lenders).

" **OFAC** " is the U.S. Department of Treasury Office of Foreign Assets Control.

" **OFAC Lists** " are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

" **Operating Documents** " are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

" **Patents** " means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

" **Payment Date** " is the first (1 st) calendar day of each calendar month, commencing on December 1, 2017.

" **Perfection Certificate** " and " **Perfection Certificates** " is defined in Section 5.1.

" **Permitted Acquisition** " is any transaction or series of related transactions resulting in the acquisition by Borrower or any Subsidiary, whether by purchase, merger or otherwise, of all or substantially all of the assets of, all of the Equity Interests of, or a business line or unit or a division of, any Person, provided that:

(a) immediately prior to, and after giving effect thereto, no Event of Default shall have occurred and be continuing or would result therefrom;

(b) all transactions in connection therewith shall be consummated, in all material respects, in accordance with applicable law;

(c) cash consideration for the Permitted Acquisitions shall not exceed One Million Dollars ($1,000,000.00) in the aggregate, and non-cash acquisition consideration for the Permitted Acquisitions shall consist solely of Equity Interests of Borrower and be subject to the limitation on changes of ownership of Borrower set forth in Section 7.2;

(d) in the case of the purchase or other acquisition of Equity Interests, all of the Equity Interests (except for any such Equity Interest in the nature of directors' qualifying shares required pursuant to applicable law) acquired or otherwise issued by such Person or any newly formed Subsidiary in connection with such acquisition shall be wholly owned by Borrower or a Subsidiary;

(e) Borrower shall have delivered to the Collateral Agent and Lenders at least fifteen (15) Business Days (or such shorter period as may be acceptable to Collateral Agent and Lenders) prior to such proposed acquisition (i) a copy of the purchase agreement related to the proposed acquisition (and any related documents reasonably requested by the Collateral Agent and Lenders), (ii) a general description of the acquired assets or acquired business line or unit or division and the competitive position of such business line or unit or division within the industry, (iii) the sources and uses of funds to finance the proposed acquisition and (iv) to the extent available, quarterly and annual audited financial statements of the Person whose Equity Interests or assets are being acquired for the twelve (12) month period immediately prior to such proposed acquisition;

(f) such Permitted Acquisition shall only comprise a business, or those assets of a business, in substantially the same business or lines of business in which Borrower and its Subsidiaries are engaged; and

(g) such Permitted Acquisition shall be non-hostile and shall have been approved by the target's board of directors.

Notwithstanding anything to the contrary contained herein, in order for any acquisition of Equity Interests or assets of another Person to constitute a "Permitted Acquisition", Borrower must comply with all of the following:

(A) concurrent with the closing of such Permitted Acquisition, the applicable Borrower (or Subsidiary) making such Permitted Acquisition and the target shall have executed such documents and taken such actions as may be required under Section 6.12;

(B) the applicable Borrower shall have delivered to Collateral Agent and Lenders, in form and substance satisfactory to the Collateral Agent and Lenders and sufficiently in advance (and in any case no later than ten (10) Business Days prior to such Permitted Acquisition), such other financial information, financial analysis, documentation or other information relating to such Permitted Acquisition and the pro forma certifications required by clause (C) below, in each case, as Collateral Agent and Lenders shall reasonably request; and

(C) on or prior to the date of such Permitted Acquisition, the Collateral Agent and Lenders shall have received, in form and substance reasonably satisfactory to the Collateral Agent and Lenders, a certificate of the chief financial officer or treasurer of Borrower certifying compliance with the requirements contained in this definition of "Permitted Acquisitions" and with the other terms of the Loan Documents (before and after giving effect to such Permitted Acquisition).

" **Permitted Indebtedness** " is:

(a) Borrower's Indebtedness to the Lenders, Administrative Agent and Collateral Agent under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate(s);

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) Indebtedness consisting of (i) capitalized lease obligations and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person and (ii) real property leases, provided that (x) the aggregate outstanding principal amount of all such Indebtedness does not exceed One Million Dollars ($1,000,000.00) at any time and (y) in the case of clause (i) above, the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(f) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of Borrower's business;

(g) intercompany Indebtedness constituting Permitted Investments;

(h) Indebtedness consisting of Cash-Secured Obligations;

(i) other unsecured Indebtedness not otherwise permitted by Section 7.4 not exceeding One Million Dollars ($1,000,000.00) in the aggregate outstanding at any time;

(j) Indebtedness under corporate credit cards used in the ordinary course of business not to exceed One Hundred Fifty Thousand Dollars ($150,000.00) at any time; and

(k) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (e), (i), and (j) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower, or its Subsidiary, as the case may be.

