UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 10-K

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

For the fiscal year ended December 31, 2019

or

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

For the transition period from to

Commission File Number: 0-24006

NEKTAR THERAPEUTICS
(Exact name of registrant as specified in its charter)

Delaware	**94-3134940**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**

455 Mission Bay Boulevard South
San Francisco, California 94158
(Address of principal executive offices and zip code)

415-482-5300
(Registrant's telephone number, including area code)

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

Title of Each Class	**Trading Symbol**	**Name of Each Exchange on Which Registered**
Common Stock, $0.0001 par value	NKTR	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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an 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	☐	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 Exchange Act Rule 12b-2). Yes ☐ No☒

The approximate aggregate market value of voting stock held by non-affiliates of the registrant, based upon the last sale price of the registrant's common stock on the last business day of the registrant's most recently completed second fiscal quarter, June 28, 2019, as reported on The NASDAQ Global Select Market, was approximately $6,184,040,785. This calculation excludes approximately 1,159,402 shares held by directors and executive officers of the registrant. Exclusion of these shares does not constitute a determination that each such person is an affiliate of the registrant.

As of February 19, 2020, the number of outstanding shares of the registrant's common stock was 177,557,144.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of registrant's definitive Proxy Statement to be filed for its 2019 Annual Meeting of Stockholders are incorporated by reference into Part III hereof. Such Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

NEKTAR THERAPEUTICS

2019 ANNUAL REPORT ON FORM 10-K

TABLE OF CONTENTS

Forward-Looking Statements

This report includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are “forward-looking statements” for purposes of this annual report on Form 10-K, including any projections of market size, earnings, revenue, milestone payments, royalties, sales or other financial items, any statements of the plans and objectives of management for future operations (including, but not limited to, preclinical development, clinical trials and manufacturing), any statements related to our financial condition and future working capital needs, any statements regarding potential future financing alternatives, any statements concerning proposed drug candidates, any statements regarding the timing for the start or end of clinical trials or submission of regulatory approval filings, any statements regarding future economic conditions or performance, any statements regarding the initiation, formation or success of our collaboration arrangements, timing of commercial launches and product sales levels by our collaboration partners and future payments that may come due to us under these arrangements, any statements regarding our plans and objectives to initiate or continue clinical trials, any statements related to potential, anticipated, or ongoing litigation and any statements of assumptions underlying any of the foregoing. In some cases, forward-looking statements can be identified by the use of terminology such as “may,” “will,” “expects,” “plans,” “anticipates,” “estimates,” “potential” or “continue,” or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, such expectations or any of the forward-looking statements may prove to be incorrect and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including, but not limited to, the risk factors set forth in Part I, Item 1A “Risk Factors” below and for the reasons described elsewhere in this annual report on Form 10-K. All forward-looking statements and reasons why results may differ included in this report are made as of the date hereof and we do not intend to update any forward-looking statements except as required by law or applicable regulations. Except where the context otherwise requires, in this annual report on Form 10-K, the “Company,” “Nektar,” “we,” “us,” and “our” refer to Nektar Therapeutics, a Delaware corporation, and, where appropriate, its subsidiaries.

Trademarks

The Nektar brand and product names, including but not limited to Nektar®, contained in this document are trademarks and registered trademarks of Nektar Therapeutics in the United States (U.S.) and certain other countries. This document also contains references to trademarks and service marks of other companies that are the property of their respective owners.

PART I

Item 1. Business

Nektar Therapeutics is a research-based biopharmaceutical company focused on discovering and developing innovative medicines in areas of high unmet medical need. Our research and development pipeline of new investigational drugs includes potential therapies for cancer and autoimmune disease. We leverage our proprietary and proven chemistry platform to discover and design new drug candidates. These drug candidates utilize our advanced polymer conjugate technology platforms, which are designed to enable the development of new molecular entities that target known mechanisms of action. We continue to make significant investments in building and advancing our pipeline of proprietary drug candidates as we believe that this is the best strategy to build long-term stockholder value. We refer to our drug candidates where we retain at least U.S. commercial rights as "proprietary programs," and refer to our other drug candidate programs where we have licensed U.S. and potentially other commercial rights to collaboration partners as "collaboration partner programs."

Our Proprietary Programs

Immuno-oncology (I-O)

In the area of I-O, we are developing medicines that target biological pathways, which stimulate and sustain the body's immune response in order to fight cancer. We are developing medicines designed to directly or indirectly modulate the activity of key immune cells, such as cytotoxic T cells and natural killer (NK) cells, to increase their numbers and improve their function to recognize and attack cancer cells.

Bempegaldesleukin (previously referred to as NKTR-214), our lead I-O candidate, is a biologic with biased signaling through one of the Interleukin-2 (IL-2) receptor subunits (CD122) that can stimulate proliferation and growth of tumor-killing immune cells in the tumor micro-environment and increase expression of PD-1 on these immune cells. Our strategic objective is to establish bempegaldesleukin as a key component of many I-O combination regimens with the potential to improve the standard of care in multiple oncology settings. We are executing a comprehensive clinical development program for bempegaldesleukin, including a broad clinical collaboration with the Bristol-Myers Squibb Company (BMS), several clinical collaborations with other third parties with pharmacological agents that have potential complementary mechanisms to bempegaldesleukin, as well as pursuing our own independent clinical studies.

On February 13, 2018, we entered into a Strategic Collaboration Agreement (BMS Collaboration Agreement) with BMS pursuant to which we and BMS are jointly developing bempegaldesleukin in combination with BMS's Opdivo® (nivolumab) and certain other agents. The key economic components of the collaboration transaction included BMS making a non-refundable up-front payment of $1.0 billion to Nektar and an $850.0 million premium equity investment in our common stock, BMS being responsible for a majority of the clinical costs of the collaboration development plan, wherein our annual funding obligation for collaboration development is limited to $125.0 million, Nektar retaining a 65% profit interest in bempegaldesleukin, and Nektar having the right to record global revenue for bempegaldesleukin commercial sales. Pursuant to the BMS Collaboration Agreement, we and BMS are jointly developing bempegaldesleukin under a broad joint development plan (Collaboration Development Plan) that was updated pursuant to an Amendment No. 1 that was entered into on January 9, 2020. The Collaboration Development Plan includes the ongoing registrational trials in first-line metastatic melanoma (for which the U.S. Food and Drug Administration (FDA) granted Breakthrough Therapy designation), first-line cisplatin ineligible, PD-L1 low, locally advanced or metastatic urothelial cancer, first-line metastatic renal cell carcinoma (RCC), and muscle-invasive bladder cancer, and also includes an additional registrational trial in adjuvant melanoma, as well as a Phase 1/2 dose escalation and expansion study to evaluate bempegaldesleukin plus Opdivo® in combination with axitinib in first line RCC to support a future Phase 3 registrational trial. Several other registrational-supporting pediatric and safety studies for the combination of bempegaldesleukin and Opdivo® are either currently underway or planned to begin in 2020. Also, as specifically allowed under the BMS Collaboration Agreement, Nektar is independently studying bempegaldesleukin and pembrolizumab in a non-small cell lung cancer (NSCLC) Phase 1/2 trial, and BMS plans to independently study bempegaldesleukin and Opdivo® in a NSCLC dose-optimization Phase 1/2 trial scheduled to begin in 2020.

We are also conducting a broad array of development activities evaluating bempegaldesleukin in combination with other agents that have potential complementary mechanisms of action. On November 6, 2018, we entered into a clinical trial collaboration with Pfizer, Inc. (Pfizer) to evaluate several combination regimens in multiple cancer settings, including metastatic castration-resistant prostate cancer and squamous cell carcinoma of the head and neck. The combination regimens in this collaboration will evaluate bempegaldesleukin with avelumab, a human anti-PD-L1 antibody in development by Merck KGaA, and Pfizer; talazoparib, a poly (ADP-ribose) polymerase (PARP) inhibitor developed by Pfizer; or enzalutamide, an androgen receptor inhibitor in development by Pfizer and Astellas Pharma Inc. We are planning a Phase 1 study in pancreatic

cancer patients in collaboration with BioXcel Therapeutics to evaluate a triplet combination of bempegaldesleukin, BXCL-701 (a small molecule immune-modulator, DPP 8/9), and avelumab being supplied to BioXcel by Pfizer and Merck KGaA. We are also working in collaboration with Vaccibody AS to evaluate bempegaldesleukin in combination with Vaccibody's personalized cancer neoantigen vaccine in a Phase 1 proof-of-concept study in patients with locally advanced or metastatic tumors.

We are also advancing other molecules, including NKTR-262 and NKTR-255, in our I-O portfolio. NKTR-262 is a small molecule agonist that targets toll-like receptors (TLRs) found on innate immune cells in the body. NKTR-262 is designed to stimulate the innate immune system and promote maturation and activation of antigen-presenting cells (APCs), such as dendritic cells, which are critical to induce the body's adaptive immunity and create antigen-specific cytotoxic T cells. NKTR-262 is being developed as an intra-tumoral injection in combination with systemic bempegaldesleukin to induce an abscopal response and achieve the goal of tumor regression in cancer patients treated with both therapies. The Phase 1 dose-escalation trial is currently ongoing. NKTR-255 is a biologic that targets the interleukin-15 (IL-15) pathway in order to activate the body's innate and adaptive immunity. Activation of the IL-15 pathway enhances the survival and function of NK cells and induces survival of both effector and CD8 memory T cells. Preclinical findings suggest NKTR-255 has the potential to synergistically combine with antibody-dependent cellular toxicity molecules as well as enhance CAR-T therapies. We have initiated a Phase 1 clinical study of NKTR-255 in adults with relapsed or refractory non-Hodgkin lymphoma or multiple myeloma. We are also designing other clinical trials of NKTR-255 in both liquid and solid tumor settings. Additionally, we have entered into separate preclinical research collaborations with Gilead Sciences, Inc. (Gilead) and Janssen Research & Development, LLC (Janssen) to test the combination of NKTR-255 with therapies in Gilead's antiviral portfolio and Janssen's oncology portfolio, respectively.

Pain

NKTR-181 (also known as oxycodegol) is a novel mu-opioid analgesic drug candidate. In a Phase 3 efficacy study, NKTR-181 met its primary and key secondary endpoints in opioid-naïve patients with chronic low back pain. In a long-term safety study, NKTR-181 was shown to have a favorable safety profile with analgesic effect maintained over 52-weeks. In a human abuse liability study (HAL), NKTR-181 had highly statistically significant lower "drug liking" scores and reduced "feeling high" scores as compared to oxycodone at all doses tested ($p < 0.0001$). In a human abuse potential study (HAP), NKTR-181 (400 mg and 600 mg) rated less likable compared to oxycodone 40 mg and 60 mg ($p<0.0001$), and a supratherapeutic dose of NKTR-181 (1200 mg) rated less likable than oxycodone 60 mg ($p=0.0071$). In numerous experiments using laboratory and home-based chemistry techniques, NKTR-181 was not able to be converted into a rapidly-acting, more abusable form of opioid.

On May 31, 2018, we announced that we submitted a New Drug Application (NDA) for NKTR-181, which had been granted a Fast Track designation by the FDA. Following our submission, the FDA missed the target action date of August 29, 2019 that it had assigned to our NDA under the Prescription Drug User Fee Act (PDUFA), and postponed product-specific advisory committee meetings for opioid analgesics, including one for NKTR-181 that was scheduled to take place on August 21, 2019. At the rescheduled advisory committee meeting held on January 14, 2020, the joint FDA Anesthetic Drug Products Advisory Committee and Drug Safety and Risk Management Committee did not recommend approval of NKTR-181, and, as a result, we subsequently withdrew the NDA and announced we would make no further investment in the program.

On February 26, 2020, the Audit Committee of the Board of Directors of the Company approved a plan to halt further development activities of the NKTR-181 program. The plan calls for the Company to terminate contracts with third party vendors (such as contract manufacturers and service providers) that were entered into for the purpose of supporting the commercialization of NKTR-181, and for the Company to enter into severance agreements with employees of Inheris Biopharma, Inc., a wholly owned subsidiary of the Company that was formed to develop and commercial NKTR-181. The plan is ultimately expected to result in a cost savings to us of between $75 million and $125 million in 2020, based upon projections of the estimated costs attributed to commercialization plans and post-approval studies. In addition, in the first quarter of 2020, we expect to incur charges of $45.0 million to $50.0 million, including non-cash charges of $19.7 million for the impairment of advance payments to contract manufacturers for commercial batches of NKTR-181, as well as other charges, primarily for non-cancellable commitments to our contract manufacturers and certain severance costs. The plan will allow us to focus our resources on the existing I-O and autoimmune disease programs.

Collaboration Partner Programs

Autoimmune Disease

NKTR-358 is an investigational drug designed to correct the underlying immune system imbalance in the body which occurs in patients with autoimmune disease. The breakdown of mechanisms assuring recognition of self and non-self is what

underlies all autoimmune diseases. A failure of the body's self-tolerance mechanisms is known to result from pathogenic auto reactive T lymphocytes. By increasing the number of regulatory T cells (which are specific immune cells in the body that modulate the immune system and prevent autoimmune disease by maintaining self-tolerance), these pathogenic auto reactive T cells can be reduced and the proper balance of effector and regulatory T cells can be achieved to restore the body's self-tolerance mechanisms. There is consistent evidence that suboptimal regulatory T cell numbers and their lack of activity play a significant role in a myriad of autoimmune diseases. NKTR-358 is designed to optimally target the IL-2 receptor complex in order to stimulate proliferation and growth of regulatory T cells. NKTR-358 is being developed as a once or twice monthly self-administered injection for a number of autoimmune diseases.

On July 23, 2017, we entered into a worldwide license agreement with Eli Lilly and Company (Lilly) to co-develop NKTR-358. We received an initial payment of $150.0 million in September 2017 and are eligible for up to an additional $250.0 million for development and regulatory milestones. We are responsible for completing Phase 1 clinical development and certain drug product development and supply activities. We also share Phase 2 development costs with Lilly, with Lilly responsible for 75% and Nektar responsible for 25% of these costs. We will have the option to contribute funding to Phase 3 development on an indication-by-indication basis, ranging from zero to 25% of the global Phase 3 development costs. We are eligible for tiered royalties on global sales up to the low twenties that escalate based upon our level of contribution to Phase 3 development costs and the level of global product annual sales. Lilly will be responsible for all costs of global commercialization and we will have an option to co-promote in the U.S. under certain conditions.

We have completed the first Phase 1 dose-finding trial of NKTR-358 to evaluate single-ascending doses of NKTR-358 in approximately 100 healthy patients, and we also completed treatment of a Phase 1 multiple-ascending dose trial to evaluate NKTR-358 in patients with systemic lupus erythematosus (SLE). Lilly is expected to initiate a Phase 2 study in SLE in mid-2020 and to start an additional Phase 2 study in another auto-immune disease in 2020. On October 7, 2019, we announced Lilly had initiated two Phase 1b studies in patients with psoriasis and atopic dermatitis.

Other Collaboration Partner Programs

In 2014, we achieved the first approval of one of our proprietary drug candidates, MOVANTIK® (naloxegol), under a global license agreement with AstraZeneca AB (AstraZeneca). MOVANTIK® is an oral peripherally-acting opioid antagonist, for the treatment of opioid-induced constipation, a side effect caused by chronic administration of prescription opioid pain medicines. AstraZeneca markets and sells MOVANTIK® in the United States in collaboration with Daiichi Sankyo, Inc. (Daiichi). Kyowa Hakko Kirin Co. Ltd. (Kirin) has exclusive marketing rights to MOVENTIG® (the naloxegol brand name in the EU) in the EU, Iceland, Liechtenstein, Norway and Switzerland.

We have a collaboration with Baxalta, Inc. (Baxalta, a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited, Takeda) to develop and commercialize PEGylated drug candidates with the objective of providing new long-acting therapies for hemophilia patients. Under this collaboration, we worked with Baxalta to develop ADYNOVATE®, an extended half-life recombinant factor VIII (rFVIII) treatment for Hemophilia A based on ADVATE® (Antihemophilic Factor (Recombinant)). ADYNOVATE®, was first approved by the FDA in late 2015 for Hemophilia A. ADYNOVATE® has also been approved in the European Union, Japan, Korea, Canada, and certain other countries using the same or similar brand names such as ADYNOVI™.

We also have a number of license, manufacturing and supply agreements with other leading biotechnology and pharmaceutical companies, including Amgen, Inc., Pfizer and UCB Pharma (UCB). More than 10 products using our PEGylation technology have received regulatory approval in the U.S. or the EU.

Corporate Information

We were incorporated in California in 1990 and reincorporated in Delaware in 1998. We maintain our executive offices at 455 Mission Bay Boulevard South, San Francisco, California 94158, and our main telephone number is (415) 482-5300. Our website is located at www.nektar.com. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated in, this Annual Report on Form 10-K.

Our Technology Platform

As a leader in the polymer conjugation field, we have advanced our technology platform to include new advanced polymer technologies that can be tailored in specific and customized ways with the objective of optimizing and significantly improving the profile of a wide range of molecules, including many classes of drugs targeting numerous disease areas. Polymer conjugation or PEGylation has been a highly effective technology platform for the development of therapeutics with significant commercial success, such as Amgen's Neulasta® (pegfilgrastim) and UCB's CIMZIA® (certolizumab pegol). Nearly all of the PEGylated drugs approved over the last fifteen years were enabled with our PEGylation technology through our collaborations

and licensing partnerships with a number of well-known biotechnology and pharmaceutical companies. PEGylation is a versatile technology as a result of polyethylene glycol (PEG) being a water soluble, amphiphilic, non-toxic, non-immunogenic compound that has been shown to safely clear from the body. Its primary use to date has been in currently approved biologic drugs to favorably alter their pharmacokinetic or pharmacodynamic properties. However, in spite of its widespread success in commercial drugs, there are some limitations with the first-generation PEGylation approaches that have been used with biologics. For example, these techniques cannot be used successfully to create small molecule drugs which could potentially benefit from the application of the technology. Other limitations of the early applications of PEGylation technology include sub-optimal bioavailability and bioactivity, and its limited ability to be used to fine-tune properties of the drug.

With our expertise and proprietary technology in polymer conjugation, we have created the next generation of PEGylation technology. Our advanced polymer conjugation technology platform is designed to overcome the limitations of the first generation of the technology platform and to allow the platform to be utilized with a broader range of molecules across many therapeutic areas. We have also developed robust manufacturing processes for generating second generation PEGylation reagents that allow us to utilize the full potential of these newer approaches.

Our advanced polymer conjugate technology platforms have the potential to offer one or more of the following benefits:

- improve efficacy or safety of a drug as a result of better pharmacokinetics, pharmacodynamics, longer half-life and sustained exposure of the drug;
- improve targeting or binding affinity of a drug to its target receptors with the potential to improve efficacy and reduce toxicity or drug resistance;
- improve solubility of a drug;
- enable oral administration of parenterally-administered drugs, or drugs that must be administered intravenously or subcutaneously, and increase oral bioavailability of small molecules;
- prevent drugs from crossing the blood-brain barrier, or reduce their rate of passage into the brain, thereby limiting undesirable central nervous system effects;
- reduce first-pass metabolism effects of certain drug classes with the potential to improve efficacy, which could reduce the need for other medicines and reduce toxicity;
- reduce the rates of drug absorption and of elimination or metabolism by improving stability of the drug in the body and providing it with more time to act on its target;
- differentially alter binding affinity of a drug for multiple receptors, improving its selectivity for one receptor over another; and
- reduce immune response to certain macromolecules with the potential to prolong their effectiveness with repeated doses.

We have a broad range of approaches that we may use when designing our own drug candidates, some of which are further described below.

Large Molecule Pro-Drug Releasable Polymer Conjugates (Cytokines)

Our customized approaches with large molecule polymer conjugates have expanded to include a new approach with biologics, in particular cytokines, which utilize the polymer as a means to bias action to a certain receptor or receptor sub-type. In addition, a cytokine's pharmacokinetics and pharmacodynamics can be substantially improved and its half-life can be significantly extended. An example of this is bempegaldesleukin, which is a CD122-preferential IL-2 pathway agonist designed to provide rapid activation and proliferation of cancer-killing CD8+ effector T cells and NK cells, without over-activating the immune system, with an every two or every three-week dosing schedule.

Large Molecule Polymer Conjugates (Proteins and Peptides)

Our customized approaches with large molecule polymer conjugates have enabled numerous successful PEGylated biologics on the market today. Through rational drug design, a protein's or peptide's pharmacokinetics and pharmacodynamics can be substantially improved and its half-life can be significantly extended. An example of this is Baxalta's ADYNOVATE®, a longer-acting (PEGylated) form of a full-length recombinant factor VIII (rFVIII) protein, which was approved by the FDA in November 2015 for use in adults and adolescents, aged 12 years and older, who have Hemophilia A. In December 2016, the FDA expanded the approval of ADYNOVATE® for use in surgical settings for both adults and pediatric patients, and also for the treatment of Hemophilia A in pediatric patients under 12 years of age.

More recently, our scientists have shown that we can also optimize relative receptor binding characteristics of large molecule conjugates. For instance, the cytokine IL-2 has two different receptor complexes in the body that cause opposing effects on the immune system. We have engineered different novel conjugates of IL-2 with optimized differential receptor binding to the IL-2 receptor categories in the immune system. By biasing the receptor binding of these molecules in complementary ways, we have made two different drug candidates: bempegaldesleukin, which selectively activates effector T cells, which kill tumors; and NKTR-358, which selectively activates regulatory T cells, which can reduce the pathological immune activation that underlies many autoimmune diseases.

Small Molecule Stable Polymer Conjugates

Our customized approach for small molecule polymer conjugates allows for the fine-tuning of the physicochemical and pharmacological properties of small molecule oral drugs to potentially increase their therapeutic benefit. In addition, this approach can enable oral administration of subcutaneously or intravenously delivered small molecule drugs that have low bioavailability when delivered orally. The benefits of this approach can also include: improved potency, modified biodistribution with enhanced pharmacodynamics, and reduced transport across specific membrane barriers in the body, such as the blood-brain barrier. An example of reducing transport across the blood-brain barrier is MOVANTIK®, an orally-available peripherally-acting opioid antagonist that is approved in the United States and the EU.

Small Molecule Pro-Drug Releasable Polymer Conjugates

The pro-drug polymer conjugation approach can be used to optimize the pharmacokinetics and pharmacodynamics of a small molecule drug to substantially increase its efficacy and improve its side effect profile. We are currently using this platform for NKTR-262. For NKTR-262 and other oncolytics, this platform can improve sub-optimal half-lives that can limit therapeutic efficacy. With our releasable polymer conjugate technology platform, we believe that oncolytic drugs can be modulated for programmed release within the body, optimized bioactivity and increased sustained exposure of active drug to tumor cells in the body.

Antibody Fragment Polymer Conjugates

This approach uses a large molecular weight PEG conjugated to antibody fragments in order to potentially improve their toxicity profile, extend their half-life and allow for ease of synthesis with the antibody. The specially designed PEG replaces the function of the fragment crystallizable (Fc) domain of full length antibodies with a branched architecture PEG with either stable or degradable linkage. This approach can be used to reduce antigenicity, reduce glomerular filtration rate, enhance uptake by inflamed tissues, and retain antigen-binding affinity and recognition. One approved product on the market that utilizes our technology with an antibody fragment is CIMZIA® (certoluzimab pegol), which was developed by our partner UCB and is approved for the treatment of Crohn's Disease and ankylosing spondylitis in the U.S., axial spondyloarthritis in the EU and psoriatic arthritis and rheumatoid arthritis in the U.S. and EU.

Our Strategy

The key elements of our business strategy are described below:

Advance Our Proprietary Clinical Pipeline of Drug Candidates that Leverage Our Advanced Polymer Conjugate Platform

Our objective is to create value by advancing our lead drug candidates through various stages of clinical development. To support this strategy, we have significantly expanded and added expertise to our internal research, preclinical, clinical development and regulatory departments. A key component of our development strategy is to potentially reduce the risks and time associated with drug development by capitalizing on the known safety and efficacy of existing drugs and drug candidates as well as established pharmacologic targets and drugs directed to those targets. For many of our novel drug candidates, we may seek to study the drug candidates in indications for which the parent drugs have not been studied or approved. We believe that the improved characteristics of our drug candidates will provide meaningful benefit to patients compared to the existing therapies. In addition, in certain instances we have the opportunity to develop new treatments for patients for which the parent drugs are not currently approved.

Ensure Future Growth of our Proprietary Pipeline through Internal Research Efforts and Advancement of our Preclinical Drug Candidates into Clinical Trials

We believe it is important to maintain a diverse pipeline of new drug candidates to continue to build on the value of our business. Our discovery research organization is continuing to identify new drug candidates by applying our technology platform to a wide range of molecule classes, including small molecules and proteins, peptides and antibodies, across multiple therapeutic areas. We continue to advance our most promising research drug candidates into preclinical development with the objective of advancing these early-stage research programs to human clinical studies over the next several years.

Selectively Enter into Strategic Collaboration Agreements

We decide on a drug-candidate-by-drug-candidate basis, how far to advance clinical development (e.g., Phase 1, 2 or 3) and whether to commercialize products on our own, or seek a partner, or pursue a combination of these approaches. When we determine to seek a partner, our strategy is to selectively access a partner's development, regulatory, or commercial capabilities with the structure of the collaboration depending on factors such as economic risk sharing, the cost and complexity of development, marketing and commercialization needs, therapeutic areas, potential for combination of drug programs, and geographic capabilities.

Transition to a Fully-Integrated Specialty Biotechnology Company with a Commercial Capability in the I-O Therapeutic Area

If we are successful with the development of bempegaldesleukin or one of our I-O drug candidates and one or more of them is approved, we plan to establish a commercial capability in the U.S. and other select major markets to market, sell and distribute these proprietary I-O therapies. Under our BMS Collaboration Agreement, we retained significant global commercial rights to bempegaldesleukin including global co-promotion rights for all combinations of bempegaldesleukin with any BMS proprietary therapy and we lead global commercialization for all other bempegaldesleukin combination regimens. We also have the contractual right under our BMS Collaboration Agreement to record all worldwide sales and revenue for bempegaldesleukin and we have final decision-making authority regarding the pricing of bempegaldesleukin.

Continue to Build a Leading Intellectual Property Estate in the Field of Polymer Conjugate Chemistry across Therapeutic Modalities

We are committed to continuing to build on our intellectual property position in the field of polymer conjugate chemistry. To that end, we have a comprehensive patent strategy with the objective of developing a patent estate covering a wide range of novel inventions, including among others, polymer materials, conjugates, formulations, synthesis, therapeutic areas, methods of treatment and methods of manufacture.

Nektar Proprietary Programs

The following table summarizes our proprietary drugs that are being developed by us or in collaboration with other pharmaceutical companies or independent investigators. The table includes the type of molecule or drug, the target indications for the drug candidate, and the status of the clinical development program.

Drug Candidate	Target Indication	Status(1)
Bempegaldesleukin (CD122-preferential IL-2 pathway agonist)	Immuno-oncology	Phase 1, Phase 2, and Phase 3 studies ongoing in multiple indications
NKTR-358 (cytokine Treg stimulant)	Autoimmune Disease	Phase 1
NKTR-262 (toll-like receptor agonist)	Oncology	Phase 1
NKTR-255 (IL-15 receptor agonist)	Immuno-oncology	Phase 1

(1) Status definitions are:
Phase 3 or Pivotal — drug candidate in large-scale clinical trials conducted to obtain regulatory approval to market and sell the drug (these trials are typically initiated following encouraging Phase 2 trial results).

Phase 2 — a drug candidate in clinical trials to establish dosing and efficacy in patients.
Phase 1 — a drug candidate in clinical trials, typically in healthy subjects, to test safety.
Research/Preclinical — a drug candidate is being studied in research by way of in vitro studies and/or animal studies

Overview of Nektar Proprietary Programs

Immuno-oncology (I-O)

Bempegaldesleukin (previously known as NKTR-214, cytokine immunostimulatory therapy)

Bempegaldesleukin is a CD122-preferential IL-2 pathway agonist designed to provide rapid activation and proliferation of cancer-killing CD8+ effector T cells and NK cells, without over-activating the immune system. Bempegaldesleukin stimulates these cancer-killing immune cells in the body by targeting CD122-specific receptors found on the surface of these immune cells. CD122, which is also known as the IL-2 receptor beta subunit, is a key signaling receptor that is known to increase proliferation of these CD8+ effector T cells. This receptor selectivity is intended to increase efficacy and improve safety over existing immunostimulatory cytokine drugs.

Under a research collaboration with The University of Texas MD Anderson Cancer Center, in December 2015 we commenced a Phase 1 study to evaluate bempegaldesleukin as a monotherapy in a variety of tumor types to evaluate safety and efficacy, and define the recommended Phase 2 dose of bempegaldesleukin in patients with solid tumors. In addition, the study also assessed the safety profile of bempegaldesleukin, the immunologic effect of bempegaldesleukin on tumor-infiltrating lymphocytes and other immune activation markers in both blood and tumor tissue, the pharmacokinetic and pharmacodynamic profile of bempegaldesleukin.

The development program for bempegaldesleukin includes combinations with a number of therapeutic approaches where we believe there is a strong biologic rationale for complementary mechanisms of action. On September 21, 2016, we entered into a Clinical Trial Collaboration Agreement with BMS, pursuant to which we and BMS collaborated to conduct Phase 1/2 clinical trials evaluating bempegaldesleukin and BMS' human monoclonal antibody that binds to PD-1, known as Opdivo®, as a potential combination treatment regimen in five tumor types and eight potential indications (each, a Combined Therapy Trial). In the first phase of the PIVOT-02 study, we evaluated the clinical benefit, safety, and tolerability of combining bempegaldesleukin with Opdivo® in thirty-eight patients. Interim data from the dose-escalation phase of the trial was presented at the 2017 SITC meeting in November 2017. We identified the recommended Phase 2 dose for bempegaldesleukin in combination with Opdivo®. The second phase of the expansion cohorts, which now falls under the BMS Collaboration Agreement entered into on February 13, 2018, and described below, is evaluating the safety and efficacy of combining bempegaldesleukin with Opdivo®. Under the initial Clinical Trial Collaboration Agreement, BMS was responsible for 50% of all out-of-pocket costs reasonably incurred in connection with third party contract research organization, laboratories, clinical sites and institutional review boards. Each party was otherwise be responsible for its own internal costs, including internal personnel costs, incurred in connection with each Combined Therapy Trial.

On February 13, 2018, we entered into the second agreement with BMS (the BMS Collaboration Agreement), pursuant to which we and BMS are jointly developing bempegaldesleukin, including, without limitation, in combination with BMS's Opdivo®, and other compounds of BMS, us or any third party. The parties have agreed to jointly commercialize bempegaldesleukin on a worldwide basis. On April 3, 2018, the closing date of the transaction, BMS paid us a non-refundable upfront cash payment of $1.0 billion and purchased $850.0 million of our common stock at a purchase price of $102.60 per share pursuant to a Share Purchase Agreement (Purchase Agreement). We are eligible to receive additional cash payments of a total of up to $1.455 billion upon achievement of certain development and regulatory milestones and a total of up to $350.0 million upon achievement of certain sales milestones. Under the BMS Collaboration Agreement, we have the contractual right to record all worldwide sales and revenue for bempegaldesleukin. We will share global commercialization profits and losses with BMS for bempegaldesleukin, with Nektar sharing 65% and BMS sharing 35% of the net profits and losses. BMS will lead commercialization for combinations of bempegaldesleukin with BMS proprietary medicines, and we will lead all other commercialization efforts for bempegaldesleukin. We will have the final decision-making authority regarding the pricing for bempegaldesleukin. Bempegaldesleukin will be sold on a stand-alone basis and there will be no fixed-dose combinations or co-packaging without the consent of both parties.

Under the BMS Collaboration Agreement, we and BMS will collaborate to develop and conduct clinical studies of bempegaldesleukin pursuant the Collaboration Development Plan. The current Collaboration Development Plan includes a series of registration-enabling trials in five indications in three tumor types and may only be further revised upon mutual agreement of the parties. On August 1, 2019, we and BMS announced that the FDA granted Breakthrough Therapy Designation for bempegaldesleukin in combination with Opdivo® for the treatment of patients with previously untreated unresectable or metastatic melanoma. Breakthrough Therapy Designation is intended to expedite the development and review of medicines

aimed at treating serious or life-threatening disease where there is preliminary evidence that the investigational therapy may offer substantial improvement over existing therapies on at least one clinically significant endpoint. In addition to the first-line metastatic melanoma trial, additional ongoing registrational trials currently being pursued under the current Collaboration Development Plan include first-line cisplatin ineligible, PD-L1 low, locally advanced or metastatic urothelial cancer, first-line metastatic renal cell carcinoma (RCC), and muscle-invasive bladder cancer, as well as an additional registrational trial in adjuvant melanoma scheduled to begin in 2020. In addition, the Collaboration Development Plan includes a Phase 1/2 dose escalation and expansion study to evaluate bempegaldesleukin plus Opdivo® in combination with axitinib in first line RCC in order to support a future Phase 3 registrational trial. Further, as part of the Collaboration Development Plan, several other registrational-supporting pediatric and safety studies for the combination of bempegaldesleukin and Opdivo® are either currently underway or planned to begin in 2020. Also, as specifically allowed under the BMS Collaboration Agreement, Nektar is independently studying bempegaldesleukin and pembrolizumab in a non-small cell lung cancer (NSCLC) Phase 1/2 trial, and BMS plans to independently study bempegaldesleukin and Opdivo® in a NSCLC dose-optimization Phase 1/2 trial in 2020.

The parties share the development costs for bempegaldesleukin in combination regimens, with BMS generally responsible for 67.5% and Nektar generally responsible for 32.5% of the development costs, based on each party's relative ownership interest in the compounds included in the regimens. For costs of producing bempegaldesleukin, however, BMS is responsible for 35% and Nektar is responsible for 65% of costs. Our share of such development costs are limited to an annual cap of $125.0 million. Neither party will develop a therapy using an IL-2 agonist in combination with a small or large molecule that binds to the PD(L)-1 target, in indications included in the Collaboration Development Plan (each, a Competing Combination), whether alone or in collaboration with any third party, during a limited exclusivity period from the closing date under the BMS Collaboration Agreement until the later of (i) the first commercial sale of bempegaldesleukin or (ii) the third anniversary of the closing date, but each party may develop a Competing Combination on its own (but not in collaboration with any third party) during the three years after the end of the foregoing limited exclusivity period. Other than as described above, Nektar may independently develop and commercialize bempegaldesleukin either alone or in combination with other Nektar proprietary compounds or third party compounds.

Outside of the Collaboration Development Plan with BMS, we are also conducting a broad array of development activities evaluating bempegaldesleukin in combination with other agents that have potential complementary mechanisms of action. Our strategic objective is to establish bempegaldesleukin as a key component with many immuno-oncology combination regimens with the potential to raise the standard of care in multiple oncology settings:

- On November 6, 2018, we entered into a clinical collaboration with Pfizer to evaluate several combination regimens in multiple cancer settings, including metastatic castration-resistant prostate cancer and squamous cell carcinoma of the head and neck. The combination regimens in this collaboration will evaluate bempegaldesleukin with avelumab, a human anti-PD-L1 antibody in development by Merck KGaA and Pfizer; talazoparib, a poly (ADP-ribose) polymerase (PARP) inhibitor developed by Pfizer; or enzalutamide, an androgen receptor inhibitor in development by Pfizer and Astellas Pharma Inc.
- A Phase 1 study in pancreatic cancer patients in collaboration with BioXcel is planned to evaluate a triplet combination of bempegaldesleukin, BXCL-701 (a small molecule immune-modulator, DPP 8/9), and avelumab (being supplied to BioXcel by Pfizer and Merck KGaA).
- We are also working in collaboration with Vaccibody AS to evaluate bempegaldesleukin with Vaccibody's personalized cancer neoantigen vaccine in a Phase 1 proof-of-concept study.

With our non-BMS clinical collaborations for bempegaldesleukin, each party generally supplies its own drug candidate and we generally share 50% of the other clinical development costs with our partners. We expect to continue to make significant and increasing investments exploring the potential of bempegaldesleukin with mechanisms of action that we believe are synergistic with bempegaldesleukin based on emerging scientific findings in cancer biology and preclinical development work.

In addition to these non-BMS clinical collaborations for bempegaldesleukin, we intend to initiate further clinical development programs, on our own or in collaboration with other potential partners, to explore the potential of combining bempegaldesleukin with other therapies such as cancer vaccines (other than Vaccibody's personalized cancer neoantigen vaccine), adoptive cell therapy, and other small molecules and biological agents in order to generate novel immuno-oncology approaches.

NKTR-262

NKTR-262 is a small molecule agonist that targets toll-like receptors (TLRs) found on innate immune cells in the body. NKTR-262 is designed to overcome the body's dysfunction of antigen-presenting cells (APCs), such as dendritic cells, which are critical to induce the body's adaptive immunity and create antigen-specific cytotoxic T cells. NKTR-262 is being developed as a single intra-tumoral injection to be administered at the start of therapy with bempegaldesleukin in order to induce an abscopal response and achieve the goal of tumor regression in cancer patients treated with both therapies. We initiated enrollment of patients in the initial Phase 1/2 clinical study in April 2018, which we call the REVEAL study, and the dose-escalation portion of this clinical study is ongoing and expected to be completed in 2020.

NKTR-255

NKTR-255 is a biologic that targets the IL-15 pathway in order to activate the body's innate and adaptive immunity. Activation of the IL-15 pathway enhances the survival and function of NK cells and induces survival of both effector and CD8 memory T cells. Native rhIL-15 is rapidly cleared from the body and must be administered frequently and in high doses limiting its utility due to toxicity. NKTR-255 is designed with IL-15 receptor alpha specificity to optimize biological activity and is uniquely engineered to provide optimal exposure and an improved safety profile. Preclinical findings suggest NKTR-255 has the potential to synergistically combine with antibody-dependent cellular toxicity molecules as well as enhance CAR-T therapies. We have initiated a Phase 1 clinical study of NKTR-255 in adults with relapsed or refractory non-Hodgkin lymphoma or multiple myeloma. We are also designing other clinical trials of NKTR-255 in both liquid and solid tumor settings. Additionally, we have entered into separate preclinical research collaborations with Gilead and Janssen to test the combination of NKTR-255 with therapies in Gilead's antiviral portfolio and Janssen's oncology portfolio, respectively.

Collaboration Partner Programs

The following table outlines our collaborations with a number of pharmaceutical companies that currently license our intellectual property and, in some cases, purchase our proprietary PEGylation materials for their drug products. More than ten products using our PEGylation technology have received regulatory approval in the U.S. or Europe. There are also a number of other candidates that have been filed for approval or are in various stages of clinical development. These collaborations generally contain one or more elements including a license to our intellectual property rights and manufacturing and supply agreements under which we may receive manufacturing revenue, milestone payments, and/or royalties on commercial sales of drug products.

Drug	Primary or Target Indications	Drug Marketer/Partner	Status(1)
NKTR-358	Autoimmune disease	Eli Lilly and Company	Phase 1
ADYNOVATE® (previously referred to as BAX 855, PEGylated rFVIII) and ADYNOVI® (brand name for ADYNOVATE® in Europe)	Hemophilia A	Takeda Pharmaceutical Company Limited	Approved 2015
MOVANTIK® (naloxegol tablets) and MOVENTIG® (brand name for MOVANTIK® in Europe)	Opioid-induced constipation in adult patients with chronic non-cancer pain (US); Opiod-induced constipation in adult patients who have and inadequate response to laxatives (EU).	AstraZeneca AB	Approved 2014
CIMZIA® (certolizumab pegol)	Crohn's disease, Rheumatoid arthritis, and Psoriasis/ Ankylosing Spondylitis	UCB Pharma	Approved 2008*
MIRCERA® (C.E.R.A.) (Continuous Erythropoietin Receptor Activator)	Anemia associated with chronic kidney disease in patients on dialysis and patients not on dialysis	F. Hoffmann-La Roche Ltd	Approved 2007*
Macugen® (pegaptanib sodium injection)	Age-related macular degeneration	Bausch Health Companies Inc. (formerly, Valeant Pharmaceuticals International, Inc.)	Approved 2004
Somavert® (pegvisomant)	Acromegaly	Pfizer Inc.	Approved 2003
Neulasta® (pegfilgrastim)	Neutropenia	Amgen Inc.	Approved 2002
Dapirolizumab Pegol	Systemic Lupus Erythematosus	UCB Pharma (Biogen)	Phase 2
PEGPH20	Pancreatic, Non-Small Cell Lung Cancer, and other multiple tumor types	Halozyme Therapeutics, Inc.	Further development halted.
Longer-acting blood clotting proteins	Hemophilia	Takeda	Research/Preclinical

(1) Status definitions are:
Approved — regulatory approval to market and sell product obtained in one or more of the U.S., EU or other countries. Year indicates first regulatory approval.
Filed — an application for approval and marketing has been filed with the applicable government health authority.
Phase 3 or Pivotal — drug candidate in large-scale clinical trials conducted to obtain regulatory approval to market and sell the drug (these trials are typically initiated following encouraging Phase 2 trial results).
Phase 2 — a drug candidate in clinical trials to establish dosing and efficacy in patients.
Phase 1 — a drug candidate in clinical trials, typically in healthy subjects, to test safety.

Research/Preclinical — a drug candidate is being studied in research by way of in vitro studies and/or animal studies.

* In February 2012, we sold our rights to receive royalties on future worldwide net sales of CIMZIA® and MIRCERA® effective as of January 1, 2012.

With respect to all of our collaboration and license agreements with third parties, please refer to Item 1A. Risk Factors, including without limitation, "We are a party to numerous collaboration agreements and other significant agreements which contain complex commercial terms that could result in disputes, litigation or indemnification liability that could adversely affect our business, results of operations and financial condition" and "We are involved in legal proceedings and may incur substantial litigation costs and liabilities that will adversely affect our business, financial condition and results of operations."

Overview of Collaboration Partner Programs

We have a number of product candidates in clinical development and approved products in collaboration with our partners where we invented the drug candidate or where our collaboration partners have licensed our proprietary intellectual property to enable one of their drug candidates. Our agreements with collaboration partners may involve several elements including a technology license as well as the development, commercialization, and manufacturing and supply obligations. We typically receive consideration from our collaboration partners in the form of upfront payments, milestone payments and royalties on sales. In certain cases, we also manufacture and supply our proprietary polymer materials to our partners.

NKTR-358, Agreement with Eli Lilly and Company

NKTR-358 is designed to correct the underlying immune system imbalance in the body which occurs in patients with autoimmune disease. Current systemic treatments for autoimmune disease, including corticosteroids and anti-TNF agents, suppress the immune system broadly and come with severe side effects. NKTR-358 targets the CD25 sub-receptor in the IL-2 pathway in order to stimulate proliferation and growth of regulatory T cells, which are specific immune cells in the body that modulate the immune system and prevent autoimmune disease by maintaining self-tolerance.

On July 23, 2017, we entered into the Lilly Agreement, pursuant to which we and Lilly will co-develop NKTR-358. Under the terms of the Lilly Agreement, we received an initial payment of $150.0 million in September 2017 and are eligible for up to $250.0 million in additional development and regulatory milestones. We are responsible for completing Phase 1 clinical development and certain drug product development and supply activities. We will also share Phase 2 development costs with Lilly, with Lilly responsible for 75% and Nektar responsible for 25% of these costs. We will have the option to contribute funding to Phase 3 development on an indication-by-indication basis, ranging from zero to 25% of the global Phase 3 development costs. We are eligible to receive up to double-digit sales royalty rates that escalate based upon our contribution to Phase 3 development costs and the level of global product annual sales. Lilly will be responsible for all costs of global commercialization and we will have an option to co-promote in the U.S. under certain conditions.

We have completed a Phase 1 dose-finding trial of NKTR-358 to evaluate single-ascending doses of NKTR-358 in approximately 100 healthy patients. Results from this study demonstrated a multiple-fold increase in regulatory T cells with no change in CD8 positive or natural killer cell levels and no dose-limiting toxicities were observed. We also completed treatment of a Phase 1 multiple-ascending dose trial to evaluate NKTR-358 in patients with systemic lupus erythematosus (SLE). Lilly is expected to initiate a Phase 2 study in SLE in mid-2020 and to start an additional Phase 2 study in another auto-immune disease in 2020. These clinical studies are in addition to the two ongoing Phase 1b studies in patients with psoriasis and atopic dermatitis being run by Lilly.

ADYNOVATE® (previously referred to as BAX 855), ADYNOVI® (brand name for ADYNOVATE® in Europe) and Longer-Acting Blood Clotting Proteins for Hemophilia A, Agreement with Subsidiaries of Baxalta Incorporated

In September 2005, we entered into an exclusive research, development, license, manufacturing and supply agreement (Baxalta License Agreement) with certain subsidiaries of Baxalta (which has been acquired by Takeda), to develop products with an extended half-life for the treatment and prophylaxis of Hemophilia A patients using our proprietary PEGylation technology. The first product in this collaboration, ADYNOVATE® (previously referred to as BAX 855), is a longer-acting (PEGylated) form of a full-length recombinant factor VIII (rFVIII) protein that was developed to increase the half-life of ADVATE® (Antihemophilic Factor (Recombinant) Plasma/Albumin-Free Method). ADYNOVATE® was first approved by the FDA on November 30, 2015. Since then it has been approved in one or more indications for Hemophilia A in the EU, Japan, and other countries around the world.

We are entitled to $35.0 million of sales milestone payments, as well as royalties on net sales varying by product and country of sale. With regard to the sales milestone payments, we received a $10.0 million dollar milestone payment in 2019 for annual net sales in 2018 achieving the sales milestone specified in the Baxalta License Agreement for this payment. With regard to royalties, our royalties start in the mid-single digits for net sales of ADYNOVATE® up to $1.2 billion and then in the low teens for net sales exceeding $1.2 billion. Our right to receive these royalties in any particular country will expire upon the later of ten years after the first commercial sale of the product in that country or the expiration of patent rights in certain designated countries or in that particular country.

In October 2017, we entered into a right to sublicense agreement with Baxalta, under which we granted to Baxalta the right to grant a nonexclusive sublicense to certain patents to a third party that were previously exclusively licensed to Baxalta under the Baxalta License Agreement. Under the right to sublicense agreement, Baxalta paid us $12.0 million in November 2017 and agreed to pay us single digit royalty payments based upon net sales of the third party products covered under the sublicense throughout the term of the right to sublicense agreement.

Hemophilia A, also called factor VIII (FVIII) deficiency or classic hemophilia, is a genetic disorder caused by missing or defective factor VIII, a clotting protein. According to the US Centers for Disease Control and Prevention, hemophilia occurs in approximately one in 5,000 live births and there are about 20,000 people with hemophilia in the US. All races and ethnic groups are affected. Hemophilia A is four times as common as Hemophilia B while more than half of patients with Hemophilia A have the severe form of hemophilia. According to 360 Research Reports, the worldwide market for human coagulation Factor VIII products was $7.4 billion in 2019.

MOVANTIK® and MOVENTIG® (brand name for MOVANTIK® in Europe), Agreement with AstraZeneca AB

In September 2009, we entered into a global license agreement with AstraZeneca AB (AstraZeneca) pursuant to which we granted AstraZeneca a worldwide, exclusive, perpetual, royalty-bearing license under our patents and other intellectual property to develop, market and sell MOVANTIK®. MOVANTIK® was developed using our oral small molecule polymer conjugate technology and we advanced this drug through the completion of Phase 2 clinical studies prior to licensing it to AstraZeneca. MOVANTIK® is an orally-available peripherally-acting mu-opioid antagonist which is a medication for the treatment of opioid-induced constipation (OIC), which is a common side effect of prescription opioid medications. Opioids attach to specific proteins called opioid receptors. When the opioids attach to certain opioid receptors in the gastrointestinal tract, constipation may occur. OIC is a result of decreased fluid absorption and lower gastrointestinal motility due to opioid receptor binding in the gastrointestinal tract.