" **Permitted Investments** " are:

(a) Investments disclosed on the Perfection Certificate(s) and existing on the Effective Date;

(b) (i) Investments consisting of cash and Cash Equivalents, and (ii) any other Investments permitted by Borrower's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved by Borrower's Board of Directors and provided to Collateral Agent;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit accounts in which Collateral Agent has a perfected security interest (unless such perfected security interest is not required by Section 6.6);

(e) Investments in connection with Transfers permitted by Section 7.1;

(f) Investments by Borrower in Puma UK not to exceed Two Million Dollars ($2,000,000.00) in the aggregate in any fiscal year;

(g) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's Board of Directors; not to exceed One Million Dollars ($1,000,000.00) in the aggregate for (i) and (ii) in any fiscal year;

(h) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(i) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (i) shall not apply to Investments of Borrower in any Subsidiary;

(j) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments in all such joint ventures and strategic alliances by Borrower do not exceed One Million Dollars ($1,000,000.00) in the aggregate in any fiscal year;

(k) Investments in unfinanced capital expenditures in connection with transactions not prohibit hereunder, in the ordinary course of business, and approved by Borrower's Board of Directors;

(l) Investments consisting of deposit account and securities accounts of Borrower or any Subsidiary, subject to the compliance by Borrower or such Subsidiary with the covenant set forth in Section 6.6; and

(m) (i) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in its Foreign Subsidiaries not to exceed in the aggregate in any fiscal year Five Hundred Thousand Dollars ($500,000.00) and (ii) Investments by Borrower in any domestic U.S. Subsidiaries so long as such Subsidiary has become a co-borrower of the Obligations or a Guarantor.

" **Permitted Licenses** " are (A) licenses of over-the-counter software that is commercially available to the public, and (B) non-exclusive and exclusive licenses for the use of the Intellectual Property of Borrower or any of its Subsidiaries entered into in the ordinary course of business or approved by Borrower's Board of Directors, provided , that, with respect to each such license described in clause (B), (i) no Event of Default has occurred or is continuing at the time such license; (ii) the license constitutes an arms-length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property; (iii) in the case of any exclusive license, (x) Borrower delivers ten (10) days' prior written notice and a brief summary of the terms of the proposed license to Administrative Agent, Collateral Agent and the Lenders and delivers to Administrative Agent, Collateral Agent and the Lenders copies of the final executed licensing documents in connection with the exclusive license promptly upon consummation thereof, and (y) any such license could not result in a legal transfer of title of the licensed property but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States; and (iv) all upfront payments, royalties, milestone payments or other proceeds arising from the licensing agreement that are payable to Borrower or any of its Subsidiaries are paid to a Deposit Account that is governed by a Control Agreement.

" **Permitted Liens** " are:

(a) Liens existing on the Effective Date and disclosed on the Perfection Certificates or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) Liens or deposits securing Indebtedness permitted under clause (e) of the definition of " **Permitted Indebtedness** ," provided that, with respect only to capitalized lease obligations for purchase money indebtedness (i) such Liens exist prior to the acquisition of, or attach substantially simultaneous with, or within thirty (30) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such Liens do not extend to any property of Borrower other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed Five Hundred Thousand Dollars ($500,000.00), and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(g) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Administrative Agent, Collateral Agent or any Lender a security interest therein;

(h) banker's liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower's deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with Section 6.6(b) hereof;

(i) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;

(j) Liens consisting of Permitted Licenses;

(k) Liens in favor of Wells Fargo arising from that certain restricted cash account no. xxxxxx2454 which secures the standby letters of credit for Borrower's office lease; and

(l) Liens and pledges securing Indebtedness permitted under clause (h) of the definition of "Permitted Indebtedness".

" **Person** " is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

" **Post Closing Letter** " is that certain Post Closing Letter dated as of the Effective Date by and between Collateral Agent and Borrower.

“ **Prepayment Fee** ” is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to the Lenders in amount equal to:

(i) for a prepayment made on or after the Funding Date of such Term Loan through and including the first anniversary of the Funding Date of such Term Loan, two percent (2.00%) of the principal amount of such Term Loan prepaid; and

(ii) for a prepayment made after the date which is after the first anniversary of the Funding Date of such Term Loan and prior to the Maturity Date, one percent (1.00%) of the principal amount of such Term Loan prepaid.

“ **Prime Rate** ” is the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the “prime rate” then in effect; provided that if such rate of interest, as set forth from time to time in the money rates section of The Wall Street Journal, becomes unavailable for any reason as determined by Collateral Agent, “Prime Rate” shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors).

“ **Pro Rata Share** ” is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of Term Loans held by such Lender by the aggregate outstanding principal amount of all Term Loans.

“ **Puma UK** ” is Puma Biotechnology Ltd., a wholly-owned Subsidiary of Borrower organized under the laws of the United Kingdom.

“ **Registered Organization** ” is any “registered organization” as defined in the Code with such additions to such term as may hereafter be made.