On September 16, 2014, the FDA approved MOVANTIK® as the first once-daily oral peripherally-acting mu-opioid receptor antagonist (PAMORA) medication for the treatment of OIC in adult patients with chronic, non-cancer pain. On December 9, 2014, the European Commission, or EC, granted Marketing Authorisation to MOVENTIG® (the naloxegol brand name in the EU) as the first once-daily oral PAMORA to be approved in the EU for the treatment of OIC in adult patients who have had an inadequate response to laxative(s). The EC's approval applies to all EU member countries plus Iceland and Norway. AstraZeneca launched the commercial sales of MOVANTIK® in the U.S. in March 2015 and MOVENTIG® in Germany, the first EU member country, in August 2015. Under the terms of our license agreement with AstraZeneca, AstraZeneca made an initial license payment of $125.0 million to us and has responsibility for all activities and bears all costs associated with research, development and commercialization for MOVANTIK®. We received milestone payments of $70.0 million and $25.0 million upon the acceptance of regulatory approval applications of MOVANTIK® by the FDA and the EMA, respectively, in 2013. We received an additional developmental milestone payment of $35.0 million upon the FDA's approval of MOVANTIK® in 2014 and a total of $140.0 million upon commercial launches in 2015, including $100.0 million for MOVANTIK® in the U.S. and $40.0 million for MOVENTIG® in Germany. We are also entitled to up to $375.0 million in sales milestones for MOVANTIK® if the program achieves certain annual commercial sales levels and significant double-digit royalty payments starting at 20% of net sales in the U.S. and, for countries AstraZeneca has not entered into sublicensing agreements, 18% of net sales in rest of world. On March 1, 2016, AstraZeneca announced that it had entered into an agreement with Kyowa Hakko Kirin Co. Ltd. (Kirin), granting Kirin exclusive marketing rights to MOVENTIG® in the EU, Iceland, Liechtenstein, Norway and Switzerland. Nektar's receipt of a 40% share of royalty payments made by Kirin to AstraZeneca will be financially equivalent to Nektar receiving high single-digit to low double-digit royalties depending on Kirin's annual net sales levels. Our right to receive royalties (subject to certain adjustments) in any particular country will expire upon the later of (a) a specified period of time after the first commercial sale of the product in that country or (b) the expiration of patent rights in that particular country. AstraZeneca has agreed to use commercially reasonable efforts to develop one MOVANTIK® fixed-dose combination product and has the right to develop multiple products which combine MOVANTIK® with opioids.

There are a number of patents relevant to MOVANTIK®, some of which are listed in the FDA's "Orange Book." The "Orange Book" currently lists six patents for MOVANTIK®. Four patents (i.e., U.S. Patent Nos. 7,056,500, 7,662,365,

7,786,133 and 9,012,469) are “composition of matter patents,” one of which has a patent expiry extending into 2032. In addition, two patents (i.e., U.S. Patent Nos. 8,067,431 and 8,617,530) are directed to methods of treatment.

CIMZIA®, Agreement with UCB

In December 2000, we entered into a license, manufacturing and supply agreement covering our proprietary PEGylation materials for use in CIMZIA® (certolizumab pegol) with Celltech Chiroscience Ltd., which was acquired by UCB in 2004. Under the terms of the agreement, UCB is responsible for all clinical development, regulatory, and commercialization expenses. We also manufacture and supply UCB with our proprietary PEGylation reagent used in the manufacture of CIMZIA® on a fixed price per gram. We were also entitled to receive royalties on net sales of the CIMZIA® product for the longer of ten years from the first commercial sale of the product anywhere in the world or the expiration of patent rights in a particular country. In February 2012, we sold our rights to receive royalties on future worldwide net sales of CIMZIA® effective as of January 1, 2012 until the agreement with UCB is terminated or expires. This sale is further discussed in Note 7 of our Consolidated Financial Statements. Our agreement with UCB Pharma expires upon the expiration of all of UCB’s royalty obligations, provided that the agreement can be extended for successive two year renewal periods upon mutual agreement of the parties. In addition, UCB may terminate the agreement should it cease the development and marketing of CIMZIA® and either party may terminate for cause under certain conditions.

MIRCERA® (C.E.R.A.) (Continuous Erythropoietin Receptor Activator), Agreement with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc.

In December 2000, we entered into a license, manufacturing and supply agreement with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (Roche), which was amended and restated in its entirety in December 2005. Pursuant to the agreement, we license our intellectual property related to our proprietary PEGylation materials for the manufacture and commercialization of Roche’s MIRCERA® product. MIRCERA® is a novel continuous erythropoietin receptor activator indicated for the treatment of anemia associated with chronic kidney disease in patients on dialysis and patients not on dialysis. As of the end of 2006, we were no longer required to manufacture and supply our proprietary PEGylation materials for MIRCERA® under our original agreement. In February 2012, we entered into a toll-manufacturing agreement with Roche under which we manufactured our proprietary PEGylation material for MIRCERA®. Roche entered into the toll-manufacturing agreement with the objective of establishing us as a secondary back-up source on a non-exclusive basis through December 31, 2016. Under the terms of this agreement, Roche paid us an up-front payment of $5.0 million plus a total of $22.0 million in performance-based milestone payments upon our achievement of certain manufacturing readiness, validation and production milestones, including the delivery of specified quantities of PEGylation materials, all of which were successfully completed by the end of January 2013. In 2013, we delivered additional quantities of PEGylation materials used by Roche to produce PEGASYS® and MIRCERA® for total consideration of approximately $18.6 million. We were also entitled to receive royalties on net sales of the MIRCERA® product. In February 2012, we sold all of our future rights to receive royalties on future worldwide net sales of MIRCERA® effective as of January 1, 2012. This sale is further discussed in Note 7 of our Consolidated Financial Statements. As of December 31, 2016, we no longer had any continuing manufacturing or supply obligations under this MIRCERA® agreement.

Macugen®, Agreement with Bausch Health Companies Inc., formerly Valeant Pharmaceuticals International, Inc.

In 2002, we entered into a license, manufacturing and supply agreement with Eyetech, Inc. (subsequently acquired by Valeant Pharmaceuticals International, Inc. or Valeant), pursuant to which we license certain intellectual property related to our proprietary PEGylation technology for the development and commercialization of Macugen®, a PEGylated anti-vascular endothelial growth factor aptamer currently approved in the U.S. and EU for age-related macular degeneration. Under the terms of the agreement, we will receive royalties on net product sales in any particular country for the longer of ten years from the date of the first commercial sale of the product in that country or the duration of patent coverage. Our agreement with Valeant expires upon the expiration of our last relevant patent containing a valid claim. In addition, Valeant may terminate the agreement if marketing authorization is withdrawn or marketing is no longer feasible due to certain circumstances, and either party may terminate for cause if certain conditions are met.

Somavert®, Agreement with Pfizer, Inc.

In January 2000, we entered into a license, manufacturing and supply agreement (LMS Agreement) with Sensus Drug Development Corporation (subsequently acquired by Pharmacia Corp. in 2001 and then acquired by Pfizer in 2003), for the PEGylation of Somavert® (pegvisomant), a human growth hormone receptor antagonist for the treatment of acromegaly. In January 2017, we entered into a master material supply agreement (Supply Agreement) with Pfizer, in which the LMS Agreement was terminated. We currently manufacture our proprietary PEGylation reagent for Pfizer on a price per gram basis

under the Supply Agreement. Our obligation under the Supply Agreement to supply our proprietary PEGylation reagent to Pfizer continues until December 31, 2023.

Neulasta®, Agreement with Amgen, Inc.

In July 1995, we entered into a non-exclusive supply and license agreement (the 1995 Agreement) with Amgen, Inc., pursuant to which we licensed our proprietary PEGylation technology to be used in the development and manufacture of Neulasta®. Neulasta® selectively stimulates the production of neutrophils that are depleted by cytotoxic chemotherapy, a condition called neutropenia that makes it more difficult for the body to fight infections. On October 29, 2010, we amended and restated the 1995 Agreement by entering into a supply, dedicated suite and manufacturing guarantee agreement (the 2010 Agreement) and an amended and restated license agreement with Amgen Inc. and Amgen Manufacturing, Limited (together referred to as Amgen). Under the terms of the 2010 Agreement, we guarantee the manufacture and supply of our proprietary PEGylation materials (Polymer Materials) to Amgen in an existing manufacturing suite to be used exclusively for the manufacture of Polymer Materials for Amgen in our manufacturing facility in Huntsville, Alabama. This supply arrangement is on a non-exclusive basis (other than the use of the manufacturing suite and certain equipment) whereby we are free to manufacture and supply the Polymer Materials to any other third party and Amgen is free to procure the Polymer Materials from any other third party. Under the terms of the 2010 Agreement, we received a $50.0 million upfront payment in return for guaranteeing supply of certain quantities of Polymer Materials to Amgen and the Additional Rights described below, and Amgen will pay manufacturing fees calculated based on fixed and variable components applicable to the Polymer Materials ordered by Amgen and delivered by us. Amgen has no minimum purchase commitments. If quantities of the Polymer Materials ordered by Amgen exceed specified quantities (with each specified quantity representing a small portion of the quantity that we historically supplied to Amgen), significant additional payments become payable to us in return for guaranteeing supply of additional quantities of the Polymer Materials.

The term of the 2010 Agreement runs through October 29, 2020. In the event we become subject to a bankruptcy or insolvency proceeding, we cease to own or control the manufacturing facility in Huntsville, Alabama, we fail to manufacture and supply the Polymer Materials or certain other events occur, Amgen or its designated third party will have the right to elect, among certain other options, to take title to the dedicated equipment and access the manufacturing facility to operate the manufacturing suite solely for the purpose of manufacturing the Polymer Materials (Additional Rights). Amgen may terminate the 2010 Agreement for convenience or due to an uncured material default by us. Either party may terminate the 2010 Agreement in the event of insolvency or bankruptcy of the other party.

Dapirolizumab Pegol, Agreement with UCB Pharma S.A.

In 2010, we entered into a license, manufacturing and supply agreement with UCB Pharma S.A., (UCB) under which we granted UCB a worldwide, exclusive license to certain of our proprietary PEGylation technology to develop, manufacture and commercialize an anti-CD40L PEGylated Fab being developed by UCB and their partner Biogen Idec, for the treatment of autoimmune disorders, including systemic lupus erythemastosus (SLE). In 2014, UCB and Biogen completed a Phase 1b randomized, double-blind, placebo-controlled clinical study in approximately 24 patients with SLE. Data from the study was published in September 2015 at the Annual American College of Rheumatology Meeting and showed that multiple administrations of dapirolizumab pegol given over 12 weeks were well-tolerated and the safety profile supported further development of the compound. Exploratory analyses from the same study showed greater improvement in clinical measures of disease activity in the dapriolizumab pegol group versus placebo. In 2016, UCB initiated a multi-center, randomized, double-blind, placebo-controlled, parallel-group, dose-ranging Phase 2 clinical study followed by an observational period to evaluate the efficacy and safety of patients with moderately to severely active SLE receiving stable standard of care medications. In October 2018, UCB announced that the primary endpoint of the study to demonstrate a dose response at 24 weeks on the British Isles Lupus Assessment Group (BILAG) based Composite Lupus Assessment (BICLA) was not met and stated that it and Biogen will continue to further evaluate these data while assessing potential next steps. In July 2019, Biogen announced a plan to initiate with UCB a Phase 3 study of dapriolizumab pegol in patients with active SLE despite standard-of-care treatment.

PEGPH20, Agreement with Halozyme Therapeutics, Inc.

In December 2006, we entered into a license agreement with Halozyme (Halozyme License Agreement) pursuant to which we granted Halozyme a worldwide, limited exclusive license to certain of our proprietary PEGylation technology to develop, manufacture and commercialize particular products that use our proprietary PEGylation materials linked only with certain qualifying hyaluronidase protein molecules including PEGPH20. Under this license agreement, we are entitled to future development milestones and royalties on net sales subject to reduction in the absence of patent coverage. In addition, pursuant to a December 18, 2013 manufacturing and supply agreement that we entered into with Halozyme (Halozyme Manufacturing

Agreement), we were to manufacture and supply Halozyme with clinical and future commercial supply of our proprietary PEGylation materials used in the manufacture of PEGPH20.

On November 4, 2019, Halozyme announced that its Phase 3 clinical study evaluating PEGPH20 as a first-line therapy for treatment of patients with metastatic pancreatic cancer failed to reach the primary endpoint of overall survival, and that Halozyme intended to halt development activities for PEGPH20. In December 2019 Halozyme and Nektar terminated the Halozyme Manufacturing Agreement. Halozyme may terminate the Halozyme License Agreement without cause upon ninety days' prior written notice.

Government Regulation

Product Development and Approval Process

The research and development, clinical testing, manufacture and marketing of products using our technologies are subject to regulation by the FDA and by comparable regulatory agencies in other countries. These national agencies and other federal, state and local entities regulate, among other things, research and development activities and the testing (in vitro, in animals, and in human clinical trials), manufacture, labeling, storage, recordkeeping, approval, marketing, advertising and promotion of our products.

The approval process required by the FDA before a product using any of our technologies may be marketed in the U.S. depends on whether the chemical composition of the product has previously been approved for use in other dosage forms. If the product is a new chemical entity that has not been previously approved, the process includes the following:

- extensive preclinical laboratory and animal testing;
- submission of an Investigational New Drug (IND) prior to commencing clinical trials;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug for the intended indication;
- extensive pharmaceutical development for the characterization of the chemistry, manufacturing process and controls for the active ingredient and drug product; and
- submission to the FDA of an NDA for approval of a drug or a Biological License Application (BLA) for approval of a biological product.

If the active chemical ingredient has been previously approved by the FDA, the approval process is similar, except that certain preclinical tests, including those relating to systemic toxicity normally required for the IND and NDA or BLA, and clinical trials, may not be necessary if the company has a right of reference to existing preclinical or clinical data under section 505(j) of the Federal Food, Drug, and Cosmetic Act (FDCA) or is eligible for approval under Section 505(b)(2) of the FDCA or the biosimilars provisions of the Public Health Services Act.

Preclinical tests include laboratory evaluation of product chemistry and animal studies to assess the safety and efficacy of the product and its chosen formulation. Preclinical safety tests must be conducted by laboratories that comply with FDA good laboratory practices (GLP) regulations. The results of the preclinical tests for drugs, biological products and combination products subject to the primary jurisdiction of the FDA's Center for Drug Evaluation and Research (CDER) or Center for Biologics Evaluation and Research (CBER) are submitted to the FDA as part of the IND and are reviewed by the FDA before clinical trials can begin. Clinical trials may begin 30 days after receipt of the IND by the FDA, unless the FDA raises objections or requires clarification within that period. Clinical trials involve the administration of the drug to healthy volunteers or patients under the supervision of a qualified, identified medical investigator according to a protocol submitted in the IND for FDA review. Drug products to be used in clinical trials must be manufactured according to current good manufacturing practices (cGMP). Clinical trials are conducted in accordance with protocols that detail the objectives of the study and the parameters to be used to monitor participant safety and product efficacy as well as other criteria to be evaluated in the study. Each protocol is submitted to the FDA in the IND.

Apart from the IND process described above, each clinical study must be reviewed by an independent Institutional Review Board (IRB) and the IRB must be kept current with respect to the status of the clinical study. The IRB considers, among other things, ethical factors, the potential risks to subjects participating in the trial and the possible liability to the institution where the trial is conducted. The IRB also reviews and approves the informed consent form to be signed by the trial participants and any significant changes in the clinical study.

Clinical trials are typically conducted in three sequential phases. Phase 1 involves the initial introduction of the drug into healthy human subjects (in most cases) and the product generally is tested for tolerability, pharmacokinetics, absorption, metabolism and excretion. Phase 2 involves studies in a limited patient population to:

- determine the preliminary efficacy of the product for specific targeted indications;
- determine dosage and regimen of administration; and
- identify possible adverse effects and safety risks.

If Phase 2 trials demonstrate that a product appears to be effective and to have an acceptable safety profile, Phase 3 trials are typically undertaken to evaluate the further clinical efficacy and safety of the drug and formulation within an expanded patient population at geographically dispersed clinical study sites and in large enough trials to provide statistical proof of efficacy and tolerability. The FDA, the clinical trial sponsor, the investigators or the IRB may suspend clinical trials at any time if any one of them believes that study participants are being subjected to an unacceptable health risk. In some cases, the FDA and the drug sponsor may determine that Phase 2 trials are not needed prior to entering Phase 3 trials.

Following a series of formal meetings and communications between the drug sponsor and the regulatory agencies, the results of product development, preclinical studies and clinical studies are submitted to the FDA as an NDA or BLA for approval of the marketing and commercial shipment of the drug product. The FDA may deny approval if applicable regulatory criteria are not satisfied or may require additional clinical or pharmaceutical testing or requirements. Even if such data are submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy all of the criteria for approval. Additionally, the approved labeling may narrowly limit the conditions of use of the product, including the intended uses, or impose warnings, precautions or contraindications which could significantly limit the potential market for the product. Further, as a condition of approval, the FDA may impose post-market surveillance, or Phase 4, studies or risk evaluation and mitigation strategies. Product approvals, once obtained, may be withdrawn if compliance with regulatory standards is not maintained or if safety concerns arise after the product reaches the market. The FDA may require additional post-marketing clinical testing and pharmacovigilance programs to monitor the effect of drug products that have been commercialized and has the power to prevent or limit future marketing of the product based on the results of such programs. After approval, there are ongoing reporting obligations concerning adverse reactions associated with the product, including expedited reports for serious and unexpected adverse events.

Each manufacturing establishment producing the active pharmaceutical ingredient and finished drug product for the U.S. market must be registered with the FDA and typically is inspected by the FDA prior to NDA or BLA approval of a drug product manufactured by such establishment. Such inspections are also held periodically after commercialization. Establishments handling controlled substances must also be licensed by the U.S. Drug Enforcement Administration. Manufacturing establishments of U.S. marketed products are subject to inspections by the FDA for compliance with cGMP and other U.S. regulatory requirements. They are also subject to U.S. federal, state, and local regulations regarding workplace safety, environmental protection and hazardous and controlled substance controls, among others.

In situations where our partners are responsible for clinical and regulatory approval procedures, we may still participate in this process by submitting to the FDA a drug master file developed and maintained by us which contains data concerning the manufacturing processes for polymer conjugation materials or drug product. For our proprietary products, we prepare and submit an IND and are responsible for additional clinical and regulatory procedures for product candidates being developed under an IND. The clinical and manufacturing, development and regulatory review and approval process generally takes a number of years and requires the expenditure of substantial resources. Our ability to manufacture and market products, whether developed by us or under collaboration agreements, ultimately depends upon the completion of satisfactory clinical trials and success in obtaining marketing approvals from the FDA and equivalent foreign health authorities.

Sales of our products outside the U.S. are subject to local regulatory requirements governing clinical trials and marketing approval for drugs. Such requirements vary widely from country to country.

In the U.S., under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S. The company that obtains the first FDA approval for a designated orphan drug for a rare disease receives marketing exclusivity for use of that drug for the designated condition for a period of seven years. In addition, the Orphan Drug Act provides for protocol assistance, tax credits, research grants, and exclusions from user fees for sponsors of orphan products. Once a product receives orphan drug exclusivity, a second product that is considered to be the same drug for the same indication generally may be approved during the exclusivity period only if the second product is shown to be “clinically superior” to the original orphan drug in that it is more effective, safer or otherwise makes a “major contribution to patient care” or the holder of exclusive approval cannot assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Similar incentives also are available for orphan drugs in the EU.

In the U.S., the FDA may grant Fast Track or Breakthrough Therapy designation to a product candidate, which allows the FDA to expedite the review of new drugs that are intended for serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs. Important features of Fast Track or Breakthrough Therapy designation include a potentially reduced clinical program and close, early communication between the FDA and the sponsor company to improve the efficiency of product development. On August 1, 2019, we and BMS announced that the FDA granted Breakthrough Therapy Designation for bempegaldesleukin in combination with Opdivo® for the treatment of patients with previously untreated unresectable or metastatic melanoma.

Coverage, Reimbursement, and Pricing

Sales of any products for which we may obtain regulatory approval depend, in part, on the coverage and reimbursement status of those products. In the U.S., sales of any products for which we may receive regulatory approval for commercial sale will depend in part on the availability of coverage and reimbursement from third-party payers. Third-party payers include government programs such as Medicare, Medicaid, TRICARE and the Veterans Administration, as well as managed care providers, private health insurers and other organizations. Other countries and jurisdictions will also have their own unique mechanisms for approval and reimbursement.

The process for determining whether a payer will provide coverage for a product is typically separate from the process for setting the reimbursement rate that the payer will pay for the product. Third-party payers may limit coverage to specific products on an approved list or formulary which might not include all of the FDA-approved products for a particular indication. Third-party payers may also refuse to include a particular branded drug on their formularies or otherwise restrict patient access to a branded drug when a less costly generic equivalent or other alternative is available. Further, private payers often follow the coverage and payment policies established by certain government programs, such as Medicare and Medicaid, which require manufacturers to comply with certain rebate, price reporting, and other obligations. For example, the Medicaid Drug Rebate Program, which is part of the Medicaid program (a program for financially needy patients, among others), requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services under which the manufacturer agrees to report certain prices to the government and pay rebates to state Medicaid programs on outpatient drugs furnished to Medicaid patients, as a condition for receiving federal reimbursement for the manufacturer's outpatient drugs furnished to Medicaid patients. Further, in order for a pharmaceutical product to receive federal reimbursement under Medicare Part B and Medicaid programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the Public Health Service's 340B drug pricing program.

Third-party payers are increasingly challenging the prices charged for medical products and services, and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. Additionally, the containment of healthcare costs has become a priority of federal and state governments, and the price of therapeutics have been a focus in this effort. The U.S. government and state legislatures have shown significant interest in implementing cost-containment programs, including price controls and restrictions on reimbursement, among other controls. Adoption of price controls or other cost-containment measures could limit coverage for or the amounts that federal and state governments or private payers will pay for health care products and services, which could also result in reduced demand for our drug candidates or additional pricing pressures and affect our ultimate profitability. If third-party payers do not consider a product to be cost-effective compared to other available therapies, they may not cover an approved product or, if they do, the level of payment may not be sufficient to allow us to sell our products at a profit.

The marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payers fail to provide adequate coverage and reimbursement. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Other Healthcare Laws and Regulations

If we obtain regulatory approval of our products, we may be subject to various federal and state laws targeting fraud and abuse in the healthcare industry. These laws may impact, among other things, our proposed sales and marketing programs. In addition, we may be subject to patient privacy regulation by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering, or paying remuneration (a term interpreted broadly to include anything of value, including, for example, gifts, discounts, and credits), directly or indirectly, in cash or in kind, to induce or

reward, or in return for, either the referral of an individual for, or the purchase, order, or recommendation of, an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;

- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment to Medicare, Medicaid, or other third-party payers that are false or fraudulent, or making a false statement or record material to payment of a false claim or avoiding, decreasing, or concealing an obligation to pay money owed to the federal government;
- provisions of the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes, referred to as the "HIPAA All-payer Fraud Prohibition," that prohibit knowingly and willfully executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;
- federal transparency laws, including the federal Physician Payment Sunshine Act, which require manufacturers of certain drugs and biologics to track and disclose payments and other transfers of value they make to U.S. physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals as well as physician ownership and investment interests in the manufacturer, and that such information is subsequently made publicly available in a searchable format on a CMS website, effective January 1, 2022, these reporting obligations will extend to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;
- provisions of HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payer, including commercial insurers, state transparency reporting and compliance laws; 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 which may not have the same effect, thus complicating compliance efforts.

If our product candidates become commercialized, it is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal, and administrative penalties, damages, fines, disgorgement, exclusion from government-funded healthcare programs, such as Medicare and Medicaid, integrity and oversight agreements to resolve allegations of non-compliance, contractual damages, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

The Patient Protection and Affordable Care Act, as amended by the Health Care Education Reconciliation Act (collectively, the Affordable Care Act), enacted in 2010, expanded the reach of the fraud and abuse laws by, among other things, amending the intent requirement of the federal Anti-Kickback Statute and the applicable criminal fraud statutes contained within 42 U.S.C. § 1320a-7b. Pursuant to the Affordable Care Act, a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act provides that 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 civil False Claims Act or the civil monetary penalties statute. Many states have adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs.

The federal False Claims Act prohibits anyone from, among other things, knowingly presenting, or causing to be presented, for payment to federal programs (including Medicare and Medicaid) claims for items or services that are false or fraudulent. Although we would not submit claims directly to payers, manufacturers can be held liable under these laws if they are deemed to "cause" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers or promoting a product off-label. In addition, our future activities relating to the reporting of wholesaler or estimated retail prices for our products, the reporting of prices used to calculate Medicaid rebate information and other information affecting federal, state, and third-party reimbursement for our products, and the sale and marketing of our products, are subject to scrutiny under this law. For example, pharmaceutical companies have been prosecuted under the federal

False Claims Act in connection with their alleged off-label promotion of drugs, purportedly concealing price concessions in the pricing information submitted to the government for government price reporting purposes, and allegedly providing free product to customers with the expectation that the customers would bill federal health care programs for the product. Penalties for a False Claims Act violation include three times the actual damages sustained by the government, plus mandatory civil penalties of between $11,463 and $23,331 for each separate false claim, the potential for exclusion from participation in federal healthcare programs, and, although the federal False Claims Act is a civil statute, conduct that results in a False Claims Act violation may also implicate various federal criminal statutes. In addition, private individuals have the ability to bring actions under the federal False Claims Act and certain states have enacted laws modeled after the federal False Claims Act.