“ **Required Lenders** ” means (i) for so long as all of the Persons that are Lenders on the Effective Date (each an “ **Original Lender** ”) have not assigned or transferred any of their interests in their Term Loan, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan, Lenders holding at least sixty six percent (66%) of the aggregate outstanding principal balance of the Term Loan and, in respect of this clause (ii), (A) each Original Lender that has not assigned or transferred any portion of its Term Loan, (B) each assignee or transferee of an Original Lender’s interest in the Term Loan, but only to the extent that such assignee or transferee is an Affiliate or Approved Fund of such Original Lender, and (C) any Person providing financing to any Person described in clauses (A) and (B) above; provided, however, that this clause (C) shall only apply upon the occurrence of a default, event of default or similar occurrence with respect to such financing.

“ **Requirement of Law** ” is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

“ **Responsible Officer** ” is any of the President, Chief Executive Officer, Chief Financial Officer or Treasurer of Borrower acting alone.

“ **Revenue Milestone Date** ” means the date on which Borrower provides evidence, in form and content reasonably acceptable to Administrative Agent and the Lenders, that Borrower has achieved commercial revenue (determined in accordance with GAAP), on a trailing three (3) month basis of [***]; provided that if such sufficient evidence is provided prior to March 31, 2018, the Revenue Milestone Date shall be determined to be March 31, 2018.

“ **Second Draw Period** ” is the period commencing on the date of the occurrence of the Revenue Milestone Date and ending on the earlier of (i) June 30, 2018 and (ii) the occurrence of an Event of Default; provided, however, that the Second Draw Period shall not commence if on the date of the occurrence of the Revenue Milestone Date an Event of Default has occurred and is continuing.

“ **Secured Promissory Note** ” is defined in Section 2.4.

“ **Secured Promissory Note Record** ” is a record maintained by each Lender with respect to the outstanding Obligations owed by Borrower to Lender and credits made thereto.

“ **Securities Account** ” is any “securities account” as defined in the Code with such additions to such term as may hereafter be made.

“ **Shares** ” is one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower’s Subsidiary, in any Subsidiary; provided that, in the event Borrower, demonstrates to Collateral Agent’s reasonable satisfaction, that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary which is a Foreign Subsidiary, creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code, “Shares” shall mean sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or its Subsidiary in any first-tier Foreign Subsidiary and zero (0%) in any second or other-tier.

“ **Solvent** ” is, with respect to any Person: the fair salable value of such Person’s consolidated assets (including goodwill minus disposition costs) exceeds the fair value of such Person’s liabilities; such Person is not left with unreasonably small capital after the transactions in this Agreement; and such Person is able to pay its debts (including trade debts) as they mature.

“ **Subordinated Debt** ” is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all Indebtedness of Borrower and/or its Subsidiaries to the Lenders hereunder (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Collateral Agent and the Lenders entered into between Collateral Agent, Borrower, and/or any of its Subsidiaries, and the other creditor), on terms acceptable to Collateral Agent and the Lenders.

“ **Subsidiary** ” is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries.

“ **Term Loan** ” is defined in Section 2.2(a)(ii) hereof.

“ **Term A Loan** ” is defined in Section 2.2(a)(i) hereof.

“ **Term B Loan** ” is defined in Section 2.2(a)(ii) hereof.

“ **Term Loan Commitment** ” is, for any Lender, the obligation of such Lender to make a Term Loan, up to the principal amount shown on Schedule 1.1 **.** “ **Term Loan Commitments** ” means the aggregate amount of such commitments of all Lenders.

“ **Trademarks** ” means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

“ **Transfer** ” is defined in Section 7.1.

[***Balance of Page Intentionally Left Blank*** **]**

IN WITNESS WHEREOF , the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

PUMA BIOTECHNOLOGY, INC.

By /s/ Charles Eyler
Name: Charles Eyler
Title: SVP, Finance / Treasurer

ADMINISTRATIVE AGENT, COLLATERAL AGENT AND LENDER:

SILICON VALLEY BANK

By /s/ Anthony Flores
Name: Anthony Flores
Title: Director

LENDER:

OXFORD FINANCE LLC

By /s/ Collette H. Featherly
Name: Collette H. Featherly
Title: Senior Vice President

SCHEDULE 1.1

Lenders and Commitments

Term A Loans

Lender	Term Loan Commitment	Commitment Percentage
SILICON VALLEY BANK	$20,000,000.00	40.00%
OXFORD FINANCE LLC	$30,000,000.00	60.00%
TOTAL	**$50,000,000.00**	**100.00%**

Term B Loans

Lender	Term Loan Commitment	Commitment Percentage
SILICON VALLEY BANK	$20,000,000.00	40.00%
OXFORD FINANCE LLC	$30,000,000.00	60.00%
TOTAL	**$50,000,000.00**	**100.00%**

Aggregate (all Term Loans)

Lender	Term Loan Commitment	Commitment Percentage
SILICON VALLEY BANK	$40,000,000.00	40.00%
OXFORD FINANCE LLC	$60,000,000.00	60.00%
TOTAL	**$100,000,000.00**	**100.00%**

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT A

Description of Collateral

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property; and (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any first-tier Foreign Subsidiary, if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code (collectively, the "Excluded Assets").

Pursuant to the terms of a certain negative pledge arrangement with Administrative Agent, Collateral Agent and the Lenders, Borrower has agreed not to encumber any of its Intellectual Property.

EXHIBIT B -1

Form of Disbursement Letter

[see attached]

DISBURSEMENT LETTER

October 31, 2017

The undersigned, being the duly elected and acting _____of PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (" **Borrower** "), does hereby certify to SILICON VALLEY BANK (" **SVB** " or " **Bank** " and " **Lender** "), as administrative agent (the "Administrative Agent") and collateral agent (the " **Collateral Agent** ") in connection with that certain Loan and Security Agreement dated as of October 31, 2017, by and among Borrower, Administrative Agent, Collateral Agent and the Lenders from time to time party thereto (the " **Loan Agreement** "; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement) that:

1. The representations and warranties made by Borrower in Section 5 of the Loan Agreement and in the other Loan Documents are true and correct in all material respects as of the date hereof.

2. No event or condition has occurred that would constitute an Event of Default under the Loan Agreement or any other Loan Document.

3. Borrower is in compliance with the covenants and requirements contained in Sections 4, 6 and 7 of the Loan Agreement.

4. All conditions referred to in Section 3 of the Loan Agreement to the making of the Loan to be made on or about the date hereof have been satisfied or waived by Administrative Agent and Collateral Agent.

5. No Material Adverse Change has occurred.

6. The undersigned is a Responsible Officer.

[Balance of Page Intentionally Left Blank]

7. The proceeds of the Term A Loan shall be disbursed as follows:

Disbursement from SVB:	
Loan Amount	$20,000,000.00
Plus:	
--Deposit Received	$500,000.00
Less:	
--Facility Fee	($300,000.00)
--Arrangement Fee	($750,000.00)
[--Interim Interest	($_____)]
--Lender's Legal Fees	($_____)*
Net Proceeds due from SVB:	**$_____**
Disbursement from Oxford:	
Loan Amount	$30,000,000.00
Less:	
--Facility Fee	($450,000.00)
[--Interim Interest	($_____)]
Net Proceeds due from Oxford:	**$_____**
TOTAL TERM A LOAN NET PROCEEDS FROM LENDERS	**$_____**

8. The Term A Loan shall amortize in accordance with the Amortization Table attached hereto.

9. The aggregate net proceeds of the Term Loans shall be transferred to the Designated Deposit Account as follows:

Account Name:	PUMA BIOTECHNOLOGY, INC.
Bank Name:	[_____]
Bank Address:	[_____] [_____]
Account Number:	[_____]
ABA Number:	[_____]

[Balance of Page Intentionally Left Blank]

* Legal fees and costs are through the Effective Date. Post closing legal fees and costs, payable after the Effective Date, to be invoiced and paid post closing.

Dated as of the date first set forth above.

BORROWER:

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____

ADMINISTRATIVE AGENT, COLLATERAL AGENT AND LENDER:

SILICON VALLEY BANK

By _____
Name: _____
Title: _____

LENDER:

OXFORD FINANCE LLC

By _____
Name: _____
Title: _____

Confidential Treatment Requested by Puma Biotechnology, Inc.

AMORTIZATION TABLE
(Term A Loan)

[see attached]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B -2

Loan Payment/Advance Request Form

DEADLINE FOR SAME DAY PROCESSING IS NOON PACIFIC TIME*

Fax To: Date: _____

LOAN PAYMENT :
PUMA BIOTECHNOLOGY, INC.

From Account # _____ To Account # _____
(Deposit Account #) (Loan Account #)

Principal $ _____ and/or Interest $ _____

Authorized Signature: _____ Phone Number: _____
Print Name/Title: _____

LOAN ADVANCE

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account # _____ To Account # _____
(Loan Account #) (Deposit Account #)

Amount of Advance $ _____

All Borrower's representations and warranties in the Loan and Security Agreement are true, correct and complete in all material respects on the date of the request for an advance; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date :

Authorized Signature: _____ Phone Number: _____
Print Name/Title: _____

OUTGOING WIRE REQUEST :
Complete only if all or a portion of funds from the loan advance above is to be wired.
Deadline for same day processing is noon, Pacific Time

Beneficiary Name: _____ Amount of Wire: $ _____
Beneficiary Bank: _____ Account Number: _____
City and State: _____

Beneficiary Bank Transit (ABA) #: _____ Beneficiary Bank Code (Swift, Sort, Chip, etc.): _____
(For International Wire Only)

Intermediary Bank: _____ Transit (ABA) #: _____
For Further Credit to: _____

Special Instruction: _____

By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreements(s) covering funds transfer service(s), which agreements(s) were previously received and executed by me (us).

Authorized Signature: _____ 2 nd Signature (if required): _____
Print Name/Title: _____ Print Name/Title: _____
Telephone #: _____ Telephone #: _____

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C

Compliance Certificate

TO: SILICON VALLEY BANK, as Collateral Agent and Lender
OXFORD FINANCE LLC, as Lender

TO: SILICON VALLEY BANK, as Administrative Agent, Collateral Agent and Lender
OXFORD FINANCE LLC, as Lender

FROM: PUMA BIOTECHNOLOGY, INC.