In each country or jurisdiction outside of the U.S. in which we seek and receive regulatory approval to commercialize our products, we will be subject to additional laws and regulations specific to those locations. These regulations and laws will also impact, among other things, our proposed sales and marketing programs in those jurisdictions.

Legislative and Regulatory Landscape

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the testing, approval, manufacturing, marketing, coverage and reimbursement of products regulated by the FDA or other government agencies. In addition to new legislation, FDA and healthcare fraud and abuse and coverage and reimbursement regulations and policies are often revised or interpreted by the agency in ways that may significantly affect our business and our products. Further, the 2016 Presidential and Congressional elections and political developments have caused the future state of many core aspects of the current health care marketplace to be uncertain, as the current Presidential Administration and Congress have repeatedly expressed a desire to repeal all or portions of the Affordable Care Act. While specific changes and their timing are not yet apparent, there may be significant changes to the healthcare environment in the future that could have an adverse effect on anticipated revenues from therapeutic candidates that we may successfully develop and for which we may obtain regulatory approval. Furthermore, federal agencies, Congress, state legislatures, and the private sector have shown significant interest in implementing cost containment programs to limit the growth of health care costs, including price controls, restrictions on reimbursement and other fundamental changes to the healthcare delivery system. Any proposed or actual changes could limit coverage for or the amounts that federal and state governments will pay for health care products and services, which could also result in reduced demand for our products or additional pricing pressures and affect our ultimate profitability.

Patents and Proprietary Rights

We own more than 290 U.S. and 1,000 foreign patents and a number of pending patent applications that cover various aspects of our technologies. We have filed patent applications, and plan to file additional patent applications, covering various aspects of our advanced polymer conjugate technologies and our proprietary product candidates. More specifically, our patents and patent applications cover polymer architecture, drug conjugates, formulations, methods of making polymers and polymer conjugates, methods of administering polymer conjugates, and methods of manufacturing polymers and polymer conjugates. Our patent portfolio contains patents and patent applications that encompass our advanced polymer conjugate technology platforms. Our patent strategy is to file patent applications on innovations and improvements to cover a significant majority of the major pharmaceutical markets in the world. Generally, patents have a term of twenty years from the earliest priority date (assuming all maintenance fees are paid). In some instances, patent terms can be increased or decreased, depending on the laws and regulations of the country or jurisdiction that issued the patent.

We also rely on trade secret protection for our confidential and proprietary information. No assurance can be given that we can meaningfully protect our trade secrets. Others may independently develop substantially equivalent confidential and proprietary information or otherwise gain access to, or disclose, our trade secrets. Please refer to Item 1A. Risk Factors, including but not limited to “We rely on trade secret protection and other unpatented proprietary rights for important proprietary technologies, and any loss of such rights could harm our business, results of operations and financial condition.” In certain situations in which we work with drugs covered by one or more patents, our ability to develop and commercialize our technologies may be affected by limitations in our access to these proprietary drugs. Even if we believe we are free to work with a proprietary drug, we cannot guarantee that we will not be accused of, or determined to be, infringing a third party’s rights and be prohibited from working with the drug or found liable for damages. Any such restriction on access or liability for damages would have a material adverse effect on our business, results of operations and financial condition.

The patent positions of pharmaceutical and biotechnology companies, such as ours, are uncertain and involve complex legal and factual issues. There can be no assurance that patents that have issued will be held valid and enforceable in a court of law. Even for patents that are held valid and enforceable, the legal process associated with obtaining such a judgment is time consuming and costly. Additionally, issued patents can be subject to *inter partes* review, opposition or other proceedings that

can result in the revocation of the patent or maintenance of the patent but in an amended form (and potentially in a form that renders the patent without commercially relevant or broad coverage). Further, our competitors may be able to circumvent and otherwise design around our patents. Even if a patent is issued and enforceable, because development and commercialization of pharmaceutical products can be subject to substantial delays, patents may expire early and provide only a short period of protection, if any, following the commercialization of products encompassed by our patent. We may have to participate in post-grant proceedings before the U.S. Patent and Trademark Office, which could result in a loss of the patent and/or substantial cost to us. Please refer to Item 1A. Risk Factors, including without limitation, "If any of our pending patent applications do not issue, or are deemed invalid following issuance, we may lose valuable intellectual property protection."

U.S. and foreign patent rights and other proprietary rights exist that are owned by third parties and relate to pharmaceutical compositions and reagents, and equipment and methods for preparation, packaging and delivery of pharmaceutical compositions. We cannot predict with any certainty which, if any, of these rights will be considered relevant to our technology by authorities in the various jurisdictions where such rights exist, nor can we predict with certainty which, if any, of these rights will or may be asserted against us by third parties. We could incur substantial costs in defending ourselves and our partners against any such claims. Furthermore, parties making such claims may be able to obtain injunctive or other equitable relief, which could effectively block our ability to develop or commercialize some or all of our products in the U.S. and abroad and could result in the award of substantial damages. In the event of a claim of infringement, we or our partners may be required to obtain one or more licenses from third parties. There can be no assurance that we can obtain a license to any technology that we determine we need on reasonable terms, if at all, or that we could develop or otherwise obtain alternative technology. The failure to obtain licenses if needed may have a material adverse effect on our business, results of operations and financial condition. Please refer to Item 1A. Risk Factors, including without limitation, "We may not be able to obtain intellectual property licenses related to the development of our drug candidates on a commercially reasonable basis, if at all."

It is our policy to require our employees and consultants, outside scientific collaborators, sponsored researchers and other advisors who receive confidential information from us to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. The agreements provide that all inventions conceived by an employee shall be our property. There can be no assurance, however, that these agreements will provide meaningful protection or adequate remedies for our trade secrets in the event of unauthorized use or disclosure of such information.

Customer Concentrations

Our revenue is derived from our collaboration agreements with partners, under which we may receive a combination of revenue elements including up-front payments for licensing agreements, clinical research reimbursement or co-funding, milestone payments based on clinical progress, regulatory progress or net sales achievements, royalties and/or product sales revenue. Our revenues are concentrated among a limited number of collaboration partners under long-term arrangements. In particular, our collaboration arrangements with BMS represent 89% of our revenues for the year ended December 31, 2018, and Lilly represented 42% of our revenues for the year ended December 31, 2017, and these arrangements provide for the most significant portion of our potential future development and regulatory milestone payments. The relative portion of such revenues in any particular year, however, is dependent upon the mix of any milestone payments or other license revenues recognized and volume of recurring royalty revenues and product sales. Additionally, we derive substantially all of our cash royalty revenue from our collaboration arrangements with Takeda for ADYNOVATE®/ADYNOVI™ and AstraZeneca for MOVANTIK®/MOVENTIG® and we derive the significant majority of our product sales from UCB and Pfizer.

Backlog

Pursuant to our collaboration agreements, we manufacture and supply our proprietary polymer conjugation materials. Inventory is produced and sales are made pursuant to customer purchase orders for delivery generally based on rolling four to eight quarter forecasts, of which at least two quarters are generally binding. Our backlog is not significant, and, in light of industry practice and our own experience, we do not believe that backlog as of any particular date is indicative of future results.

Competition

Competition in the pharmaceutical and biotechnology industry is intense and characterized by aggressive research and development and rapidly-evolving science, technology, and standards of medical care throughout the world. We frequently compete with pharmaceutical companies and other institutions with greater financial, research and development, marketing and sales, manufacturing and managerial capabilities. We face competition from these companies not just in product development

but also in areas such as recruiting employees, acquiring technologies that might enhance our ability to commercialize products, establishing relationships with certain research and academic institutions, enrolling patients in clinical trials and seeking program partnerships and collaborations with larger pharmaceutical companies.

Science and Technology Competition

We face intense science and technology competition from a multitude of technologies seeking to enhance the efficacy, safety and ease of use of approved drugs and new drug molecule candidates. A number of the drug candidates in our pipeline have direct and indirect competition from large pharmaceutical companies and biopharmaceutical companies. With our advanced polymer conjugate technologies, we believe we have competitive advantages relating to factors such as efficacy, safety, ease of use and cost for certain applications and molecules. We constantly monitor scientific and medical developments in order to improve our current technologies, seek licensing opportunities where appropriate, and determine the best applications for our technology platforms.

In the fields of advanced polymer conjugate technologies, our competitors include Biogen Idec Inc., Horizon Pharma, Dr. Reddy's Laboratories, Ltd., Mountain View Pharmaceuticals, Inc., SunBio Corporation, NOF Corporation, and Novo Nordisk A/S (assets formerly held by Neose Technologies, Inc.). Several other chemical, biotechnology and pharmaceutical companies may also be developing advanced polymer conjugate technology or technologies intended to deliver similar scientific and medical benefits. Some of these companies license intellectual property or PEGylation materials to other companies, while others apply the technology to create their own drug candidates.

Product and Program Specific Competition

Bempegaldesleukin (NKTR-214) (CD122-preferential IL-2 pathway agonist)

There are numerous companies engaged in developing immunotherapies to be used alone, or in combination, to treat a wide range of oncology indications targeting both solid and liquid tumors. In particular, we expect to compete with therapies with tumor infiltrating lymphocytes, or TILs, chimeric antigen receptor-expressing T cells, or CAR-T, cytokine-based therapies, and checkpoint inhibitors. Potential competitors in the TIL and CAR-T space include Gilead (through its acquisition of Kite Pharma)/NCI, Apeiron Biologics, Philogen S.p.A., Brooklyn ImmunoTherapetuics LLC, Anaveon AG, and Adaptimmune LLC. In the cytokine-based therapies space, potential competitors include Novartis AG, Alkermes PLC, NantWorks LLC, Eli Lilly & Co. (through its acquisition of Armo Biosciences), Roche, and Sanofi SA (through its acquisition of Synthorx, Inc.), and in the checkpoint inhibitor space potential competitors include Tesaro, Inc., Macrogenics, Inc., Merck, Bristol-Myers Squibb, and Roche.

NKTR-358 (IL-2 conjugate regulator T Cell stimulator)

There are a number of competitors in various stages of clinical development that are working on programs which are designed to correct the underlying immune system imbalance in the body due to autoimmune disease. In particular, we expect to compete with therapies that could be cytokine-based therapies (Symbiotix, LLC, Jassen Pharmaceuticals, AstraZeneca and Tizona Therapeutics), regulatory T cell therapies (Targazyme, Inc., Caladrius BioSciences, Inc., and Tract Therapeutics, Inc.), or IL-2 based therapies (Amgen, Inc., Celgene Corporation (through its acquisition of Delnia, Inc.), ILTOO Pharma, and Sanofi SA, through its acquisition of Synthorx, Inc.).

MOVANTIK® (previously referred to as naloxegol and NKTR-118) (orally-available peripheral opioid antagonist)

There are no other once-daily oral drugs that act specifically to block or reverse the action of opioids on receptors in the gastrointestinal tract which are approved specifically for the treatment of opioid-induced constipation (OIC) or opioid bowel dysfunction (OBD) in patients with chronic, non-cancer pain. The only approved oral treatment for opioid-induced constipation in adults with chronic, non-cancer pain is a twice daily oral therapy called AMITIZA® (lubiprostone), which acts by specifically activating ClC-2 chloride channels in the gastrointestinal tract to increase secretions. AMITIZA® is marketed by Mallincrodt Pharmaceuticals and Takeda. There is also a subcutaneous treatment and an oral treatment known as RELISTOR® which is marketed by Bausch Health Companies Inc. (formerly, Valeant Pharmaceuticals International, Inc., which previously acquired Salix) under a license from Progenics Pharmaceuticals, Inc. In 2014, RELISTOR® Subjectaneous Injection was approved by the FDA for adult patients with chronic non-cancer pain. On July 22, 2016, Relistor (methylnaltrexone bromide) oral tablets for the treatment of OCI in adult patients with chronic non-cancer pain was approved by FDA. Other therapies used to treat OIC and OBD include over-the-counter laxatives and stool softeners, such as docusate sodium, senna, and milk of

magnesia. These therapies do not address the underlying cause of constipation as a result of opioid use and are generally viewed as ineffective or only partially effective to treat the symptoms of OIC and OBD.

There are a number of companies developing potential products which are in various stages of clinical development and are being evaluated for the treatment of OIC and OBD in different patient populations. Potential competitors include Merck, GlaxoSmithKline plc, Ironwood Pharmaceuticals, Inc. in collaboration with Actavis plc (acquired by Teva Pharmaceutical Industries Ltd.), Purdue Pharma L.P. in collaboration with Shionogi & Co., Ltd., Mundipharma Int. Limited, Theravance, Inc., Develco Pharma, Mallincrodt Pharmaceuticals, and Takeda.

ADYNOVATE® (previously referred to as BAX 855, PEGylated rFVIII)

On June 6, 2014, the FDA approved Biogen Idec's ELOCTATE™ [antihemophilic factor (recombinant), Fc fusion protein] for the control and prevention of bleeding episodes, perioperative (surgical) management and routine prophylaxis in adults and children with Hemophilia A. ELOCTATE™ is intended to be an extended half-life Factor VIII therapy with prolonged circulation in the body with the potential to extend the interval between prophylactic infusions. Prior to its 2014 approval, the fusion protein in ELOCTATE™ was not used outside of the clinical trial setting for Hemophilia A patients. On August 31, 2018, Bayer Healthcare received FDA approval for JIVI® (antihemophilic factor (recombinant) PEGylated-aucl), an extended half-life Factor VIII for Hemophilia A treatment in patients 12 and older which became commercially available in the third quarter of 2018. In addition, on February 19, 2019, Novo Nordisk received FDA approval for ESPEROCT® [antihemophilic factor (recombinant), glycoPEGylated-exei] a glycoPEGylated Factor VIII product with an extended half-life for use in adults and children with Hemophilia A. The Biogen, Bayer, and Novo Nordisk products are competitors in the extended half-life Factor VIII market.

Research and Development

Our total research and development expenditures can be disaggregated into the following significant types of expenses (in millions):

	Year Ended December 31,		
	2019	2018	2017
Third party and direct materials costs	$ 221.5	$ 206.9	$ 125.4
Personnel, overhead and other costs	141.7	130.8	113.5
Stock-based compensation and depreciation	71.4	61.8	29.6
Research and development expense	$ 434.6	$ 399.5	$ 268.5

Manufacturing and Supply

We have a manufacturing facility located in Huntsville, Alabama that is capable of manufacturing our proprietary PEGylation materials for active pharmaceutical ingredients (APIs). The facility is also used to produce APIs to support the early phases of clinical development of our proprietary drug candidates. The facility and associated equipment are designed and operated to be consistent with all applicable laws and regulations. As we do not maintain the capability to manufacture biologics nor finished drug products for our development programs, we primarily utilize contract manufacturers to manufacture biologics and finished drug product for us. We also utilize the services of contract manufacturers to manufacture APIs and finished drug products required for later phases of clinical development and eventual commercialization under all applicable laws and regulations.

We source drug starting materials for our manufacturing activities from one or more suppliers. For the drug starting materials necessary for our proprietary drug candidate development, we have agreements for the supply of such drug components with drug manufacturers or suppliers that we believe have sufficient capacity to meet our demands. However, from time to time, we source critical raw materials and services from one or a limited number of suppliers and there is a risk that if such supply or services were interrupted, it could materially harm our business. In addition, we typically order raw materials and services on a purchase order basis for early phase clinical development products and enter into long-term supply arrangements only for late stage products nearing regulatory approval for marketing authorization.

Environment

As a manufacturer of PEG reagents for the U.S. market, we are subject to inspections by the FDA and the U.S. Environmental Protection Agency for compliance with cGMP and other U.S. regulatory requirements, including U.S. federal,

state and local regulations regarding environmental protection and hazardous and controlled substance controls, among others. Environmental laws and regulations are complex, change frequently and have tended to become more stringent over time. We have incurred, and may continue to incur, significant expenditures to ensure we are in compliance with these laws and regulations. We would be subject to significant penalties for failure to comply with these laws and regulations.

Employees and Consultants

As of December 31, 2019, we had 723 employees, of which 585 employees were engaged in research and development, manufacturing, commercial operations and quality activities and 138 employees in general administration and business development. Of the 723 employees, 654 were located in the U.S. and 69 were located in India. We have a number of employees who hold advanced degrees, such as Ph.D. None of our employees are covered by a collective bargaining agreement, and we have experienced no work stoppages. We believe that we maintain good relations with our employees.

To complement our own expert professional staff, we utilize specialists in regulatory affairs, pharmacovigilance, process engineering, manufacturing, quality assurance and clinical development. These individuals include scientific advisors as well as independent consultants.

Available Information

Our website address is *http://www.nektar.com*. The information in, or that can be accessed through, our website is not part of this annual report on Form 10-K. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports are available, free of charge, on or through our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities Exchange Commission (SEC). The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings at *www.sec.gov.*

EXECUTIVE OFFICERS OF THE REGISTRANT

The following table sets forth the names, ages and positions of our executive officers as of February 21, 2020:

Name	Age	Position
Howard W. Robin	67	Director, President and Chief Executive Officer
Gil M. Labrucherie, J.D.	48	Chief Operating Officer and Chief Financial Officer
John Northcott	42	Senior Vice President and Chief Commercial Officer
Jillian B. Thomsen	54	Senior Vice President, Finance and Chief Accounting Officer
Jonathan Zalevsky, Ph.D.	45	Chief Research and Development Officer

Howard W. Robin has served as our President and Chief Executive Officer since January 2007 and has served as a member of our board of directors since February 2007. Mr. Robin served as Chief Executive Officer, President and a director of Sirna Therapeutics, Inc., a biotechnology company, from July 2001 to November 2006 and from January 2001 to June 2001, served as their Chief Operating Officer, President and as a director. From 1991 to 2001, Mr. Robin was Corporate Vice President and General Manager at Berlex Laboratories, Inc. (Berlex), a pharmaceutical products company that is a subsidiary of Schering, AG, and from 1987 to 1991 he served as Vice President of Finance and Business Development and Chief Financial Officer of Berlex. From 1984 to 1987, Mr. Robin was Director of Business Planning and Development at Berlex. He was a Senior Associate with Arthur Andersen & Co. prior to joining Berlex. Mr. Robin serves as a director of the Biotechnology Industry Organization, the world's largest biotechnology industry trade organization, and also serves as a director of BayBio, a non-profit trade association serving the Northern California life sciences community. He received his B.S. in Accounting and Finance from Fairleigh Dickinson University in 1974.

Gil M. Labrucherie has served as our Senior Vice President, Chief Financial Officer since June 2016, and added the role of Chief Operating Officer in October 2019. Mr. Labrucherie served as our Vice President, Corporate Legal from October 2005 through April 2007 and served as our Senior Vice President, General Counsel and Secretary from April 2007 through June 2016 when he was promoted to Senior Vice President and Chief Financial Officer. From October 2000 to September 2005, Mr. Labrucherie was Vice President of Corporate Development at E2open. While at E2open, Mr. Labrucherie was responsible

for global corporate alliances and merger and acquisitions. Prior to E2open, he was the Senior Director of Corporate Development at AltaVista Company, an Internet search company, where he was responsible for strategic partnerships and mergers and acquisitions. Mr. Labrucherie began his career as an associate in the corporate practice of the law firm of Wilson Sonsini Goodrich & Rosati, P.C. Mr. Labrucherie received his J.D. from the Berkeley Law School and his B.A. from the University of California Davis.

John Northcott has served as our Senior Vice President and Chief Commercial Officer since December 2019. From 2015 to 2019, Mr. Northcott served as the Chief Commercial Officer of Pharmacyclics. From 2013 to 2015, Mr. Northcott was Chief Commercial Officer at Lexicon Pharmaceuticals. He has held commercial roles from 2007 to 2013 in both U.S. and Global marketing with Genentech and the Roche Group, including the role of International Business Leader. Prior to Roche/Genentech, Mr. Northcott held management positions in sales and marketing in a variety of therapeutic areas at other pharmaceutical companies including Merck and Pfizer. Mr. Northcott received a bachelor's degree in Business Administration from St. Francis Xavier University.

Jillian B. Thomsen has served as our Senior Vice President, Finance and Chief Accounting Officer since February 2010. From March 2006 through March 2008, Ms. Thomsen served as our Vice President Finance and Corporate Controller and from April 2008 through January 2010 she served as our Vice President Finance and Chief Accounting Officer. Before joining Nektar, Ms. Thomsen was Vice President Finance and Deputy Corporate Controller of Calpine Corporation from September 2002 to February 2006. Ms. Thomsen began her career as a certified public accountant at Arthur Andersen LLP, where she worked from 1990 to 2002, and specialized in audits of multinational consumer products, life sciences, manufacturing and energy companies. Ms. Thomsen holds a Masters of Accountancy from the University of Denver and a B.A. in Business Economics from Colorado College.

Jonathan Zalevsky has served as our Chief Research & Development Officer since October 2019. Dr. Zalevsky served as our Senior Vice President, Biology and Preclinical Development from April 2017 through November 2017 and served as our Senior Vice President, Research and Chief Science Officer from November 2017 to October 2019. From July 2015 through April 2017, Dr. Zalevsky served as our Vice President, Biology and Preclinical Development. Prior to joining Nektar, Dr. Zalevsky was Global Vice President and Head of the Inflammation Drug Discovery Unit at Takeda Pharmaceuticals. Prior to working at Takeda, Dr. Zalevsky held a number of research and development positions at Xencor, Inc. Dr. Zalevsky received his Ph.D. in Biochemistry from the Tetrad Program at the University of California, San Francisco. He received dual bachelor degrees in Biochemistry and Molecular, Cellular and Developmental Biology from the University of Colorado at Boulder.

Item 1A. Risk Factors

We are providing the following cautionary discussion of risk factors, uncertainties and assumptions that we believe are relevant to our business. These are factors that, individually or in the aggregate, we think could cause our actual results to differ materially from expected and historical results and our forward-looking statements. We note these factors for investors as permitted by Section 21E of the Exchange Act and Section 27A of the Securities Act. Investors in Nektar Therapeutics should carefully consider the risks described below before making an investment decision. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider this section to be a complete discussion of all potential risks or uncertainties that may substantially impact our business. Moreover, we operate in a competitive and rapidly changing environment. New factors emerge from time to time and it is not possible to predict the impact of all of these factors on our business, financial condition or results of operations.

Risks Related to Our Business

We are highly dependent on the success of bempegaldesleukin, our lead I-O candidate. We are executing a clinical development program for bempegaldesleukin and clinical and regulatory outcomes for bempegaldesleukin, if not successful, will significantly harm our business.

Our future success is highly dependent on our ability to successfully develop, obtain regulatory approval for, and commercialize bempegaldesleukin. In general, most investigational drugs, including I-O drug candidates such as bempegaldesleukin, do not become approved drugs. Accordingly, there is a very meaningful risk that bempegaldesleukin will not succeed in one or more clinical trials sufficient to support one or more regulatory approvals. To date, reported clinical outcomes from bempegaldesleukin have had a significant impact on our market valuation, financial position, and business

prospects and we expect this to continue in future periods. If one or more clinical studies of bempegaldesleukin are delayed (as a result of, for example, our collaboration partner causing a delay of the initiation of one or more clinical trials for reasons outside of our control) or not successful, it would materially harm our market valuation, prospects, financial condition and results of operations. For example, under the BMS Collaboration Agreement, we are entitled to up to $1.455 billion in development milestone payments that are based upon clinical and regulatory successes from the bempegaldesleukin development program. One or more failures in bempegaldesleukin studies could jeopardize such milestone payments, and any product sales or royalty revenue or commercial milestone payments that we would otherwise be entitled to receive could be reduced, delayed or eliminated.

Delays in clinical studies are common and have many causes, and any significant delay in clinical studies being conducted by us or our partners could result in delay in regulatory approvals and jeopardize the ability to proceed to commercialization.

We or our partners may experience delays in clinical trials of drug candidates. We have ongoing trials evaluating bempegaldesleukin, including trials evaluating bempegaldesleukin as a potential combination treatment with BMS's Opdivo® as well as other ongoing and planned combination trials. Our partner Lilly has initiated clinical Phase 1b studies of NKTR-358 for indications in systemic lupus erythematosus, psoriasis and atopic dermatitis. We also continue to enroll patients in a Phase 1/2 study evaluating bempegaldesleukin in combination with NKTR-262. In addition, we have initiated a Phase 1 clinical study of NKTR-255 in adults with relapsed or refractory non-Hodgkin lymphoma or multiple myeloma. These and other clinical studies may not begin on time, enroll a sufficient number of patients or be completed on schedule, if at all. Clinical trials for any of our product candidates could be delayed for a variety of reasons, including:

- delays in obtaining regulatory authorization to commence a clinical study;
- delays in reaching agreement with applicable regulatory authorities on a clinical study design;
- for product candidates (such as bempegaldesleukin and NKTR-358) partnered with other companies, delays caused by our partner;
- imposition of a clinical hold by the FDA or other health authorities, which may occur at any time including after any inspection of clinical trial operations or trial sites;
- suspension or termination of a clinical study by us, our partners, the FDA or foreign regulatory authorities due to adverse side effects of a drug on subjects in the trial;
- delays in recruiting suitable patients to participate in a trial;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;
- clinical sites dropping out of a trial to the detriment of enrollment rates;
- delays in manufacturing and delivery of sufficient supply of clinical trial materials;
- changes in regulatory authorities policies or guidance applicable to our drug candidates; and
- delays caused by changing standards of care or new treatment options.

If the initiation or completion of any of the planned clinical studies for our drug candidates is delayed for any of the above or other reasons, the regulatory approval process would be delayed and the ability to commercialize and commence sales of these drug candidates could be materially harmed, which could have a material adverse effect on our business, financial condition and results of operations. Clinical study delays could also shorten any commercial periods during which our products have patent protection and may allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business and results of operations.

The outcomes from competitive I-O and combination therapy clinical trials, and the discovery and development of new potential oncology therapies, could have a material and adverse impact on the value of our I-O research and development pipeline.

The research and development of I-O therapies is a very competitive global segment in the biopharmaceutical industry attracting billions of dollars of investment each year. Our clinical trial plans for bempegaldesleukin, NKTR-262, and NKTR-255 face substantial competition from other I-O combination regimens already approved, and many more combination therapies that are either ahead of or in parallel development in patient populations where we are studying our drug candidates. As I-O combination therapies are relatively new approaches in cancer treatment and few have successfully completed late stage development, I-O drug development entails substantial risks and uncertainties that include rapidly changing standards of care,

patient enrollment competition, evolving regulatory frameworks to evaluate combination regimens, and varying risk-benefit profiles of competing therapies, any or all of which could have a material and adverse impact on the probability of success of I-O drug candidates.

Drug development is a long and inherently uncertain process with a high risk of failure at every stage of development.

We have a number of proprietary drug candidates and partnered drug candidates in research and development ranging from the early discovery research phase through preclinical testing and clinical trials. Preclinical testing and clinical studies are long, expensive, difficult to design and implement and highly uncertain as to outcome. It will take us, or our collaborative partners, many years to conduct extensive preclinical tests and clinical trials to demonstrate the safety and efficacy in humans of our product candidates. The start or end of a clinical study is often delayed or halted due to changing regulatory requirements, manufacturing challenges, required clinical trial administrative actions, slower than anticipated patient enrollment, changing standards of care, availability or prevalence of use of a comparator drug or required prior therapy, clinical outcomes, or our and our partners' financial constraints.

Drug development is a highly uncertain scientific and medical endeavor, and failure can unexpectedly occur at any stage of preclinical and clinical development. Typically, there is a high rate of attrition for drug candidates in preclinical and clinical trials due to scientific feasibility, safety, efficacy, changing standards of medical care (including commercialization of a competing therapy in the same or similar indication for which our drug candidate is being studied) and other variables (such as commercial supply challenges). The risk of failure increases for our drug candidates that are based on new technologies, such as the application of our advanced polymer conjugate technology to bempegaldesleukin, NKTR-358, NKTR-262, NKTR-255, and other drug candidates currently in discovery research or preclinical development. The failure of one or more of our drug candidates could have a material adverse effect on our business, financial condition and results of operations.

We may not elect or be able to take advantage of any expedited development or regulatory review and approval processes available to product candidates granted breakthrough therapy by the FDA.

We intend to evaluate and continue ongoing discussions with the FDA on regulatory strategies that could enable us to take advantage of expedited development pathways for certain of our drug candidates, although we cannot be certain that our drug candidates will qualify for any expedited development pathways or that regulatory authorities will grant, or allow us to maintain, the relevant qualifying designations.

Breakthrough therapy designation is intended to expedite the development and review of drug candidates that are designed to treat serious or life-threatening diseases when "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." The designation of a drug candidate as a breakthrough therapy provides potential benefits that include more frequent meetings with FDA to discuss the development plan for the drug candidate and ensure collection of appropriate data needed to support approval; more frequent written correspondence from FDA about such things as the design of the proposed clinical trials and use of biomarkers; intensive guidance on an efficient drug development program, beginning as early as Phase 1; organizational commitment involving senior managers; and eligibility for rolling review and priority review.

Although bempegaldesleukin in combination with Opdivo® received breakthrough therapy designation for the treatment of patients with previously untreated unresectable or metastatic melanoma, we may elect not to pursue breakthrough therapy designation for our other drug candidates, and the FDA has broad discretion whether or not to grant these designations.

Accordingly, even if we believe a particular drug candidate is eligible for breakthrough therapy, we cannot be assured that the FDA would decide to grant it. Breakthrough therapy designation does not change the standards for drug approval, and there is no assurance that such designation will result in expedited review or approval or that the approved indication will not be narrower than the indication covered by the breakthrough therapy designation. Thus, even though we have received breakthrough therapy designation, we may not experience a faster development process or review, and, upon any filing seeking regulatory approval, we may not obtain an approval from the FDA.

The risk of clinical failure for any drug candidate remains high prior to regulatory approval.

A number of companies have suffered significant unforeseen failures in clinical studies due to factors such as inconclusive efficacy or safety, even after achieving preclinical proof-of-concept or positive results from earlier clinical studies that were satisfactory both to them and to reviewing regulatory authorities. Clinical study outcomes remain very unpredictable and it is possible that one or more of our clinical studies could fail at any time due to efficacy, safety or other important clinical findings or regulatory requirements. The results from preclinical testing or early clinical trials of a product candidate may not predict the results that will be obtained in later phase clinical trials of the product candidate. We, the FDA, an independent

Institutional Review Board (IRB), an independent ethics committee (IEC), or other applicable regulatory authorities may suspend clinical trials of a product candidate at any time for various reasons, including a belief that patients participating in such trials are being exposed to unacceptable health risks or adverse side effects. Similarly, an IRB or IEC may suspend a clinical trial at a particular trial site. If one or more of our drug candidates fail in clinical studies, it could have a material adverse effect on our business, financial condition and results of operations.

If we or our contract manufacturers are not able to manufacture drugs or drug substances in sufficient quantities that meet applicable quality standards, it could delay clinical studies, result in reduced sales or constitute a breach of our contractual obligations, any of which could significantly harm our business, financial condition and results of operations.

If we or our contract manufacturers are not able to manufacture and supply sufficient drug quantities meeting applicable quality standards required to support large clinical studies or commercial manufacturing in a timely manner, it could delay our or our collaboration partners' clinical studies or result in a breach of our contractual obligations, which could in turn reduce the potential commercial sales of our or our collaboration partners' products. As a result, we could incur substantial costs and damages and any product sales or royalty revenue that we would otherwise be entitled to receive could be reduced, delayed or eliminated. In most cases, we rely on contract manufacturing organizations to manufacture and supply drug product for our clinical studies and those of our collaboration partners. The manufacturing of drugs involves significant risks and uncertainties related to the demonstration of adequate stability, sufficient purification of the drug substance and drug product, the identification and elimination of impurities, optimal formulations, process and analytical methods validations, and challenges in controlling for all of these variables. We have faced and may in the future face significant difficulties, delays and unexpected expenses as we validate third party contract manufacturers required for drug supply to support our clinical studies and the clinical studies and products of our collaboration partners. Failure by us or our contract manufacturers to supply API or drug products in sufficient quantities that meet all applicable quality requirements could result in supply shortages for our clinical studies or the clinical studies and commercial activities of our collaboration partners. Such failures could significantly and materially delay clinical trials and regulatory submissions or result in reduced sales, any of which could significantly harm our business prospects, results of operations and financial condition.

Building and validating large scale clinical or commercial-scale manufacturing facilities and processes, recruiting and training qualified personnel and obtaining necessary regulatory approvals is complex, expensive and time consuming. In the past, we have encountered challenges in scaling up manufacturing to meet the requirements of large scale clinical trials without making modifications to the drug formulation, which may cause significant delays in clinical development. There continues to be substantial and unpredictable risk and uncertainty related to manufacturing and supply until such time as the commercial supply chain is validated and proven.

We purchase some of the starting material for drugs and drug candidates from a single source or a limited number of suppliers, and the partial or complete loss of one of these suppliers could cause production delays, clinical trial delays, substantial loss of revenue and contract liability to third parties.

We often face very limited supply of a critical raw material that can only be obtained from a single, or a limited number of, suppliers, which could cause production delays, clinical trial delays, substantial lost revenue opportunities or contract liabilities to third parties. For example, there are only a limited number of qualified suppliers, and in some cases single source suppliers, for the raw materials included in our PEGylation and advanced polymer conjugate drug formulations. Any interruption in supply, diminution in quality of raw materials supplied to us or failure to procure such raw materials on commercially feasible terms could harm our business by delaying our clinical trials, impeding commercialization of approved drugs or increasing our costs.

Our manufacturing operations and those of our contract manufacturers are subject to laws and other governmental regulatory requirements, which, if not met, would have a material adverse effect on our business, results of operations and financial condition.

We and our contract manufacturers are required in certain cases to maintain compliance with current good manufacturing practices (cGMP), including cGMP guidelines applicable to active pharmaceutical ingredients, and drug products, and with laws and regulations governing manufacture and distribution of controlled substances, and are subject to inspections by the FDA, the Drug Enforcement Administration or comparable agencies in other jurisdictions administering such requirements. We anticipate periodic regulatory inspections of our drug manufacturing facilities and the manufacturing facilities of our contract manufacturers for compliance with applicable regulatory requirements. Any failure to follow and document our or our contract manufacturers' adherence to such cGMP and other laws and governmental regulations or satisfy other manufacturing and product release regulatory requirements may disrupt our ability to meet our manufacturing obligations to

our customers, lead to significant delays in the availability of products for commercial use or clinical study, result in the termination or hold on a clinical study or delay or prevent filing or approval of marketing applications for our products. Failure to comply with applicable laws and regulations may also result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products, delays, suspension or withdrawal of approvals, license revocation, seizures, administrative detention, or recalls of products, operating restrictions and criminal prosecutions, any of which could harm our business. Regulatory inspections could result in costly manufacturing changes or facility or capital equipment upgrades to satisfy the FDA that our manufacturing and quality control procedures are in substantial compliance with cGMP. Manufacturing delays, for us or our contract manufacturers, pending resolution of regulatory deficiencies or suspensions could have a material adverse effect on our business, results of operations and financial condition.

If we or our partners do not obtain regulatory approval for our drug candidates on a timely basis, or at all, or if the terms of any approval impose significant restrictions or limitations on use, our business, results of operations and financial condition will be negatively affected.

We or our partners may not obtain regulatory approval for drug candidates on a timely basis, or at all, or the terms of any approval (which in some countries includes pricing approval) may impose significant restrictions or limitations on use. Drug candidates must undergo rigorous animal and human testing and an extensive review process for safety and efficacy by the FDA and equivalent foreign regulatory authorities. The time required for obtaining regulatory decisions is uncertain and difficult to predict. For example, although the FDA granted a Breakthrough Therapy designation to bempegaldesleukin in combination with Opdivo® for the treatment of patients with previously untreated unresectable or metastatic melanoma, there is no guarantee regulatory approval will follow, if at all, for this or any indication of bempegaldesleukin on a timely basis. The FDA and other U.S. and foreign regulatory authorities have substantial discretion, at any phase of development, to terminate clinical studies, require additional clinical development or other testing, delay or withhold registration and marketing approval and mandate product withdrawals, including recalls. Further, regulatory authorities have the discretion to analyze data using their own methodologies that may differ from those used by us or our partners, which could lead such authorities to arrive at different conclusions regarding the safety or efficacy of a drug candidate. In addition, undesirable side effects caused by our drug candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restricted label or the delay or denial of regulatory approval by regulatory authorities. For example, AstraZeneca is conducting a post-marketing, observational epidemiological study comparing MOVANTIK® to other treatments of opioid-induced constipation (OIC) in patients with chronic, non-cancer pain and the results of this study could at some point in the future negatively impact the labeling, regulatory status, and commercial potential of MOVANTIK®.

Even if we or our partners receive regulatory approval of a product, the approval may limit the indicated uses for which the drug may be marketed. Our and our partnered drugs that have obtained regulatory approval, and the manufacturing processes for these products, are subject to continued review and periodic inspections by the FDA and other regulatory authorities. Discovery from such review and inspection of previously unknown problems may result in restrictions on marketed products or on us, including withdrawal or recall of such products from the market, suspension of related manufacturing operations or a more restricted label. The failure to obtain timely regulatory approval of product candidates, any product marketing limitations or a product withdrawal would negatively impact our business, results of operations and financial condition.

Our results of operations and financial condition depend significantly on the ability of our collaboration partners to successfully develop and market drugs and they may fail to do so.

Under our collaboration agreements with various pharmaceutical or biotechnology companies (other than the BMS Collaboration Agreement), our collaboration partner is generally solely responsible for:

- designing and conducting large scale clinical studies;
- preparing and filing documents necessary to obtain government approvals to sell a given drug candidate; and/

  or
- marketing and selling the drugs when and if they are approved.

Our reliance on collaboration partners poses a number of significant risks to our business, including risks that:

- we have very little control over the timing and level of resources that our collaboration partners dedicate to commercial marketing efforts such as the amount of investment in sales and marketing personnel, general marketing campaigns, direct-to-consumer advertising, product sampling, pricing agreements and rebate strategies with government and private payers, manufacturing and supply of drug product, and other marketing

and selling activities that need to be undertaken and well executed for a drug to have the potential to achieve commercial success;

- collaboration partners with commercial rights may choose to devote fewer resources to the marketing of our partnered drugs than they devote to their own drugs or other drugs that they have in-licensed;
- we have very little control over the timing and amount of resources our partners devote to development programs in one or more major markets;
- disagreements with partners could lead to delays in, or termination of, the research, development or commercialization of product candidates or to litigation or arbitration proceedings;
- disputes may arise or escalate in the future with respect to the ownership of rights to technology or intellectual property developed with partners;
- we do not have the ability to unilaterally terminate agreements (or partners may have extension or renewal rights) that we believe are not on commercially reasonable terms or consistent with our current business strategy;
- partners may be unable to pay us as expected; and
- partners may terminate their agreements with us unilaterally for any or no reason, in some cases with the payment of a termination fee penalty and in other cases with no termination fee penalty.

Given these risks, the success of our current and future collaboration partnerships is highly unpredictable and can have a substantial negative impact on our business. If the approved drugs fail to achieve commercial success or the drugs in development fail to have positive late stage clinical outcomes sufficient to support regulatory approval in major markets, it could significantly impair our access to capital necessary to fund our research and development efforts for our proprietary drug candidates. If we are unable to obtain sufficient capital resources to advance our drug candidate pipeline, it would negatively impact the value of our business, results of operations and financial condition.

We have substantial future capital requirements and there is a risk we may not have access to sufficient capital to meet our current business plan. If we do not receive substantial milestone or royalty payments from our existing collaboration agreements, execute new high value collaborations or other arrangements, or are unable to raise additional capital in one or more financing transactions, we would be unable to continue our current level of investment in research and development.

As of December 31, 2019, we had cash and investments in marketable securities valued at approximately $1.6 billion and had debt of $250.0 million in principal of senior secured notes due in October 2020. While we believe that our cash position will be sufficient to meet our liquidity requirements through at least the next 12 months, our future capital requirements will depend upon numerous unpredictable factors, including:

- the cost, timing and outcomes of clinical studies and regulatory reviews of our drug candidates —important examples include bempegaldesleukin and NKTR-358;
- the commercial launch and sales levels of products marketed by our collaboration partners for which we are entitled to royalties and sales milestone payments—importantly, the level of success in marketing and selling MOVANTIK® by AstraZeneca in the U.S. and ADYNOVATE® by Baxalta (a wholly-owned subsidiary of Takeda) globally, as well as MOVENTIG® (the naloxegol brand name in the EU) by Kirin in the EU;
- if and when we receive potential milestone payments and royalties from our existing collaborations if the drug candidates subject to those collaborations achieve clinical, regulatory or commercial success;
- the progress, timing, cost and results of our clinical development programs;
- the success, progress, timing and costs of our efforts to implement new collaborations, licenses and other transactions that increase our current net cash, such as the sale of additional royalty interests held by us, term loan or other debt arrangements, and the issuance of securities;
- the number of patients, enrollment criteria, primary and secondary endpoints, and the number of clinical studies required by the regulatory authorities in order to consider for approval our drug candidates and those of our collaboration partners;
- our general and administrative expenses, capital expenditures and other uses of cash; and

- disputes concerning patents, proprietary rights, or license and collaboration agreements that negatively impact our receipt of milestone payments or royalties or require us to make significant payments arising from licenses, settlements, adverse judgments or ongoing royalties.

A significant multi-year capital commitment is required to advance our drug candidates through the various stages of research and development in order to generate sufficient data to enable high value collaboration partnerships with significant upfront payments or to successfully achieve regulatory approval. In the event we do not enter into any new collaboration partnerships with significant upfront payments and we choose to continue our later stage research and development programs, we may need to pursue financing alternatives, including dilutive equity-based financings, such as an offering of convertible debt or common stock, which would dilute the percentage ownership of our current common stockholders and could significantly lower the market value of our common stock. If sufficient capital is not available to us or is not available on commercially reasonable terms, it could require us to delay or reduce one or more of our research and development programs. If we are unable to sufficiently advance our research and development programs, it could substantially impair the value of such programs and result in a material adverse effect on our business, financial condition and results of operations.

The commercial potential of a drug candidate in development is difficult to predict. If the market size for a new drug is significantly smaller than we anticipate, it could significantly and negatively impact our revenue, results of operations and financial condition.

It is very difficult to estimate the commercial potential of product candidates due to important factors such as safety and efficacy compared to other available treatments, including potential generic drug alternatives with similar efficacy profiles, changing standards of care, third party payer reimbursement standards, patient and physician preferences, drug scheduling status, the availability of competitive alternatives that may emerge either during the long drug development process or after commercial introduction, and the availability of generic versions of our product candidates following approval by regulatory authorities based on the expiration of regulatory exclusivity or our inability to prevent generic versions from coming to market by asserting our patents. If due to one or more of these risks the market potential for a drug candidate is lower than we anticipated, it could significantly and negatively impact the commercial potential of the drug candidate, the commercial terms of any collaboration partnership potential for such drug candidate, or if we have already entered into a collaboration for such drug candidate, the revenue potential from royalty and milestone payments could be significantly diminished and this would negatively impact our business, financial condition and results of operations. We also depend on our relationships with other companies for sales and marketing performance and the commercialization of product candidates. Poor performance by these companies, or disputes with these companies, could negatively impact our revenue and financial condition.

If government and private insurance programs do not provide payment or reimbursement for our partnered products or proprietary products, those products will not be widely accepted, which would have a negative impact on our business, results of operations and financial condition.

In both domestic and foreign markets, sales of our partnered and proprietary products that have received regulatory approval will depend in part on market acceptance among physicians and patients, pricing approvals by government authorities and the availability of coverage and payment or reimbursement from third-party payers, such as government programs, including Medicare and Medicaid, managed care providers, private health insurers and other organizations. However, eligibility for coverage does not necessarily signify that a drug candidate will be adequately reimbursed in all cases or at a rate that covers costs related to research, development, manufacture, sale, and distribution. Third-party payers are increasingly challenging the price and cost effectiveness of medical products and services. Therefore, significant uncertainty exists as to the coverage and pricing approvals for, and the payment or reimbursement status of, newly approved healthcare products.

Moreover, legislation and regulations affecting the pricing of pharmaceuticals may change before regulatory agencies approve our proposed products for marketing and could further limit coverage or pricing approvals for, and reimbursement of, our products from government authorities and third-party payers. For example, Congress passed the Affordable Care Act in 2010 which enacted a number of reforms to expand access to health insurance while also reducing or constraining the growth of healthcare spending, enhancing remedies against fraud and abuse, adding new transparency requirements for healthcare industries, and imposing new taxes on fees on healthcare industry participants, among other policy reforms. Federal agencies, Congress and state legislatures have continued to show interest in implementing cost containment programs to limit the growth of health care costs, including price controls, restrictions on reimbursement and other fundamental changes to the healthcare delivery system. In addition, in recent years, Congress has enacted various laws seeking to reduce the federal debt level and contain healthcare expenditures, and the Medicare and other healthcare programs are frequently identified as potential targets for spending cuts. New government legislation or regulations related to pricing or other fundamental changes to the healthcare delivery system as well as a government or third-party payer decision not to approve pricing for, or provide adequate coverage or reimbursement of, our products hold the potential to severely limit market opportunities of such products.

If we are unable to establish and maintain collaboration partnerships on attractive commercial terms, our business, results of operations and financial condition could suffer.

We intend to continue to seek partnerships with pharmaceutical and biotechnology partners to fund a portion of our research and development capital requirements. The timing of new collaboration partnerships is difficult to predict due to availability of clinical data, the outcomes from our clinical studies, the number of potential partners that need to complete due diligence and approval processes, the definitive agreement negotiation process and numerous other unpredictable factors that can delay, impede or prevent significant transactions. If we are unable to find suitable partners or negotiate collaboration arrangements with favorable commercial terms with respect to our existing and future drug candidates or the licensing of our intellectual property, or if any arrangements we negotiate, or have negotiated, are terminated, it could have a material adverse effect on our business, financial condition and results of operations.

Our revenue is exclusively derived from our collaboration agreements, which can result in significant fluctuation in our revenue from period to period, and our past revenue is therefore not necessarily indicative of our future revenue.

Our revenue is exclusively derived from our collaboration agreements, from which we receive upfront fees, contract research payments, milestone and other contingent payments based on clinical progress, regulatory progress or net sales achievements, royalties and product sales. Significant variations in the timing of receipt of cash payments and our recognition of revenue can result from payments based on the execution of new collaboration agreements, the timing of clinical outcomes, regulatory approval, commercial launch or the achievement of certain annual sales thresholds. The amount of our revenue derived from collaboration agreements in any given period will depend on a number of unpredictable factors, including our ability to find and maintain suitable collaboration partners, the timing of the negotiation and conclusion of collaboration agreements with such partners, whether and when we or our collaboration partners achieve clinical, regulatory and sales milestones, the timing of regulatory approvals in one or more major markets, reimbursement levels by private and government payers, and the market introduction of new drugs or generic versions of the approved drug, as well as other factors. Our past revenue generated from collaboration agreements is not necessarily indicative of our future revenue. If any of our existing or future collaboration partners fails to develop, obtain regulatory approval for, manufacture or ultimately commercialize any product candidate under our collaboration agreement, our business, financial condition, and results of operations could be materially and adversely affected.

We are a party to numerous collaboration agreements and other significant agreements which contain complex commercial terms that could result in disputes, litigation or indemnification liability that could adversely affect our business, results of operations and financial condition.

We currently derive, and expect to derive in the foreseeable future, substantially all of our revenue from collaboration agreements with biotechnology and pharmaceutical companies. These collaboration agreements contain complex commercial terms, including:

- clinical development and commercialization obligations that are based on certain commercial reasonableness performance standards that can often be difficult to enforce if disputes arise as to adequacy of our partner's performance;
- research and development performance and reimbursement obligations for our personnel and other resources allocated to partnered drug candidate development programs;
- clinical and commercial manufacturing agreements, some of which are priced on an actual cost basis for products supplied by us to our partners with complicated cost allocation formulas and methodologies;
- intellectual property ownership allocation between us and our partners for improvements and new inventions developed during the course of the collaboration;
- royalties on drug sales based on a number of complex variables, including net sales calculations, geography, scope of patent claim coverage, patent life, generic competitors, bundled pricing and other factors; and
- indemnity obligations for intellectual property infringement, product liability and certain other claims.

We are a party to numerous significant collaboration agreements and other strategic transaction agreements (e.g., financings and asset divestitures) that contain complex representations and warranties, covenants and indemnification obligations. If we are found to have materially breached such agreements, it could subject us to substantial liabilities and harm our financial condition.