The undersigned authorized officer (" **Officer** ") of PUMA BIOTECHNOLOGY, INC. (" **Borrower** "), hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement by and among Borrower, Administrative Agent, Collateral Agent, and the Lenders from time to time party thereto (the " **Loan Agreement** ;" capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below;

(b) There are no Events of Default, except as noted below;

(c) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date and for the period described in (a), above; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

(d) Borrower, and each of Borrower's Subsidiaries, has timely filed all required tax returns and reports, Borrower, and each of Borrower's Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(e) No Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Administrative Agent, Collateral Agent and the Lenders.

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under "Complies" column.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Quarterly within 45 days		Yes	No	N/A
2)	Annual (CPA Audited) statements	Within 90 days after FYE or within 5 days of filing		Yes	No	N/A
3)	Annual Financial Projections/Budget (prepared on a monthly basis)	Annually (within 30 days of FYE), and when revised		Yes	No	N/A
5)	8-K, 10-K and 10-Q Filings	If applicable, within 5 days of filing		Yes	No	N/A
6)	Compliance Certificate	Quarterly within 45 days		Yes	No	N/A
8)	Total amount of Borrower's cash and cash equivalents at the last day of the measurement period		$_____	Yes	No	N/A
9)	Total amount of Borrower's Subsidiaries' cash and cash equivalents at the last day of the measurement period		$_____	Yes	No	N/A

Deposit and Securities Accounts
(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	Account Number	New Account?		Account Control Agreement in place?	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

Financial Covenants

	Covenant	Requirement	Actual	Compliance	
1)	Minimum Revenues (trailing three months)	At least (i) 70% of projections for fiscal year 2017; (ii) 50% of projections for fiscal year 2018; (iii) 50% of projections for fiscal year 2019	_____%	Yes	No

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Other Matters

1)	Have there been any changes in management since the last Compliance Certificate?	Yes	No
2)	Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement?	Yes	No
3)	Have there been any new or pending claims or causes of action against Borrower that involve more than Five Hundred Thousand Dollars ($500,000.00)?	Yes	No
4)	Have there been any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate.	Yes	No

Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions." Attach separate sheet if additional space needed.)

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____

Date:

LENDER USE ONLY

Received by: _____ Date: _____

Verified by: _____ Date: _____

Compliance Status: Yes No

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ANNEX I

Annual Projections

[hardcopy to be attached]

Confidential Treatment Requested by Puma Biotechnology, Inc.

EXHIBIT D

Form of Secured Promissory Note

[see attached]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SECURED PROMISSORY NOTE
(Term A Loan)

$_____ Dated: October 31, 2017

FOR VALUE RECEIVED, the undersigned, PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (" **Borrower** ") HEREBY PROMISES TO PAY to the order of [SILICON VALLEY BANK][OXFORD FINANCE LLC] (" **Lender** ") the principal amount of [_____] MILLION DOLLARS ($_____) or such lesser amount as shall equal the outstanding principal balance of the Term A Loan made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such Term A Loan, at the rates and in accordance with the terms of the Loan and Security Agreement dated October 31, 2017 by and among Borrower, Lender, Oxford Finance LLC, and the other Lenders from time to time party thereto (as amended, restated, supplemented or otherwise modified from time to time, the " **Loan Agreement** "). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the Term A Loan, are payable in lawful money of the United States of America to Lender as set forth in the Loan Agreement and this Secured Promissory Note (this " **Note** "). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of a secured Term A Loan by Lender to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

This Note may not be prepaid except as set forth in Section 2.2 (c) and Section 2.2(d) of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of the Term A Loan, interest on the Term A Loan and all other amounts due Lender under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including, without limitation, reasonable attorneys' fees and costs, incurred by Lender in the enforcement or attempt to enforce any of Borrower's obligations hereunder not performed when due.

This Note shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of California.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by Lender or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

[Balance of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

CORPORATE BORROWING CERTIFICATE

BORROWER : PUMA BIOTECHNOLOGY, INC. **DATE** : October 31, 2017
LENDERS: SILICON VALLEY BANK, as Administrative Agent, Collateral Agent and Lender
OXFORD FINANCE LLC, as Lender

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.

2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware .

3. Attached hereto as Exhibit A and Exhibit B , respectively, are true, correct and complete copies of (i) Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth in paragraph 2 above; and (ii) Borrower's Bylaws. Neither such Certificate of Incorporation nor such Bylaws have been amended, annulled, rescinded, revoked or supplemented, and such Articles/Certificate of Incorporation and such Bylaws remain in full force and effect as of the date hereof.

4. The following resolutions were duly and validly adopted by Borrower's Board of Directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and the Lenders may rely on them until each Lender receives written notice of revocation from Borrower.