From time to time, we are involved in litigation matters involving the interpretation and application of complex terms and conditions of our agreements. One or more disputes may arise or escalate in the future regarding our collaboration agreements, transaction documents, or third-party license agreements that may ultimately result in costly litigation and unfavorable interpretation of contract terms, which would have a material adverse effect on our business, financial condition and results of operations.

If we, or our partners through our collaborations, are not successful in recruiting sales and marketing personnel or in building a sales and marketing infrastructure, we will have difficulty commercializing our products, which would adversely affect our business, results of operations and financial condition.

To the extent we rely on other pharmaceutical or biotechnology companies with established sales, marketing and distribution systems to market our products, we will need to establish and maintain partnership arrangements, and we may not be able to enter into these arrangements on acceptable terms or at all. To the extent that we enter into co-promotion or other arrangements, any revenue we receive will depend upon the efforts of third parties, which may not be successful and over which we have little or no control—important examples of this risk include MOVANTIK® partnered with AstraZeneca and ADYNOVATE® (previously referred to as BAX 855) partnered with Baxalta (a wholly-owned subsidiary of Takeda). In the event that we market our products without a partner, we would be required to build, either internally or through third-party contracts, a sales and marketing organization and infrastructure, which would require a significant investment, and we may not be successful in building this organization and infrastructure in a timely or efficient manner.

If we are unable to create robust sales, marketing and distribution capabilities or to enter into agreements with third parties to perform these functions, we will be unable to commercialize our product candidates successfully.

We currently have no sales or distribution capabilities. To commercialize any of our drugs that receive regulatory approval for commercialization, we must develop robust internal sales, marketing and distribution capabilities, and manage inventory, supply, labeling, storage, record keeping, and advertising and promotion capabilities, which would be expensive and time consuming, or enter into arrangements with third parties to perform these services. If we decide to market our products directly, we must commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and with supporting distribution, administration and compliance capabilities. Factors that may inhibit our efforts to commercialize our products directly or through partnerships include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or successfully educate adequate numbers of physicians about the potential benefits associated with the use of, and to subsequently prescribe, our products;
- the lack of complementary products or multiple product pricing arrangements may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating and sustaining an independent sales and marketing organization.

We depend on third parties to conduct the clinical trials for our proprietary product candidates and any failure of those parties to fulfill their obligations could harm our development and commercialization plans.

We depend on independent clinical investigators, contract research organizations and other third-party service providers to conduct clinical trials for our proprietary product candidates. We rely heavily on these parties for the successful execution of our clinical trials. Though we are ultimately responsible for the results of their activities, many aspects of their activities are beyond our control. For example, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trials, but the independent clinical investigators may prioritize other projects over ours or communicate issues regarding our products to us in an untimely manner. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The early termination of any of our clinical trial arrangements, the failure of third parties to comply with the regulations and requirements governing clinical trials or the failure of third parties to properly conduct our clinical trials could hinder or delay the development, approval and commercialization of our product candidates and would adversely affect our business, results of operations and financial condition.

We expect to continue to incur substantial losses and negative cash flow from operations and may not achieve or sustain profitability in the future.

For the year ended December 31, 2019, we reported net loss of $440.7 million. If and when we achieve profitability depends upon a number of factors, including the timing and recognition of milestone and other contingent payments and royalties received, the timing of revenue under our collaboration agreements, the amount of investments we make in our proprietary product candidates and the regulatory approval and market success of our product candidates. We may not be able to achieve and sustain profitability.

Other factors that will affect whether we achieve and sustain profitability include our ability, alone or together with our partners, to:

- develop drugs utilizing our technologies, either independently or in collaboration with other pharmaceutical or biotechnology companies;
- effectively estimate and manage clinical development costs, particularly the cost of the clinical studies for bempegaldesleukin, NKTR-358, NKTR-262, and NKTR-255;
- receive necessary regulatory and marketing approvals;
- maintain or expand manufacturing at necessary levels;
- achieve market acceptance of our partnered products;
- receive royalties on products that have been approved, marketed or submitted for marketing approval with regulatory authorities; and
- maintain sufficient funds to finance our activities.

Significant competition for our polymer conjugate chemistry technology platforms and our partnered and proprietary products and product candidates could make our technologies, products or product candidates obsolete or uncompetitive, which would negatively impact our business, results of operations and financial condition.

Our advanced polymer conjugate chemistry platforms and our partnered and proprietary products and product candidates compete with various pharmaceutical and biotechnology companies. Competitors of our polymer conjugate chemistry technologies include Biogen Inc., Horizon Pharma, Dr. Reddy's Laboratories Ltd., SunBio Corporation, Mountain View Pharmaceuticals, Inc., Novo Nordisk A/S (formerly assets held by Neose Technologies, Inc.), and NOF Corporation. Several other chemical, biotechnology and pharmaceutical companies may also be developing polymer conjugation technologies or technologies that have similar impact on target drug molecules. Some of these companies license or provide the technology to other companies, while others are developing the technology for internal use.

There are many competitors for our proprietary product candidates currently in development. For bempegaldesleukin, there are numerous companies engaged in developing immunotherapies to be used alone, or in combination, to treat a wide range of oncology indications targeting both solid and liquid tumors. In particular, we expect to compete with therapies with tumor infiltrating lymphocytes, or TILS, chimeric antigen receptor-expressing T cells, or CAR-T, cytokine-based therapies, and checkpoint inhibitors. Potential competitors in the TIL and CAR-T space include Gilead Sciences, Inc. (through its acquisition of Kite Pharma, Inc.)/NCI, Apeiron Biologics, Philogen S.p.A., Brooklyn ImmunoTherapeutics LLC, Anaveon AG, Adaptimmune LLC, and Novartis AG, Alkermes plc, Altor Bioscience, Roche, Sanofi SA (through its acquisition of Synthorx, Inc.), and Eli Lilly & Co. (through its acquisition of Armo BioSciences) in the cytokine-based therapies space, and GlaxoSmithKline plc (through its acquisition of Tesaro, Inc.), Macrogenics, Inc., Merck, Bristol-Myers Squibb Company, and Roche in the checkpoint inhibitor space. For NKTR-358, there are a number of competitors in various stages of clinical development that are working on programs which are designed to correct the underlying immune system imbalance in the body due to autoimmune disease. In particular, we expect to compete with therapies that could be cytokine-based therapies (Symbiotix, LLC, Janssen, AstraZeneca, and Tizona Therapeutics), regulatory T cell therapies (Targazyme, Inc., Caladrius BioSciences, Inc., and Tract Therapeutics, Inc.), or IL-2-based-therapies (Amgen Inc., Celgene Corporation, and ILTOO Pharma). For MOVANTIK®, there are currently several alternative therapies used to address opioid-induced constipation (OIC) and opioid-induced bowel dysfunction (OBD), including RELISTOR® (methylnaltrexone bromide), oral therapy AMITIZA® (lubiprostone), and oral and rectal over-the-counter laxatives and stool softeners such as docusate sodium, senna and milk of magnesia. For ADYNOVATE®, there is substantial competition from Sanofi's Fc fusion protein ELOCTATE™ for Hemophilia A treatment, JIVI® (antihemophilic factor (recombinant) PEGylated-aucl), an extended half-life Factor VIII for Hemophilia A treatment, approved in the U.S. in August 2018, and marketed by Bayer Healthcare, and, more recently, an extended half-life product from Novo Nordisk. In addition, technologies other than those based on Fc fusion and polymer conjugation approaches (such as gene therapy approaches being developed by BioMarin Pharmaceutical Inc. and others) are being pursued to treat patients with Hemophilia A. There can be no assurance that we or our partners will successfully develop, obtain regulatory approvals for and commercialize next-generation or new products that will successfully compete with those of our competitors.

Many of our competitors have greater financial, research and development, marketing and sales, manufacturing and managerial capabilities. We face competition from these companies not just in product development but also in areas such as recruiting employees, acquiring technologies that might enhance our ability to commercialize products, establishing relationships with certain research and academic institutions, enrolling patients in clinical trials and seeking program partnerships and collaborations with larger pharmaceutical companies. As a result, our competitors may succeed in developing competing technologies, obtaining regulatory approval or gaining market acceptance for products before we do. These developments could make our products or technologies uncompetitive or obsolete.

We may not be able to manage our growth effectively, which could adversely affect our operations and financial performance.

The ability to manage and operate our business as we execute our development and growth strategy will require effective planning. Significant rapid growth could strain our management and internal resources, and other problems may arise that could adversely affect our financial performance. We expect that our efforts to grow will place a significant strain on personnel, management systems, infrastructure and other resources. Our ability to effectively manage future growth will also require us to successfully attract, train, motivate, retain and manage new employees and continue to update and improve our operational, financial and management controls and procedures. If we do not manage our growth effectively, our operations and financial performance could be adversely affected.

Our future depends on the proper management of our current and future business operations and their associated expenses.

Our business strategy requires us to manage our business to provide for the continued development and potential commercialization of our proprietary and partnered drug candidates. Our strategy also calls for us to undertake increased research and development activities and to manage an increasing number of relationships with partners and other third parties, while simultaneously managing the capital necessary to support this strategy. If we are unable to manage effectively our current operations and any growth we may experience, our business, financial condition and results of operations may be adversely affected. If we are unable to effectively manage our expenses, we may find it necessary to reduce our personnel-related costs through reductions in our workforce, which could harm our operations, employee morale and impair our ability to retain and recruit talent. Furthermore, if adequate funds are not available, we may be required to obtain funds through arrangements with partners or other sources that may require us to relinquish rights to certain of our technologies, products or future economic rights that we would not otherwise relinquish or require us to enter into other financing arrangements on unfavorable terms.

Because competition for highly qualified technical personnel is intense, we may not be able to attract and retain the personnel we need to support our operations and growth.

We must attract and retain experts in the areas of clinical testing, manufacturing, research, regulatory and finance, and may need to attract and retain commercial, marketing and distribution experts and develop additional expertise in our existing personnel. We face intense competition from other biopharmaceutical companies, research and academic institutions and other organizations for qualified personnel. Many of the organizations with which we compete for qualified personnel have greater resources than we have. Because competition for skilled personnel in our industry is intense, companies such as ours sometimes experience high attrition rates with regard to their skilled employees. Further, in making employment decisions, job candidates often consider the value of the stock awards they are to receive in connection with their employment. Our equity incentive plan and employee benefit plans may not be effective in motivating or retaining our employees or attracting new employees, and significant volatility in the price of our stock may adversely affect our ability to attract or retain qualified personnel. If we fail to attract new personnel or to retain and motivate our current personnel, our business and future growth prospects could be severely harmed.

We are dependent on our management team and key technical personnel, and the loss of any key manager or employee may impair our ability to develop our products effectively and may harm our business, operating results and financial condition.

Our success largely depends on the continued services of our executive officers and other key personnel. The loss of one or more members of our management team or other key employees could seriously harm our business, operating results and financial condition. The relationships that our key managers have cultivated within our industry make us particularly dependent upon their continued employment with us. We are also dependent on the continued services of our technical personnel because of the highly technical nature of our products and the regulatory approval process. Because our executive officers and key employees are not obligated to provide us with continued services, they could terminate their employment with

us at any time without penalty. We do not have any post-employment noncompetition agreements with any of our employees and do not maintain key person life insurance policies on any of our executive officers or key employees.

The price of our common stock has, and may continue to fluctuate significantly, which could result in substantial losses for investors and securities class action and shareholder derivative litigation.

Our stock price is volatile. During the year ended December 31, 2019, based on closing prices on the NASDAQ Global Select Market, the closing price of our common stock ranged from $15.87 to $46.35 per share. In response to volatility in the price of our common stock in the past, Plaintiffs' securities litigation firms have sought information from us and/or shareholders as part of their investigation into potential securities violations and breaches of duties (among other corporate misconduct allegations). Following their investigations, Plaintiffs' securities litigation firms have often initiated legal action, including the filing of class action lawsuits, derivative lawsuits, and other forms of redress. We expect our stock price to remain volatile and we continue to expect the initiation of legal actions by Plaintiffs' securities litigation firms following share price fluctuations.

A variety of factors may have a significant effect on the market price of our common stock, including the risks described in this section titled "Risk Factors" and the following:

- announcements of data from, or material developments in, our clinical studies and those of our collaboration partners, including data regarding efficacy and safety, delays in clinical development, regulatory approval or commercial launch – in particular, data from clinical studies of bempegaldesleukin has had a significant impact on our stock price;
- announcements by collaboration partners as to their plans or expectations related to drug candidates and approved drugs in which we have a substantial economic interest;
- announcements regarding terminations or disputes under our collaboration agreements;
- fluctuations in our results of operations;
- developments in patent or other proprietary rights, including intellectual property litigation or entering into intellectual property license agreements and the costs associated with those arrangements;
- announcements of technological innovations or new therapeutic products that may compete with our approved products or products under development;
- announcements of changes in governmental regulation affecting us or our competitors;
- litigation brought against us or third parties to whom we have indemnification obligations;
- public concern as to the safety of drug formulations developed by us or others;
- our financing needs and activities; and
- general market conditions.

At times, our stock price has been volatile even in the absence of significant news or developments. The stock prices of biotechnology companies and securities markets generally have been subject to dramatic price swings in recent years.

We have implemented certain anti-takeover measures, which make it more difficult to acquire us, even though such acquisitions may be beneficial to our stockholders.

Provisions of our certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, even though such acquisitions may be beneficial to our stockholders. These anti-takeover provisions include:

- establishment of a classified board of directors such that not all members of the board may be elected at one time;
- lack of a provision for cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- the ability of our board to authorize the issuance of "blank check" preferred stock to increase the number of outstanding shares and thwart a takeover attempt;
- prohibition on stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of stockholders;

- establishment of advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- limitations on who may call a special meeting of stockholders.

Further, provisions of Delaware law relating to business combinations with interested stockholders may discourage, delay or prevent a third party from acquiring us. These provisions may also discourage, delay or prevent a third party from acquiring a large portion of our securities or initiating a tender offer or proxy contest, even if our stockholders might receive a premium for their shares in the acquisition over the then-current market prices. We also have a change of control severance benefit plan, which provides for certain cash severance, stock award acceleration and other benefits in the event our employees are terminated (or, in some cases, resign for specified reasons) following an acquisition. This severance plan could discourage a third party from acquiring us.

The indenture governing our 7.75% senior secured notes imposes significant operating and financial restrictions on us and our subsidiaries that may prevent us from pursuing certain business opportunities and restrict our ability to operate our business.

On October 5, 2015, we issued $250.0 million in aggregate principal amount of 7.75% senior secured notes due October 2020. The indenture governing the senior secured notes contains covenants that restrict our and our subsidiaries' ability to take various actions, including, among other things:

- incur or guarantee additional indebtedness or issue disqualified capital stock or cause certain of our subsidiaries to issue preferred stock;
- pay dividends or distributions, redeem equity interests or subordinated indebtedness or make certain types of investments;
- create or incur liens;
- transfer, sell, lease or otherwise dispose of assets and issue or sell equity interests in certain of our subsidiaries;
- incur restrictions on certain of our subsidiaries' ability to pay dividends or other distributions to the Company or to make intercompany loans, advances or asset transfers;
- enter into transactions with affiliates;
- engage in any business other than businesses which are the same, similar, ancillary or reasonably related to our business as of the date of the indenture; and
- consummate a merger, consolidation, reorganization or business combination, sell, lease, convey or otherwise dispose of all or substantially all of our assets or other change of control transaction.

This indenture also requires us to maintain a minimum cash and investments in marketable securities balance of $60.0 million. We have certain reporting obligations under the indenture regarding cash position and royalty revenue. The indenture specifies a number of events of default, some of which are subject to applicable grace or cure periods, including, among other things, non-payment defaults, covenant defaults, cross-defaults to other material indebtedness, bankruptcy and insolvency defaults, non-payment of material judgments, loss of any material business license, criminal indictment of the Company, and certain civil forfeiture proceedings involving material assets of the Company. Our ability to comply with these covenants will likely be affected by many factors, including events beyond our control, and we may not satisfy those requirements. Our failure to comply with our obligations could result in an event of default under our other indebtedness and the acceleration of our other indebtedness, in whole or in part, could result in an event of default under the indenture governing the senior secured notes.

The restrictions contained in the indenture governing the senior secured notes could also limit our ability to plan for or react to market conditions, meet capital needs or otherwise restrict our activities or business plans and adversely affect our ability to finance our operations, enter into acquisitions or to engage in other business activities that would be in our interest.

Preliminary and interim data from our clinical studies that we announce or publish from time to time are subject to audit and verification procedures that could result in material changes in the final data and may change as more patient data become available.

From time to time, we publish preliminary or interim data from our clinical studies. Preliminary data remain subject to audit confirmation and verification procedures that may result in the final data being materially different from the preliminary data we previously published. Interim data are also subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. As a result, preliminary and interim data should

be viewed with caution until the final data are available. Material adverse changes in the final data could significantly harm our business prospects.

We may not be able to obtain intellectual property licenses related to the development of our drug candidates on a commercially reasonable basis, if at all.

Numerous pending and issued U.S. and foreign patent rights and other proprietary rights owned by third parties relate to pharmaceutical compositions, methods of preparation and manufacturing, and methods of use and administration. We cannot predict with any certainty which, if any, patent rights will be considered relevant to our or our collaboration partners' technology or drug candidates by authorities in the various jurisdictions where such rights exist, nor can we predict with certainty which, if any, of these rights will or may be asserted against us by third parties. In certain cases, we have existing licenses or cross-licenses with third parties; however, the sufficiency of the scope and adequacy of these licenses is very uncertain in view of the long development and commercialization cycles for biotechnology and pharmaceutical products. There can be no assurance that we can obtain a license to any technology that we determine we need on reasonable terms, if at all, or that we could develop or otherwise obtain alternate technology to avoid a need to secure a license. If we are required to enter into a license with a third party, our potential economic benefit for the products subject to the license will be diminished. If a license is not available on commercially reasonable terms or at all, we may be prevented from developing and commercializing the drug, which could significantly harm our business, results of operations, and financial condition.

If any of our pending patent applications do not issue, or are deemed invalid following issuance, we may lose valuable intellectual property protection.

The patent positions of pharmaceutical and biotechnology companies, such as ours, are uncertain and involve complex legal and factual issues. We own more than 290 U.S. and 1000 foreign patents and have a number of pending patent applications that cover various aspects of our technologies. There can be no assurance that patents that have issued will be held valid and enforceable in a court of law. Even for patents that are held valid and enforceable, the legal process associated with obtaining such a judgment is time consuming and costly. Additionally, issued patents can be subject to opposition, *inter partes* review or other proceedings that can result in the revocation of the patent or maintenance of the patent in amended form (and potentially in a form that renders the patent without commercially relevant and/or broad coverage). Further, our competitors may be able to circumvent and otherwise design around our patents. Even if a patent is issued and enforceable, because development and commercialization of pharmaceutical products can be subject to substantial delays, patents may expire prior to the commercialization of the drug. Moreover, even if a patent encompassing a drug has not expired prior to the drugs commercialization, the patent may only provide a short period of protection following the commercialization of products. In addition, our patents may be subject to post grant or *inter partes* review before the U.S. Patent and Trademark Office (or equivalent proceedings in other jurisdictions), which could result in a loss of the patent and/or substantial cost to us.

We have filed patent applications, and plan to file additional patent applications, covering various aspects of our PEGylation and advanced polymer conjugate technologies and our proprietary product candidates. There can be no assurance that the patent applications for which we apply will actually issue as patents, or do so with commercially relevant and/or broad coverage. The coverage claimed in a patent application can be significantly reduced before the patent is issued. The scope of our claim coverage can be critical to our ability to enter into licensing transactions with third parties and our right to receive royalties from our collaboration partnerships. Since publication of discoveries in scientific or patent literature often lags behind the date of such discoveries, we cannot be certain that we were the first inventor of inventions covered by our patents or patent applications. In addition, there is no guarantee that we will be the first to file a patent application directed to an invention.

An adverse outcome in any judicial proceeding involving intellectual property, including patents, could subject us to significant liabilities to third parties, require disputed rights to be licensed from or to third parties or require us to cease using the technology in dispute. In those instances where we seek an intellectual property license from another, we may not be able to obtain the license on a commercially reasonable basis, if at all, thereby raising concerns on our ability to freely commercialize our technologies or products.

We rely on trade secret protection and other unpatented proprietary rights for important proprietary technologies, and any loss of such rights could harm our business, results of operations and financial condition.

We rely on trade secret protection for our confidential and proprietary information. No assurance can be given that others will not independently develop substantially equivalent confidential and proprietary information or otherwise gain access to our trade secrets or disclose such technology, or that we can meaningfully protect our trade secrets. In addition, unpatented proprietary rights, including trade secrets and know-how, can be difficult to protect and may lose their value if they are

independently developed by a third party or if their secrecy is lost. Any loss of trade secret protection or other unpatented proprietary rights could harm our business, results of operations and financial condition.

If product liability lawsuits are brought against us, we may incur substantial liabilities.

The manufacture, clinical testing, marketing and sale of medical products involve inherent product liability risks. If product liability costs exceed our product liability insurance coverage (or if we cannot secure product liability insurance), we may incur substantial liabilities that could have a severe negative impact on our financial position. Whether or not we are ultimately successful in any product liability litigation, such litigation would consume substantial amounts of our financial and managerial resources and might result in adverse publicity, all of which would impair our business. Additionally, we may not be able to maintain our clinical trial insurance or product liability insurance at an acceptable cost, if at all, and this insurance may not provide adequate coverage against potential claims or losses.

If we or current or future collaborators or service providers fail to comply with healthcare laws and regulations, we or they could be subject to enforcement actions and civil or criminal penalties.

Although we do not currently have any products on the market, once we begin commercializing our drug candidates, we will be subject to additional healthcare statutory and regulatory requirements and enforcement by the federal and state governments of the jurisdictions in which we conduct our business. Healthcare providers, physicians and third-party payers play a primary role in the recommendation and prescription of any drug candidates for which we obtain marketing approval. Our future arrangements with third-party payers and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our therapeutic candidates for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering, or paying remuneration (a term interpreted broadly to include anything of value, including, for example, gifts, discounts, and credits), directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order, or recommendation of, an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment to Medicare, Medicaid, or other third-party payers that are false or fraudulent, or making a false statement or record material to payment of a false claim or avoiding, decreasing, or concealing an obligation to pay money owed to the federal government;
- provisions of the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which created new federal criminal statutes, referred to as the "HIPAA All-Payer Fraud Prohibition," that prohibit knowingly and willfully executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;
- federal transparency laws, including the federal Physician Payment Sunshine Act, which require manufacturers of certain drugs and biologics to track and disclose payments and other transfers of value they make to U.S. physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals as well as physician ownership and investment interests in the manufacturer, and that such information is subsequently made publicly available in a searchable format on a CMS website, effective January 1, 2022, these reporting obligations will extend to include transfers of value made to certain non-physician assistants and nurse practioners;
- provisions of HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payer, including commercial insurers, state transparency reporting and compliance laws; 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 which may not have the same effect, thus complicating compliance efforts.

Ensuring that our future business arrangements with third-parties comply with applicable healthcare laws and regulations could involve substantial costs. If our operations are found to be in violation of any such requirements, we may be

subject to penalties, including administrative, civil or criminal penalties, monetary damages, the curtailment or restructuring of our operations, or exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, any of which could adversely affect financial results. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

We are involved in legal proceedings and may incur substantial litigation costs and liabilities that will adversely affect our business, financial condition and results of operations.

From time to time, third parties have asserted, and may in the future assert, that we or our partners infringe their proprietary rights, such as patents and trade secrets, or have otherwise breached our obligations to them. A third party often bases its assertions on a claim that its patents cover our technology platform or drug candidates or that we have misappropriated its confidential or proprietary information. Similar assertions of infringement could be based on future patents that may issue to third parties. In certain of our agreements with our partners, we are obligated to indemnify and hold harmless our collaboration partners from intellectual property infringement, product liability and certain other claims, which could cause us to incur substantial costs and liability if we are called upon to defend ourselves and our partners against any claims. If a third party obtains injunctive or other equitable relief against us or our partners, they could effectively prevent us, or our partners, from developing or commercializing, or deriving revenue from, certain drugs or drug candidates in the U.S. and abroad. Costs associated with litigation, substantial damage claims, indemnification claims or royalties paid for licenses from third parties could have a material adverse effect on our business, financial condition and results of operations.

We are involved in legal proceedings where we or other third parties are enforcing or seeking intellectual property rights, invalidating or limiting patent rights that have already been allowed or issued, or otherwise asserting proprietary rights through one or more potential legal remedies. For example, we are currently involved in German litigation proceedings whereby we and Bayer Healthcare LLC are seeking at least co-ownership rights in certain of each other's patent filings related to PEGylated Factor VIII products. We believe that Bayer's claims to an ownership interest in these is without merit and we are vigorously defending our exclusive ownership rights to this intellectual property. These German litigation proceedings are currently stayed pending the outcome of ongoing mediation efforts. In the U.S., Bayer filed a complaint against Baxalta and Nektar alleging the ADYNOVATE® product infringes a Bayer patent. Although the U.S. court dismissed all of Bayer's claims against Nektar and Nektar was removed as a defendant, a jury found the Bayer patent was valid and infringed, and awarded Bayer damages, the responsibility of which are borne fully by Baxalta. This damages award does not impact our royalties from sales of ADYNOVATE® under our collaboration with Baxalta and Baxalta is currently appealing the decision. In other U.S. proceedings, Nektar and Baxalta filed complaints against Bayer Healthcare alleging Bayer's JIVI® product infringes several Nektar patents. A jury trial in this proceeding is scheduled to being in the summer of 2020. In addition, in response to notices AstraZeneca and we received from the generic companies, Apotex (Apotex Inc. and Apotex Corp.), MSN Laboratories Pvt. Ltd., and Aurobindo Pharma USA INC. alerting us that they had filed abbreviated new drug applications (ANDAs) with the FDA to market a generic version of MOVANTIK® (Paragraph IV Certifications), AstraZeneca and we together filed patent infringement suits against each of these generic companies. In these Paragraph IV Certifications, all three generic companies only alleged one patent, U.S. Patent No. 9,012,469, is invalid, unenforceable and/or not infringed by the manufacture, use or sale of their respective generic products. At this time, none of the other five Orange Book listed patents associated with MOVANTIK® are being challenged by these generics companies. We are also regularly involved in opposition proceedings at the European Patent Office and in *inter partes* review proceedings at the U.S. Patent and Trademark Office where third parties seek to invalidate or limit the scope of our allowed patent applications or issued patents covering (among other things) our drugs and platform technologies.

We are involved in legal proceedings other than those related to intellectual property. For example, on October 30, 2018, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on May 15, 2019. Also, on February 13, 2019, and February 18, 2019, shareholder derivative complaints were filed in the U.S. District Court for the District of Delaware naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder derivative actions assert, among other things, that for a period beginning at least from November 11, 2017 through October 2, 2018, our stock was inflated due to alleged misrepresentations about the efficacy and safety of bempegaldesleukin. In addition, on August 19, 2019, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on January 24, 2020. Also, on February 11, 2020, and on February 20, 2020, shareholder derivative complaints were filed in the U.S. District Court for the Northern District of California naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder

derivative actions assert, among other things, that for a period between February 15, 2019 and August 8, 2019, inclusive, our stock was inflated due to an alleged failure to disclose a reduction in the planned number of bempegaldesleukin clinical trials and a bempegaldesleukin manufacturing issue. related to intellectual property, we are involved intellectual propertyOn October 30, 2018, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on May 15, 2019. Also, on February 13, 2019, and February 18, 2019, shareholder derivative complaints were filed in the U.S. District Court for the District of Delaware naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder derivative actions assert, among other things, that for a period beginning at least from November 11, 2017 through October 2, 2018, our stock was inflated due to alleged misrepresentations about the efficacy and safety of bempegaldesleukin. In addition, on August 19, 2019, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on January 24, 2020. Also, on February 11, 2020, and on February 20, 2020, shareholder derivative complaints were filed in the U.S. District Court for the Northern District of California naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder derivative actions assert, among other things, that for a period between February 15, 2019 and August 8, 2019, inclusive, our stock was inflated due to an alleged failure to disclose a reduction in the planned number of bempegaldesleukin clinical trials and a bempegaldesleukin manufacturing issue.

The cost to us in initiating or defending any litigation or other proceeding, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts or result in financial implications either in terms of seeking license arrangements or payment of damages or royalties. There is no guarantee that our insurance coverage for damages resulting from a litigation or the settlement thereof (including the putative securities class action lawsuits and shareholder derivative lawsuits) is sufficient, thereby resulting in substantial financial risk to the Company.

Our internal computer systems, or those of our partners, vendors, CROs, CMOs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development programs or the theft of our confidential information or patient confidential information.

Despite the implementation of security measures, our internal computer systems and those of our partners, vendors, contract research organizations (CROs), contract manufacturing organizations (CMOs) and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, business email compromise, natural disasters, terrorism, war and telecommunication and electrical failures. Such events could cause interruptions of our operations. For instance, the loss of preclinical data or data from any future clinical trial involving our product candidates could result in delays in our development and regulatory filing efforts and significantly increase our costs. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data, or inappropriate disclosure of confidential or proprietary information of our company or clinical patients, we could suffer or be subject to reputational harm, monetary fines (such as those imposed by European Regulation 2016/679, known as the General Data Protection Regulation, or "GDPR" and, the California Consumer Privacy Act, or "CCPA"), civil suits, civil penalties or criminal sanctions and requirements to disclose the breach, and other forms of liability, and the development of our product candidates could be delayed. In addition, we continue to be subject to new and evolving data protection laws and regulations from a variety of jurisdictions, and there is a risk that our systems and processes for managing and protecting data may be found to be inadequate, which could expose us to fines and litigation.

The United Kingdom's withdrawal from the European Union (EU) may have a negative effect on global economic conditions, access to patient markets, and regulatory certainty, which could adversely affect our operations.

On January 31, 2020, the United Kingdom withdrew from the EU (Brexit), thereby triggering a transition period that is set to end on December 31, 2020, during which the United Kingdom and the EU will negotiate their future relationship. Many effects of Brexit depend on how closely the UK will be tied to the EU, and whether the transition period ends without terms being agreed.

There is currently considerable uncertainty on regulatory processes in Europe and the European Economic Area. The lack of clarity about which EU rules and regulations the United Kingdom would replace or replicate, such as rules and regulations relating to trade (including the importation and exportation of pharmaceuticals), clinical research, and intellectual property, increases the risk that our clinical trials being carried out in United Kingdom are delayed or disrupted. Further, depending on which rules and regulations the United Kingdom ultimately adopts, our business could be negatively affected.

Global economic conditions may negatively affect us and may magnify certain risks that affect our business.

Our operations and performance have been, and may continue to be, affected by global economic conditions. As a result of global economic conditions, some third-party payers may delay or be unable to satisfy their reimbursement obligations. Job losses or other economic hardships may also affect patients' ability to afford healthcare as a result of increased co-pay or deductible obligations, greater cost sensitivity to existing co-pay or deductible obligations, lost healthcare insurance coverage or for other reasons. We believe such conditions have led and could continue to lead to reduced demand for our and our collaboration partners' drug products, which could have a material adverse effect on our product sales, business and results of operations.

Further, with rising international trade tensions, our business may be adversely affected following new or increased tariffs that result in the increased global clinical trial costs as a result of international transportation of clinical drug supplies, as well as the costs of materials and products imported into the U.S. Tariffs, trade restrictions or sanctions imposed by the U.S. or other countries could increase the prices of our and our collaboration partners' drug products, affect our and our collaboration partners' ability to commercialize such drug products, or create adverse tax consequences in the U.S. or other countries. As a result, changes in international trade policy, changes in trade agreements and the imposition of tariffs or sanctions by the U.S. or other countries could materially adversely affect our results of operations and financial condition.

Our business could be negatively impacted by corporate citizenship and sustainability matters.

There is an increased focus from certain investors, employees, and other stakeholders concerning corporate citizenship and sustainability matters, which include environmental concerns and social investments. We could fail to meet, or be perceived to fail to meet, the expectations of these certain investors, employees and other stakeholders concerning corporate citizenship and sustainability matters, thereby resulting in a negative impact to our business.

Our operations may involve hazardous materials and are subject to environmental, health, and safety laws and regulations. Compliance with these laws and regulations is costly, and we may incur substantial liability arising from our activities involving the use of hazardous materials.

As a research-based biopharmaceutical company with significant research and development and manufacturing operations, we are subject to extensive environmental, health, and safety laws and regulations, including those governing the use of hazardous materials. Our research and development and manufacturing activities involve the controlled use of chemicals, radioactive compounds, and other hazardous materials. The cost of compliance with environmental, health, and safety regulations is substantial. If an accident involving these materials or an environmental discharge were to occur, we could be held liable for any resulting damages, or face regulatory actions, which could exceed our resources or insurance coverage.

If earthquakes or other catastrophic events strike, our business may be harmed.

Our corporate headquarters, including a substantial portion of our research and development operations, are located in the San Francisco Bay Area, a region known for seismic activity and a potential terrorist target. In addition, we own facilities for the manufacture of products using our advanced polymer conjugate technologies in Huntsville, Alabama and own and lease offices in Hyderabad, India. There are no backup facilities for our manufacturing operations located in Huntsville, Alabama. In the event of an earthquake or other natural disaster, political instability, or terrorist event in any of these locations, our ability to manufacture and supply materials for drug candidates in development and our ability to meet our manufacturing obligations to our customers would be significantly disrupted and our business, results of operations and financial condition would be harmed. Our collaboration partners and important vendors and suppliers to us or our collaboration partners may also be subject to catastrophic events, such as earthquakes, floods, hurricanes, tornadoes and pandemics any of which could harm our business (including, for example, by disrupting supply chains important to the success of our business), results of operations and financial condition. We have not undertaken a systematic analysis of the potential consequences to our business, results of operations and financial condition from a major earthquake or other catastrophic event, such as a fire, sustained loss of power, terrorist activity or other disaster, and do not have a recovery plan for such disasters. In addition, our insurance coverage may not be sufficient to compensate us for actual losses from any interruption of our business that may occur.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

California

We lease a 148,263 square foot facility in the Mission Bay Area of San Francisco, California (Mission Bay Facility), under an operating lease which expires in 2030. The Mission Bay Facility is our corporate headquarters and also includes our research and development operations.

We also lease 135,936 square feet of office space in San Francisco (the Third Street Facility), under an operating lease which expires in 2030. The Third Street Facility provides additional space to support our research and development activities.

Alabama

We currently own a facility consisting of approximately 124,000 square feet in Huntsville, Alabama, which house laboratories as well as administrative, clinical and commercial manufacturing facilities for our PEGylation and advanced polymer conjugate technology operations as well as manufacturing of APIs for early clinical studies.

India

We own a research and development facility consisting of approximately 88,000 square feet, near Hyderabad, India. In addition, we lease approximately 1,600 square feet of office space in Hyderabad, India, under a three-year operating lease that will expire in 2021.

Item 3. Legal Proceedings

From time to time, we are subject to legal proceedings. We are not currently a party to or aware of any proceedings that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition or results of operations. With respect to ongoing securities class action and shareholder derivative litigation, please refer to Item 1A. Risk Factors, including without limitation, “We are involved in legal proceedings and may incur substantial litigation costs and liabilities that will adversely affect our business, financial condition and results of operations.”

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our common stock trades on The NASDAQ Global Select Market under the symbol "NKTR." The table below sets forth the high and low closing sales prices for our common stock as reported on The NASDAQ Global Select Market during the periods indicated.

	High	Low
Year Ended December 31, 2018		
1st Quarter	$ 108.44	$ 57.40
2nd Quarter	104.45	46.25
3rd Quarter	68.49	46.46
4th Quarter	56.65	30.43
Year Ended December 31, 2019		
1st Quarter	$ 46.35	$ 31.58
2nd Quarter	36.30	31.00
3rd Quarter	36.27	16.91
4th Quarter	23.12	15.87

Holders of Record

As of February 19, 2020, there were approximately 162 holders of record of our common stock.

Dividend Policy

We have never declared or paid any cash dividends on our common stock. We currently expect to retain any future earnings for use in the operation and expansion of our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future.

There were no sales of unregistered securities and there were no common stock repurchases made during the year ended December 31, 2019.

Securities Authorized for Issuance Under Equity Compensation Plans

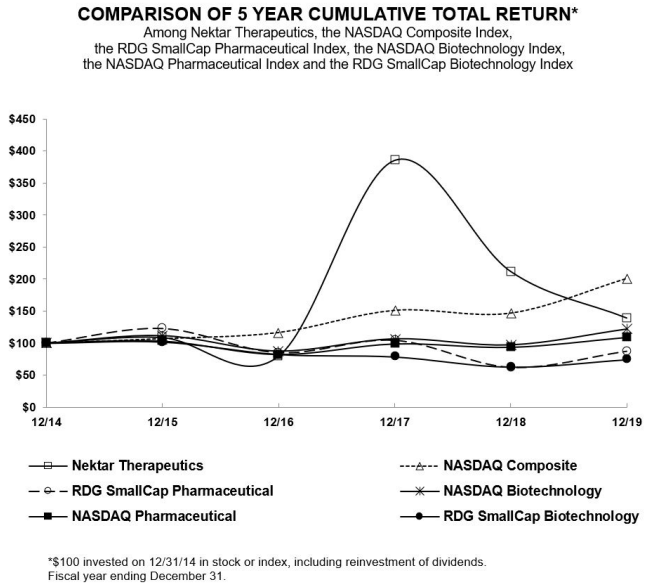
Information regarding our equity compensation plans as of December 31, 2019 is disclosed in Item 12 "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" of this Annual Report on Form 10-K and is incorporated herein by reference from our proxy statement for our 2020 annual meeting of stockholders to be filed with the SEC pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Performance Measurement Comparison

The material in this section is being furnished and shall not be deemed "filed" with the SEC for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall the material in this section be deemed to be incorporated by reference in any registration statement or other document filed with the SEC under the Securities Act or the Exchange Act, except as otherwise expressly stated in such filing.

The following graph compares, for the five year period ended December 31, 2019, the cumulative total stockholder return (change in stock price plus reinvested dividends) of our common stock with (i) the NASDAQ Composite Index, (ii) the NASDAQ Pharmaceutical Index, (iii) the RDG SmallCap Pharmaceutical Index, (iv) the NASDAQ Biotechnology Index and (v) the RDG SmallCap Biotechnology Index. Measurement points are the last trading day of each of our fiscal years ended December 31, 2015, December 31, 2016, December 31, 2017, December 31, 2018 and December 31, 2019. The graph assumes that $100 was invested on December 31, 2014 in the common stock of the Company, the NASDAQ Composite Index, the Nasdaq Pharmaceutical Index, the RDG SmallCap Pharmaceutical Index, the NASDAQ Biotechnology Index and the RDG

SmallCap Biotechnology Index and assumes reinvestment of any dividends. The stock price performance in the graph is not intended to forecast or indicate future stock price performance.



*$100 invested on 12/31/14 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

Item 6. Selected Financial Data

SELECTED CONSOLIDATED FINANCIAL INFORMATION
(In thousands, except per share information)

The selected consolidated financial data set forth below should be read together with the consolidated financial statements and related notes, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and the other information contained herein.

	Year Ended December 31,				
	2019	2018	2017	2016	2015
Statements of Operations Data:					
Revenue:					
Product sales	$ 20,117	$ 20,774	$ 32,688	$ 55,354	$ 40,155
Royalty revenue	41,222	41,976	33,527	19,542	2,967
Non-cash royalty revenue related to sale of future royalties[1]	36,303	33,308	30,531	30,158	22,058
License, collaboration and other revenue	16,975	1,097,265	210,965	60,382	165,604
Total revenue	114,617	1,193,323	307,711	165,436	230,784
Operating costs and expenses:					
Research and development	434,566	399,536	268,461	203,801	182,787
Other operating expenses[2]	120,086	105,855	98,892	74,490	77,368
Total operating costs and expenses[2]	554,652	505,391	367,353	278,291	260,155
Income (loss) from operations	(440,035)	687,932	(59,642)	(112,855)	(29,371)
Non-cash interest expense on liability related to sale of future royalties[1]	(25,044)	(21,196)	(18,869)	(19,712)	(20,619)
Interest income (expense) and other income (expense), net	25,025	15,989	(17,565)	(20,081)	(16,602)
Loss on extinguishment of debt	—	—	—	—	(14,079)
Provision (benefit) for income taxes	613	1,412	616	876	506
Net income (loss)	$ (440,667)	$ 681,313	$ (96,692)	$ (153,524)	$ (81,177)
Net income (loss) per share[3]					
Basic	$ (2.52)	$ 4.02	$ (0.62)	$ (1.10)	$ (0.61)
Diluted	$ (2.52)	$ 3.78	$ (0.62)	$ (1.10)	$ (0.61)
Weighted average shares outstanding used in computing net income (loss) per share[3]					
Basic	174,993	169,600	155,953	139,596	132,458
Diluted	174,993	180,119	155,953	139,596	132,458

	As of December 31,				
	2019	2018	2017	2016	2015
Balance Sheet Data:					
Cash, cash equivalents and investments in marketable securities	$ 1,603,981	$ 1,918,239	$ 353,220	$ 389,102	$ 308,944
Working capital	$ 1,067,657	$ 1,355,685	$ 270,657	$ 353,730	$ 288,805
Operating lease right-of-use assets[4]	$ 134,177	$ —	$ —	$ —	$ —
Total assets	$ 1,977,356	$ 2,150,172	$ 508,866	$ 568,871	$ 498,642
Deferred revenue	$ 8,071	$ 24,636	$ 37,970	$ 66,239	$ 83,854
Senior secured notes, net	$ 248,693	$ 246,950	$ 245,207	$ 243,464	$ 241,699
Lease liabilities[4]	$ 155,246	$ —	$ —	$ —	$ —
Liability related to the sale of future royalties[1]	$ 72,020	$ 82,911	$ 94,655	$ 105,950	$ 116,029
Accumulated deficit	$ (1,864,718)	$ (1,424,051)	$ (2,117,941)	$ (2,021,010)	$ (1,867,486)
Total stockholders' equity	$ 1,405,391	$ 1,717,575	$ 87,828	$ 88,125	$ 6,429

(1) In February 2012, we sold all of our rights to receive future royalty payments on net sales of UCB's CIMZIA® and Roche's MIRCERA®. As described in Note 7 to our Consolidated Financial Statements, this royalty sale transaction has been recorded as a liability that amortizes over the estimated royalty payment period. As a result of this liability accounting, even though the royalties from UCB and Roche are remitted directly to the purchaser of these royalty interests starting in the second quarter of 2012, we will continue to record non-cash revenue for these royalties and related non-cash interest expense.

(2) Operating costs and expenses in 2017 includes $16.0 million for the impairment of equipment and related costs resulting from the termination of the Amikacin Inhale development program.

(3) Basic net income (loss) per share is based upon the weighted average number of common shares outstanding. Diluted net income (loss) per share is based on the weighted-average number of shares of common stock outstanding, including potentially dilutive securities.

(4) On January 1, 2019, we adopted Accounting Standards Codification 842, *Leases* (ASC 842). As described in Note 1 to our Consolidated Financial Statements, ASC 842 generally requires an entity to recognize a lease liability for leases with a term greater than one year, measured as the present value of the lease payments, with an offset to a right-of-use asset. See Note 6 to our Consolidated Financial Statements for additional information on our leases.

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed here. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this section as well as factors described in "Part I, Item 1A — Risk Factors."

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

Overview

Strategic Direction of Our Business

Nektar Therapeutics is a research-based biopharmaceutical company that discovers and develops innovative new medicines in areas of high unmet medical need. Our research and development pipeline of new investigational drugs includes treatments for cancer and autoimmune disease. We leverage our proprietary and proven chemistry platform to discover and design new drug candidates. These drug candidates utilize our advanced polymer conjugate technology platforms, which are designed to enable the development of new molecular entities that target known mechanisms of action. We continue to make significant investments in building and advancing our pipeline of proprietary drug candidates as we believe that this is the best strategy to build long-term stockholder value.

In immuno-oncology (I-O), we are executing a clinical development program for bempegaldesleukin (previously referred to as NKTR-214), in collaboration with Bristol-Myers Squibb Company (BMS) as well as other independent development work evaluating bempegaldesleukin in combination with other agents with potential complementary mechanisms of action. We announced in August that the FDA granted a Breakthrough Therapy designation for bempegaldesleukin in combination with Opdivo® for the treatment of patients with untreated unresectable or metastatic melanoma. We expect our research and development expense to continue to grow over the next few years as we expand and execute our broad clinical development program for bempegaldesleukin.

On January 9, 2020, we and BMS entered into an Amendment No. 1 (the Amendment) to the February 13, 2018 BMS Collaboration Agreement. Pursuant to the Amendment, we and BMS agreed to update the Collaboration Development Plan under which we are collaborating and developing bempegaldesleukin. Specifically, pursuant to the updated Collaboration Development Plan, bempegaldesleukin in combination with Opdivo® is currently being evaluated in ongoing registrational trials in first-line metastatic melanoma, first-line cisplatin ineligible, PD-L1 low, locally advanced or metastatic urothelial cancer, first-line metastatic renal cell carcinoma (RCC), and muscle-invasive bladder cancer, and also includes an additional registrational trial in adjuvant melanoma, as well as a Phase 1/2 dose escalation and expansion study to evaluate bempegaldesleukin plus Opdivo® in combination with axitinib in first line RCC in order to support a future Phase 3 registrational trial. Several other registrational-supporting pediatric and safety studies for the combination of bempegaldesleukin and Opdivo® are either currently underway or planned to begin in 2020. Also, as specifically allowed under the BMS Collaboration Agreement, Nektar is independently studying bempegaldesleukin and pembrolizumab in a non-small cell lung cancer (NSCLC) Phase 1/2 trial, and BMS plans to independently study bempegaldesleukin and Opdivo® in a NSCLC dose-optimization Phase 1/2 trial scheduled to begin in 2020.

The Amendment did not alter the cost-sharing methodology the parties agreed to under the February 13, 2018 BMS Collaboration Agreement, wherein we share development costs based on each party's relative ownership interest in the compounds included in the regimen. For example, we share clinical development costs for bempegaldesleukin in combination with Opdivo®, BMS 67.5% and Nektar 32.5%. For costs of manufacturing bempegaldesleukin, however, BMS is responsible for 35% and Nektar is responsible for 65% of costs. We also share commercialization related costs, 35% BMS and 65% Nektar, which we present in general and administrative expense. Our share of development costs is limited to an annual cap of $125.0 million. To the extent this annual cap is exceeded, we will recognize our full share of the research and development expense and BMS will reimburse us for the amount over the annual cap which will be recorded as a contingent liability. This contingent liability will be paid to BMS only if bempegaldesleukin is approved and solely by reducing a portion of our share of net profits following the first commercial sale of bempegaldesleukin. The BMS Collaboration Agreement entitles Nektar to receive up to $1.455 billion of clinical, regulatory and commercial launch milestones, $650.0 million of which are associated with approval and launch of bempegaldesleukin in its first indication in the U.S., EU and Japan (subject to $100.0 million in creditable milestone payments). As a result, whether and when bempegaldesleukin is approved in any indication will have a significant impact on our future results of operations and financial condition.

In addition, under the Amendment, we are entitled to an additional $25.0 million non-refundable, non-creditable milestone payment following the achievement of the first-patient, first-visit milestone in the registrational adjuvant melanoma trial studying bempegaldesleukin and Opdivo®. We are also eligible to receive non-refundable, creditable milestone payments of $25.0 million and $75.0 million following the achievement of the first-patient, first-visit milestone in the registrational

muscle-invasive bladder cancer trial and the first-patient, first-visit milestone in a registrational first-line non-small-cell lung cancer trial, respectively, in each case studying the combination of bempegaldesleukin and Opdivo®.

In January 2020, the milestone for the first-patient, first-visit for the registrational muscle-invasive bladder cancer trial was achieved.

Under the Amendment, BMS has the right, at its sole discretion, to terminate co-funding its share of the development costs for the adjuvant melanoma collaboration study if the metastatic melanoma collaboration study fails to meet the primary endpoint of progression free survival. If BMS exercises such right, Nektar has the right, in its sole discretion, to continue the adjuvant melanoma study as a combined therapy independent study pursuant to the Collaboration Agreement.