[***Balance of Page Intentionally Left Blank*** **]**

RESOLVED , that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

Name	Title	Signature	Authorized to Add or Remove Signatories
			☐
			☐
			☐
			☐

RESOLVED FURTHER, that **any one** of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED FURTHER , that such individuals may, on behalf of Borrower:

Borrow Money . Borrow money from the Lenders.
Execute Loan Documents . Execute any loan documents any Lender requires.
Grant Security . Grant Collateral Agent a security interest in any of Borrower's assets.
Negotiate Items . Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds.
Further Acts . Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effectuate such resolutions.

RESOLVED FURTHER , that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

[***Balance of Page Intentionally Left Blank*** **]**

5. T he persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: _____
Name: _____
Title: _____

**** If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the _____ of B orrower, hereby certify as to paragraphs 1 through 5 above, as
[print title]
of the date set forth above.

By: _____
Name: _____
Title: _____

[*Signature Page to Corporate Borrowing Certificate*]

EXHIBIT A

Certificate of Incorporation (including amendments)

[see attached]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Confidential Treatment Requested by Puma Biotechnology, Inc.

EXHIBIT B

Bylaws

[see attached]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

DEBTOR: **PUMA BIOTECHNOLOGY, INC.**
SECURED PARTY: **SILICON VALLEY BANK,**
as Collateral Agent

EXHIBIT A TO UCC FINANCING STATEMENT

Description of Collateral

The Collateral consists of all of Debtor's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below)], commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Debtor that are proceeds of the Intellectual Property; and (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any first-tier Foreign Subsidiary, if Debtor demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Debtor under the U.S. Internal Revenue Code (collectively, the "Excluded Assets").

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Debtor has agreed not to encumber any of its Intellectual Property.

Capitalized terms used but not defined herein have the meanings ascribed in the Uniform Commercial Code in effect in the State of California as in effect from time to time (the "Code") or, if not defined in the Code, then in the Loan and Security Agreement by and between Debtor, Secured Party and the other Lenders party thereto (as modified, amended and/or restated from time to time).

Exhibit 10.15

December 8, 2017

Douglas Hunt

Via E-Mail

Re: EMPLOYMENT OFFER LETTER

Dear Douglas :

Puma Biotechnology, Inc., a Delaware corporation (the "Company") is pleased to offer you the Full Time, Exempt position of Senior Vice President, Regulatory Affairs of the Company, with terms as noted below. Please confirm your acceptance of this offer by signing and returning a copy of this letter on or before December 11, 2017:

1. EFFECTIVE DATE, POSITION, DUTIES AND RESPONSIBILITIES . The terms will become effective on the date you start your employment (the "Effective Date"), which shall be no later than January 2, 2018. As of the Effective Date, the Company will employ you as its Senior Vice President, Regulatory Affairs. In such capacity, you will have such duties and responsibilities as are normally associated with such position. Your duties may be changed from time to time by the Company in its discretion. You will report to the Chief Executive Officer or such other individual as the Company may designate, and will work at the Company's offices located in Los Angeles, California, or such other location as the Company may designate, except for travel to other locations as may be necessary to fulfill your responsibilities . Although your initial title and duties are described above, the Company may assign you additional or different duties and/or titles from time-to-time .

2. BASE COMPENSATION. During your employment with the Company, the Company will pay you a base salary of $330,750 per year (the "Base Salary"), less payroll deductions and all required withholdings, payable in installments in accordance with the Company's normal payroll practices (but in no event less often than monthly) and prorated for any partial pay period of employment. Your Base Salary may be subject to adjustment pursuant to the Company's policies as in effect from time to time.

3. ANNUAL BONUS. In addition to the Base Salary set forth above, you will be eligible to receive an annual discretionary cash bonus (pro-rated for any partial year of service), based on the attainment of performance metrics and/or individual performance objectives, in each case, established and evaluated by the Company in its sole discretion (the "Annual Bonus"). Your target Annual Bonus shall be 30% of your Base Salary, but the actual amount of your Annual Bonus may be more or less (and may equal zero), depending on the attainment of applicable performance criteria. Payment of any Annual Bonus(es), to the extent any Annual Bonus(es) become payable, will be contingent upon your continued employment through the applicable payment date .

4. STOCK OPTION. In connection with entering into this offer letter, following the commencement of your employment with the Company and provided that you are employed by the Company on the date of grant, the Company will grant you an option to purchase **90,000** shares of the Company's common stock (the **"Stock Option")** at a per share exercise price equal to the Fair Market Value of a share of the Company's common stock on the date of grant as part of the Employment Inducement Pool. Subject to your continued employment with the Company through the applicable vesting date, l/3rd of the shares underlying the Stock Option will vest on the first anniversary of the Effective Date and 1/36 th of the shares underlying the Stock Option will vest on each monthly anniversary of the Effective Date thereafter. Subject to the foregoing, the terms and conditions of the Stock Option will be set forth in a separate award agreement in such form as is prescribed by the Company, to be entered into by the Company and you.

5. SIGNING BONUS. In connection with entering into this offer letter, you will be paid a signing bonus to **$40,000** (the "Signing Bonus") within twenty days after the Effective Date. You and the Company acknowledge and agree that the Signing Bonus will not be earned in whole unless and until you are continuously, actively employed by the Company through the third anniversary of the Effective Date. If your employment is terminated by the Company with Cause at any time prior to or on the first anniversary of the Effective Date, or by you for any reason prior to or on the first anniversary of the Effective Date, you will not be entitled to retain any portion of the Signing Bonus and you will be obligated to immediately repay to the Company the Signing Bonus , in full, on the date of termination . In the event that your employment is terminated by the Company with Cause or by you (a)after the first anniversary of the Effective Date but prior to or on the second anniversary of the Effective Date, the Company will allow you to retain 33% of the unearned bonus, and you hereby agree to repay to the Company, on the date of termination, 67% of the bonus; or (b) after the second anniversary of the Effective Date but prior to the third anniversary of the Effective Date, the Company will allow you to retain 67% of the unearned bonus, and you hereby agree to repay to the Company , on the date of termination, 33% of the Signing Bonus. For purposes of this Section 5, **Cause** shall mean: (1) your conv i ction or plea of nolo contender to a misdemeanor involving moral turpitude or any felony, (2) your commission of any act of theft, embezzlement or misappropriation of Company assets, (3) your material breach of any agreement with the Company, (4) your failure to follow the reasonable and lawful written direction of any superior , provided that you are given five days' notice and opportunity to cure such failure, if curable, prior to termination, (5) your willful failure to perform the essential duties of your position, or (6) your commission of an act of unlawful discrimination, harassment or retaliation . This does not alter the at-will nature of your employment.

6. BENEFITS AND VACATION . You will be eligible to participate in all health, welfare , savings and retirement plans , practices , policies and programs maintained or sponsored by the Company from time to time for the benefit of its similarly situated employees, subject to the terms and conditions thereof To the extent that you properly elect to participate in the Company's applicable medical, dental and/or prescription benefit plans, the Company will pay the premiums for you and your dependents under such plans while you remain employed by the Company, *provided, however,* that the Company shall have no obligation to pay any such premiums if doing so would result in a violation of law and/or the imposition of penalty or excise taxes on the Company. In addition, you will be eligible for other standard benefits, such as sick leave, vacations and holidays, in each case, to the extent available under, and in accordance with, Company policy applicable generally to other similarly situated employees of the Company. Notwithstanding the foregoing, nothing contained in this Section 6 shall, or shall be construed so as to, obligate the Company or its affiliates to adopt, sponsor, maintain or continue any benefit plans or programs at any time.

7. CONFIDENTIAL AND PROPRIETARY INFORMATION. This offer of employment is contingent upon your execution of the Proprietary Information and Inventions Agreement, attached hereto as Exhibit A.

8. NON-SOLICITATION. You further agree that during the term of such employment and for one (1) year after your employment is terminated, you will not directly or indirectly solicit, induce, or encourage any employee, consultant, agent, customer, vendor, or other parties doing business with the Company to terminate their employment, agency, or other relationship with the Company or to render services for or transfer their business from the Company and you will not initiate discussion with any such person for any such purpose or authorize or knowingly cooperate with the taking of any such actions by any other individual or entity.

9. AT-WILL EMPLOYMENT; AMENDMENT. Your employment with the Company is "at-will," and either you or the Company may terminate your employment for any reason whatsoever (or for no reason) upon written notice of such termination to the other party. This at-will employment relationship cannot be changed except in a writing signed by you and an authorized representative of the Company. This agreement may not be amended except by a signed writing executed by the parties hereto.

10. COMPANY RULES AND REGULATIONS. As an employee of the Company, you agree to abide by all Company rules, regulations and policies as set forth in the Company's employee handbook or as otherwise promulgated.

11. WITHHOLDING. The Company may withhold from any amounts payable under this offer letter such Federal, state, local or foreign taxes as shall be required to be withheld pursuant to any applicable law or regulation.

12. ENTIRE AGREEMENT. As of the Effective Date, this offer letter, together with the Stock Option Agreement, Proprietary Information and Inventions Agreement and Relocation Costs Repayment Agreement, comprises the final, complete and exclusive agreement between you and the Company with respect to the subject matter hereof and replaces and supersedes any and all other agreements, offers or promises, whether oral or written, made to you by any representative of the Company . You agree that any such agreement, offer or promise between you and any representative of the Company is hereby terminated and will be of no further force or effect, and you acknowledge and agree that upon your execution of this offer letter, you will have no right or interest in or with respect to any such agreement, offer or promise.

13. CHOICE OF LAW. This offer letter shall be interpreted and construed m accordance with California law without regard to any conflicts of laws principles.

14. PROOF OF RIGHT TO WORK . As required by law, this offer of employment is subject to satisfactory proof of your right to work in the United States.

15 . BACKGROUND CHECK. This offer of employment is expressly contingent upon your completion of a pre-employment background check conducted by an outside service bureau with results that are satisfactory to the Company in its sole discretion. Refusal to submit to the background check will result in your disqualification from further employment consideration. In addition, failure to successfully complete the background will cause this offer of employment to be withdrawn, or your employment to be terminated if you already have started work.

[SIGNATURE PAGE FOLLOWS]

Please confirm your agreement to the foregoing by signing and dating this offer letter in the space provided below for your signature and returning, as well as the attached Relocation Costs Repayment Agreement and returning both documents to the Company's Human Resources Department. Please retain one fully-executed copy for your files .

Sincerely ,

Puma Biotechnology , Inc. a Delaware corporation

By : /s/ Alan Auerbach

Name : Alan H. Auerbach
Title : President and Chief Executive Officer

Accepted and Agreed,
this 8 th day of December , 2017

By : /s/ Douglas Hunt

Name : Douglas Hunt

Exhibit 21.1

Puma Biotechnology, Inc.
Subsidiaries

Subsidiary	Jurisdiction of Incorporation or Organization
Puma Biotechnology Ltd	England and Wales

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Puma Biotechnology, Inc.:

We consent to the incorporation by reference in the registration statement on Form S-3 (No. 333-201603), in the Post-Effective Amendment No. 2 on Form S-1 on Form S-3 (No. 333-178308), and in the registration statements on Form S-8 (Nos. 333-181703, 333-196993, 333-205117 and 333-219347), pertaining to the Puma Biotechnology, Inc. 2011 Incentive Award Plan, as amended, and in the registration statement on Form S-8 (No. 333-218373), pertaining to the Puma Biotechnology, Inc. 2017 Employment Inducement Award Plan, of our report dated March 9, 2018, with respect to the consolidated balance sheet of Puma Biotechnology, Inc. and subsidiary as of December 31, 2017, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements), and the effectiveness of internal control over financial reporting as of December 31, 2017, which report appears in the December 31, 2017 annual report on Form 10-K of Puma Biotechnology, Inc.

Our report dated March 9, 2018 contains an explanatory paragraph that states that the Company has suffered recurring losses from operations, which raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

/s/ KPMG LLP

Los Angeles, California
March 9, 2018

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-201603), in the Post-Effective Amendment No. 2 to Form S-1 on Form S-3 (No. 333-178308), and in the Registration Statements on Form S-8 (Nos. 333-181703, 333-196993, 333-205117 and 333-219347), pertaining to the Puma Biotechnology, Inc. 2011 Incentive Award Plan, as amended, and in the Registration Statement on Form S-8 (No. 333-218373), pertaining to the Puma Biotechnology, Inc. 2017 Employment Inducement Incentive Award Plan, of our report dated March 1, 2017, relating to the consolidated financial statements of Puma Biotechnology, Inc. and Subsidiary as of December 31, 2016 and for the two years ended December 31, 2016 and 2015, and the effectiveness of internal control over financial reporting of Puma Biotechnology, Inc. and Subsidiary as of December 31, 2016, included in the Annual Report on Form 10-K for the year ended December 31, 2017.

San Diego, California
March 9, 2018

/s/ PKF, LLP
PKF, LLP
(formerly PKF
Certified Public Accountants
A Professional Corporation)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Alan H. Auerbach, certify that:

1. I have reviewed this Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017;

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 subsidiary, 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 9, 2018

/s/ Alan H. Auerbach
Alan H. Auerbach
Principal Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Charles R. Eyler, certify that:

1. I have reviewed this Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017;

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 subsidiary, 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 9, 2018

/s/ Charles R. Eyler
Charles R. Eyler
Principal Financial and Accounting 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

The following certification is being furnished solely to accompany the Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017, pursuant to 18 U.S.C. § 1350 and in accordance with SEC Release No. 33-8238. This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference in any filing of Puma Biotechnology, Inc. under the Securities Act of 1933, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Certification of Principal Executive Officer

I, Alan H. Auerbach, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Puma Biotechnology, Inc.

Date: March 9, 2018

/s/ Alan H. Auerbach
Alan H. Auerbach
Principal Executive Officer

A signed original of this written statement required by Section 906 has been provided to Puma Biotechnology, Inc. and will be retained by Puma Biotechnology, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION
PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The following certification is being furnished solely to accompany the Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017, pursuant to 18 U.S.C. § 1350 and in accordance with SEC Release No. 33-8238. This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference in any filing of Puma Biotechnology, Inc. under the Securities Act of 1933, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Certification of Principal Financial Officer

I, Charles R. Eyler, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Puma Biotechnology, Inc. for the year ended December 31, 2017, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Puma Biotechnology, Inc.

Date: March 9, 2018

/s/ Charles R. Eyler
Charles R. Eyler
Principal Financial and Accounting Officer

A signed original of this written statement required by Section 906 has been provided to Puma Biotechnology, Inc. and will be retained by Puma Biotechnology, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.