Outside of the collaboration development plan with BMS, we are conducting additional research and development activities evaluating bempegaldesleukin in combination with other agents that have potential complementary mechanisms of action. Our strategic objective is to establish bempegaldesleukin as a key component of many I-O combination regimens with the potential to enhance the standard of care in multiple oncology settings. On November 6, 2018, we entered into a clinical collaboration with Pfizer Inc. (Pfizer) to evaluate several combination regimens in multiple cancer settings, including metastatic castration-resistant prostate cancer and squamous cell carcinoma of the head and neck. The combination regimens in this collaboration will evaluate bempegaldesleukin with avelumab, a human anti-PD-L1 antibody in development by Merck KGaA (Merck), and Pfizer; talazoparib, a poly (ADP-ribose) polymerase (PARP) inhibitor developed by Pfizer; or enzalutamide, an androgen receptor inhibitor in development by Pfizer and Astellas Pharma Inc. We are planning a Phase 1 study this year in pancreatic cancer patients in collaboration with BioXcel Therapeutics Inc. (BioXcel) to evaluate a triplet combination of bempegaldesleukin, BXCL-701 (a small molecule immune-modulator, DPP 8/9), and avelumab being supplied to BioXcel by Pfizer and Merck. We are also working in collaboration with Vaccibody AS (Vaccibody) to evaluate in a Phase 1 proof-of-concept study combining bempegaldesleukin with Vaccibody's personalized cancer neoantigen vaccine. With our non-BMS clinical collaborations for bempegaldesleukin, we generally share clinical development costs on a substantially pro-rata basis commensurate with our ownership interest in the underlying compounds. We expect to continue to make significant and increasing investments exploring the potential of bempegaldesleukin with mechanisms of action that we believe are synergistic with bempegaldesleukin based on emerging scientific findings in cancer biology and preclinical development work.

We are also advancing other molecules, including NKTR-262 and NKTR-255, in our I-O portfolio. NKTR-262 is a small molecule agonist that targets toll-like receptors (TLRs) found on innate immune cells in the body. NKTR-262 is designed to stimulate the innate immune system and promote maturation and activation of antigen-presenting cells (APCs), such as dendritic cells, which are critical to induce the body's adaptive immunity and create antigen-specific cytotoxic T cells. NKTR-262 is being developed as an intra-tumoral injection in combination with systemic bempegaldesleukin in order to induce an abscopal response and achieve the goal of tumor regression in cancer patients treated with both therapies. The Phase 1 dose-escalation trial is currently ongoing. NKTR-255 is a biologic that targets the interleukin-15 (IL-15) pathway in order to activate the body's innate and adaptive immunity. Activation of the IL-15 pathway enhances the survival and function of natural killer (NK) cells and induces survival of both effector and CD8 memory T cells. Preclinical findings suggest NKTR-255 has the potential to synergistically combine with antibody dependent cellular toxicity molecules as well as enhance CAR-T therapies. We have initiated a Phase 1 clinical study of NKTR-255 in adults with relapsed or refractory non-Hodgkin lymphoma or multiple myeloma. We are also designing other clinical trials in both liquid and solid tumor settings.

In immunology, we are developing NKTR-358, which is designed to correct the underlying immune system imbalance in the body that occurs in patients with autoimmune disease. NKTR-358 is designed to optimally target the IL-2 receptor complex in order to stimulate proliferation and growth of regulatory T cells. NKTR-358 is being developed as a once or twice monthly self-administered injection for a number of autoimmune diseases. In 2017, we entered into a worldwide license agreement with Eli Lilly and Company (Lilly) to co-develop NKTR-358. We received an initial payment of $150.0 million in September 2017 and are eligible for up to an additional $250.0 million for development and regulatory milestones. We are responsible for completing Phase 1 clinical development and certain drug product development and supply activities. We also share Phase 2 development costs with Lilly, with Lilly responsible for 75% and Nektar responsible for 25% of these costs. We will have the option to contribute funding to Phase 3 development on an indication-by-indication basis, ranging from zero to 25% of the Phase 3 development costs. Lilly will be responsible for all costs of global commercialization and we will have an option to co-promote in the U.S. under certain conditions.

We have completed a Phase 1 dose-finding trial of NKTR-358 to evaluate single-ascending doses of NKTR-358 in approximately 100 healthy patients. Results from this study demonstrated a multiple-fold increase in regulatory T cells with no change in CD8 positive or natural killer cell levels and no dose-limiting toxicities were observed. We also completed treatment of a Phase 1 multiple-ascending dose trial to evaluate NKTR-358 in patients with systemic lupus erythematosus (SLE). Lilly is

expected to initiate a Phase 2 study in SLE in mid-2020 and to start an additional Phase 2 study in another auto-immune disease in 2020. These clinical studies are in addition to the two Phase 1b studies in patients with psoriasis and atopic dermatitis being run by Lilly.

ONZEALD® (also known as NKTR-102, etirinotecan pegol) is a topoisomerase I inhibitor proprietary drug candidate. A Phase 3 clinical study, which we called the BEACON study, evaluated ONZEALD® as a single-agent therapy for women with advanced metastatic breast cancer. In a top-line analysis of 852 patients from the trial, ONZEALD® provided a 2.1 month improvement in median overall survival over treatment of physician's choice (TPC), which did not achieve statistical significance. A significant overall survival benefit was observed in two pre-specified subgroup populations—patients with a history of brain metastases and patients with baseline liver metastases at study entry. We thereafter initiated the ATTAIN study, a Phase 3 study comparing overall survival in patients with advanced breast cancer and brain metastases who have been previously treated with an anthracycline, a taxane and capecitabine. On February 27, 2020, we announced that there was no improvement in overall survival between patients receiving ONZEALD® and patients receiving TPC, and, as a result, we will wind down all development activities for ONZEALD®.

We were developing NKTR-181 for the treatment of chronic low back pain in adult patients and had submitted an NDA for NKTR-181. Following our submission, the FDA missed the target action date of August 29, 2019 that it had assigned to our NDA under the Prescription Drug User Fee Act (PDUFA), and postponed product-specific advisory committee meetings for opioid analgesics, including one that was scheduled for NKTR-181 on August 21, 2019. At the rescheduled advisory committee meeting held on January 14, 2020, the joint FDA Anesthetic Drug Products Advisory Committee and Drug Safety and Risk Management Committee did not recommend approval of NKTR-181, and, as a result, we withdrew the NDA.

The level of our future research and development investment will depend on a number of trends and uncertainties including clinical outcomes, future studies required to advance programs to regulatory approval, and the economics related to potential future collaborations that may include up-front payments, development funding, milestones, and royalties. Over the next several years, we plan to continue to make significant investments to advance our early drug candidate pipeline.

We have historically derived all of our revenue and substantial amounts of operating capital from our collaboration agreements including the BMS collaboration for bempegaldesleukin that was effective on April 3, 2018, pursuant to which we recognized $1.06 billion in revenue and recorded $790.2 million in additional paid in capital for shares of our common stock issued in the transaction. While in the near-term we continue to expect to generate substantially all of our revenue from collaboration arrangements, including the potential $1.455 billion in development and regulatory milestones under the BMS collaboration, in the medium- to long-term, our plan is to generate significant commercial revenue from proprietary products including bempegaldesleukin. Since we do not have experience commercializing products or an established commercialization organization, there will be substantial risks and uncertainties in future years as we build commercial, organizational, and operational capabilities.

We also receive royalties and milestones from two approved drugs. We have a collaboration with AstraZeneca for MOVANTIK®, an oral peripherally-acting mu-opioid antagonist for the treatment of opioid-induced constipation in adult patients with non-cancer pain which was approved by the FDA and subsequently launched in March 2015 and MOVENTIG®, for the treatment of opioid-induced constipation in adult patients who have an inadequate response to laxatives, which was approved by health authorities in the European Union and many other countries beginning in 2014. We also have a collaboration with Baxalta Inc. (a wholly-owned subsidiary of Takeda Pharmaceutical Company Ltd.) for ADYNOVATE®, that was approved by the FDA in late 2015 for use in adults and adolescents, aged 12 years and older, who have Hemophilia A. ADYNOVI™ was approved by health authorities in Europe in January 2018, and has also been approved in many other countries.

Our business is subject to significant risks, including the risks inherent in our development efforts, the results of our clinical trials, our dependence on the marketing efforts by our collaboration partners, uncertainties associated with obtaining and enforcing patents, the lengthy and expensive regulatory approval process and competition from other products. For a discussion of these and some of the other key risks and uncertainties affecting our business, see Item 1A. Risk Factors.

While the approved drugs and clinical development programs described above are key elements of our future success, we believe it is critically important that we continue to make substantial investments in our earlier-stage drug candidate pipeline. We have several drug candidates in earlier stage clinical development or being explored in research that we are preparing to advance into the clinic in future years. We are also advancing several other drug candidates in preclinical development in the areas of I-O, immunology, and other therapeutic indications. We believe that our substantial investment in

research and development has the potential to create significant value if one or more of our drug candidates demonstrates positive clinical results, receives regulatory approval in one or more major markets and achieves commercial success. Drug research and development is an inherently uncertain process with a high risk of failure at every stage prior to approval. The timing and outcome of clinical trial results are extremely difficult to predict. Clinical development successes and failures can have a disproportionately positive or negative impact on our scientific and medical prospects, financial condition and prospects, results of operations and market value.

Key Developments and Trends in Liquidity and Capital Resources

We estimate that we have working capital to fund our current business plans through at least March 1, 2021. At December 31, 2019, we had approximately $1.6 billion in cash and investments in marketable securities and had debt of $250.0 million in principal of senior secured notes due in October 2020.

Results of Operations

Years Ended December 31, 2019 and 2018

Additional information required by Item 7 for the year ended December 31, 2017 can be found in Item 7 in our Annual Report on Form 10-K for the year December 31, 2018, filed with the SEC on March 1, 2019 and is incorporated herein by reference.

Revenue (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease)	Percentage Increase/ (Decrease)
	2019	2018	2019 vs. 2018	2019 vs. 2018
Product sales	$ 20,117	$ 20,774	$ (657)	(3)%
Royalty revenue	41,222	41,976	(754)	(2)%
Non cash royalty revenue related to sale of future royalties	36,303	33,308	2,995	9 %
License, collaboration and other revenue	16,975	1,097,265	(1,080,290)	(98)%
Total revenue	$ 114,617	$ 1,193,323	$ (1,078,706)	(90)%

Our revenue is derived from our collaboration agreements, under which we may receive product sales revenue, royalties, and license fees, as well as development and sales milestones and other contingent payments. We recognize revenue when we transfer promised goods or services to our collaboration partners. The amount of upfront fees received under our license and collaboration agreements allocated to continuing obligations, such as development or manufacturing and supply commitments, is generally recognized as we deliver products or provide development services. As a result, there may be significant variations in the timing of receipt of cash payments and our recognition of revenue. We make our best estimate of the timing and amount of products and services expected to be required to fulfill our performance obligations. Given the uncertainties in research and development collaborations, significant judgment is required to make these estimates.

Product sales

Product sales include predominantly fixed price manufacturing and supply agreements with our collaboration partners and are the result of firm purchase orders from those partners. The timing of shipments is based solely on the demand and requirements of our collaboration partners and is not ratable throughout the year.

Product sales was consistent for the years ended December 31, 2019 and December 31, 2018.

We expect product sales in 2020 to be lower than 2019 due to decreased demand from our collaboration partners.

Royalty revenue

We receive royalty revenue from certain of our collaboration partners based on their net sales of commercial products. Royalty revenue was consistent for the years ended December 31, 2019 compared to the year ended December 31, 2018. We expect royalty revenue in 2020 to be consistent with 2019.

As part of its approval of MOVANTIK®, the FDA required AstraZeneca to perform a post-marketing, observational epidemiological study comparing MOVANTIK® to other treatments of OIC in patients with chronic, non-cancer pain. As a result, the royalty rate payable to us from net sales of MOVANTIK® in the U.S. by AstraZeneca can be reduced by up to two percentage points to fund 33% of the external costs incurred by AstraZeneca to fund such post approval study, subject to a $35.0 million aggregate cap. As of December 31, 2019, our cumulative share of the post-approval study expenses since 2015 has been $1.8 million. Any costs incurred by AstraZeneca can only be recovered by the reduction of the royalty paid to us. In no case can amounts be recovered by the reduction of a contingent payment due from AstraZeneca to us or through a payment from us to AstraZeneca.

Non-cash royalty revenue related to sale of future royalties

For a discussion of our Non-cash royalty revenue, please see our discussion below “Non-Cash Royalty Revenue and Non-Cash Interest Expense.”

License, collaboration and other revenue

License, collaboration and other revenue includes the recognition of upfront payments, milestone and other contingent payments received in connection with our license and collaboration agreements and certain research and development activities. The level of license, collaboration and other revenue depends in part upon the estimated recognition period of the upfront payments allocated to continuing performance obligations, the achievement of milestones and other contingent events, the continuation of existing collaborations, the amount of research and development work, and entering into new collaboration agreements, if any.

License, collaboration and other revenue decreased for the year ended December 31, 2019 compared to the year ended December 31, 2018 primarily due to the recognition of $1,059.8 million from the BMS Collaboration Agreement as described in Note 10 to our Consolidated Financial Statements. In addition, we recognized a $10.0 million milestone payment received in March 2018 as a result of the marketing authorization of ADYNOVI™ in the EU in January 2018, and we recognized an additional $10.0 million milestone in the fourth quarter of 2018 for annual sales of ADYNOVATE® reaching a certain specified amount.

We expect that our license, collaboration and other revenue will increase in 2020 compared to 2019 as a result of the recognition of milestones expected to be achieved under our BMS Collaboration Agreement.

The timing and future success of our drug development programs and those of our collaboration partners are subject to a number of risks and uncertainties. See Item 1A. Risk Factors for discussion of the risks associated with the complex nature of our collaboration agreements.

Revenue by geography (in thousands)

Revenue by geographic area is based on the headquarters or shipping locations of our partners. The following table sets forth revenue by geographic area:

	Year Ended December 31,	
	2019	2018
United States	$ 27,093	$ 1,090,794
Rest of World	87,524	102,529
Total revenue	$ 114,617	$ 1,193,323

Revenue attributable to the U.S. for the year ended December 31, 2018 was higher than for the years ended December 31, 2019 primarily due to the recognition of $1,059.8 million from the BMS Collaboration Agreement as described above.

Cost of goods sold (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Cost of goods sold	$ 21,374	$ 24,412	$ (3,038)	(12)%
Product gross profit	(1,257)	(3,638)	2,381	(65)%
Product gross margin	(6)%	(18)%		

Our strategy is to manufacture and supply polymer reagents to support our proprietary drug candidates or our third-party collaborators where we have a strategic development and commercialization relationship or where we derive substantial economic benefit. We have elected to only enter into and maintain those manufacturing relationships associated with long-term collaboration agreements which include multiple sources of revenue, which we view holistically and in aggregate. We have a predominantly fixed cost base associated with our manufacturing activities. As a result, our product gross profit and margin are significantly impacted by the mix and volume of products sold in each period.

Product gross margin improved for the year ended December 31, 2019 compared to the year ended December 31, 2018 primarily due to a more favorable mix in 2019 compared to 2018. In particular, we have a manufacturing arrangement with a partner that includes a fixed price which is less than the fully burdened manufacturing cost for the reagent, and we expect this situation to continue with this partner in future years. There were fewer shipments to this partner relative to shipments to other customers during 2019 compared to 2018. In addition to product sales from reagent materials supplied to the partner where our sales are less than our fully burdened manufacturing cost, we also receive royalty revenue from this collaboration. In the years ended December 31, 2019 and 2018, the royalty revenue from this collaboration exceeded the related negative gross profit.

We expect product gross margin to continue to fluctuate in future periods depending on the level and mix of manufacturing orders from our customers. We currently expect product gross margin to be negative in 2020 as a result of the anticipated unfavorable product mix described above.

Research and development expense (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Research and development expense	$ 434,566	$ 399,536	$ 35,030	9%

Research and development expense consists primarily of clinical study costs, contract manufacturing costs, direct costs of outside research, materials, supplies, licenses and fees as well as personnel costs (including salaries, benefits, and stock-based compensation). Research and development expense also includes certain overhead allocations consisting of support and facilities-related costs. Where we perform research and development activities under a clinical joint development collaboration, such as our collaboration with BMS, we record the expense reimbursement from our partners as a reduction to research and development expense, and we record our share of our partners' expenses as an increase to research and development expense.

Research and development expense increased for the year ended December 31, 2019 compared to the year ended December 31, 2018 primarily due to our clinical development program, including bempegaldesleukin, NKTR-358, NKTR-262 and NKTR-255. These increases were partially offset by a decrease in pre-commercial manufacturing and costs related to our NKTR-181 program. In addition, the increase in research and development expense for the year ended December 31, 2019 compared with the year ended December 31, 2018 includes increases in non-cash stock-based compensation and other personnel costs. During the years ended December 31, 2019 and 2018, we recorded net reductions to research and development expense for BMS' reimbursements of our costs of $105.4 million and $62.5 million, respectively. Under the BMS Collaboration Agreement, BMS generally bears 67.5% of development costs for bempegaldesleukin in combination with Opdivo® and 35% of costs for manufacturing bempegaldesleukin. Please see Note 10 to our Consolidated Financial Statements for additional information regarding our BMS Collaboration Agreement.

We utilize our employee and infrastructure resources across multiple development and research programs. The following table shows expenses incurred for clinical and regulatory services, clinical supplies, and preclinical study support provided by third parties as well as contract manufacturing costs for each of our drug candidates. The table also presents other costs and overhead consisting of personnel, facilities and other indirect costs (in thousands):

	Clinical Study Status(1)	Year Ended December 31,	
		2019	2018
Bempegaldesleukin (CD122-preferential IL-2 pathway agonist)(2)	Phase 1/2/3	$ 109,355	$ 98,024
NKTR-181 (orally-available mu-opioid analgesic molecule)(3)	Terminated	29,830	56,272
NKTR-358 (cytokine Treg stimulant)	Phase 1	27,319	17,002
ONZEALD™ (next-generation topoisomerase I inhibitor)	Terminated	12,733	9,205
NKTR-255 (IL-15 receptor agonist)	Phase 1	12,278	12,981
NKTR-262 (toll-like receptor agonist)	Phase 1	11,379	9,847
Other product candidates	Various	18,585	3,608
Total clinical development, contract manufacturing and other third party costs		221,479	206,939
Personnel, overhead and other costs(4)		141,719	130,837
Stock-based compensation and depreciation		71,368	61,760
Research and development expense		$ 434,566	$ 399,536

(1) Clinical Study Status definitions are provided in the chart found in Part I, Item 1. Business.

(2) Development expenses for bempegaldesleukin include expenses under the BMS Collaboration Agreement, other collaboration agreements and our own independent studies. The amounts for the years ended December 31, 2019 and 2018 include $70.5 million and $47.1 million, respectively, of development cost reimbursements from BMS under our collaboration, net of our share of BMS' costs.

(3) As described in Note 14 to our Consolidated Financial Statements, we withdrew our NDA for NKTR-181 and will make no further investment in the program. As a result, in the first quarter of 2020, we expect to incur charges of $45.0 million to $45.0 million, including noncash charges of $19.7 million for the impairment of advance payments to contract manufacturers for commercial batches of NKTR-181, as well as other charges, primarily for non-cancellable commitments to our contract manufacturers and certain severance costs.

(4) The amounts for the year ended December 31, 2019 and 2018 include $34.9 million and $15.6 million of employee cost reimbursements from BMS under our collaboration.

We expect research and development expense to increase for 2020 compared to 2019 primarily as a result of the development of bempegaldesleukin under the BMS Collaboration Agreement. In addition, we are collaborating with Lilly to develop NKTR-358, and Lilly will begin additional studies in 2020, for which we are responsible for 25% of costs. We are continuing to enroll patients in a dose-escalation Phase 1/2 study for NKTR-262 in combination with bempegaldesleukin. We will continue our Phase 1 dose-escalation studies for NKTR-255 in multiple myeloma and non-Hodgkin lymphoma. The timing and amount of our future clinical investments will vary significantly based upon our evaluation of ongoing clinical results and the structure, timing, and scope of potential collaboration partnerships (if any) for these programs. In addition, we expect non-cash stock-based compensation expense to increase in 2020.

In addition to our drug candidates that we plan to evaluate in clinical development during 2020 and beyond, we believe it is vitally important to continue our substantial investment in a pipeline of new drug candidates to continue to build the value of our drug candidate pipeline and our business. Our discovery research organization is identifying new drug candidates by applying our polymer conjugate technology platform to a wide range of molecule classes, including small molecules and large proteins, peptides and antibodies, across multiple therapeutic areas. We plan to continue to advance our most promising early research drug candidates into preclinical development with the objective to advance these early stage research programs to human clinical studies over the next several years.

Our expenditures on current and future preclinical and clinical development programs are subject to numerous uncertainties in timing and cost to completion. In order to advance our drug candidates through clinical development, each drug candidate must be tested in numerous preclinical safety, toxicology and efficacy studies. We then conduct clinical studies for our drug candidates that take several years to complete. The cost and time required to complete clinical trials may vary significantly over the life of a clinical development program as a result of a variety of factors, including but not limited to:

- the number of patients required for a given clinical study design;

- the length of time required to enroll clinical study participants;
- the number and location of sites included in the clinical studies;
- the clinical study designs required by the health authorities (i.e. primary and secondary endpoints as well as the size of the study population needed to demonstrate efficacy and safety outcomes);
- the potential for changing standards of care for the target patient population;
- the competition for patient recruitment from competitive drug candidates being studied in the same clinical setting;
- the costs of producing supplies of the drug candidates needed for clinical trials and regulatory submissions;
- the safety and efficacy profile of the drug candidate;
- the use of clinical research organizations to assist with the management of the trials; and
- the costs and timing of, and the ability to secure, approvals from government health authorities.

Furthermore, our strategy includes the potential of entering into collaborations with third parties to participate in the development and commercialization of some of our drug candidates such as those collaborations that we have already completed for bempegaldesleukin, NKTR-358 and MOVANTIK®. In certain situations, the clinical development program and process for a drug candidate and the estimated completion date will largely be under the control of that third party and not under our control. We cannot forecast with any degree of certainty which of our drug candidates will be subject to future collaborations or how such arrangements would affect our development plans or capital requirements.

The risks and uncertainties associated with our research and development projects are discussed more fully in Item 1A . Risk Factors. As a result of the uncertainties discussed above, we are unable to determine with any degree of certainty the duration and completion costs of our research and development projects, anticipated completion dates or when and to what extent we will receive cash inflows from a collaboration arrangement or the commercialization of a drug candidate.

General and administrative expense (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
General and administrative expense	$ 98,712	$ 81,443	$ 17,269	21%

General and administrative expense includes the cost of administrative staffing, business development, marketing, finance, and legal activities. General and administrative expense increased for the year ended December 31, 2019 compared with the year ended December 31, 2018 primarily due to increased commercialization readiness activities for NKTR-181 and non-cash stock based compensation expense, as well as other costs related to personnel, facilities and outside services. We expect general and administrative expense in 2020 to increase compared to 2019 primarily due to increased personnel costs as we begin a stage appropriate build of our commercial capability to launch and co-commercialize bempegaldesleukin with BMS as early as 2021.

Interest expense (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Interest expense	$ 21,310	$ 21,582	$ (272)	(1)%

Interest expense for the years ended December 31, 2019 and 2018 primarily consists of interest from our senior secured notes which, as further described in Note 5 to our Consolidated Financial Statements, were issued in October 2015 for $250.0 million in aggregate principal amount at a rate of 7.75% and which are due in October 2020. Interest on the 7.75% senior secured notes is calculated based on actual days outstanding over a 360 day year. Interest expense is consistent for the years ended December 31, 2019 and 2018.

We expect interest expense to decrease in 2020 compared to 2019 due to the repayment of our senior notes, which we expect to redeem in the second quarter of 2020.

Non-Cash Royalty Revenue and Non-Cash Interest Expense

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Non-cash royalty revenue related to sale of future royalties	$ 36,303	$ 33,308	$ 2,995	9%
Non-cash interest expense on liability related to sale of future royalties	25,044	21,196	3,848	18%

For a discussion of the sale of future royalties for CIMZIA® and MIRCERA®, see Note 7 to our Consolidated Financial Statements.

As discussed in Note 7, we continue to recognize non-cash royalty revenue, which increased for the year ended December 31, 2019 compared to the year ended December 31, 2018 due to increases in sales of CIMZIA® and MIRCERA®. Non-cash interest expense increased for the year ended December 31, 2019 compared the year ended December 31, 2018 due to an increase in the estimated implicit interest rate over the life of the transaction. When forecasted future revenues rise, this results in an increase to the estimated implicit interest rate over the life of the transaction, which, in turn, increases the prospective effective interest rate in the current and future periods.

We recognized non-cash interest expense at an effective rate of 21% for the first three quarters of 2018. We recognized non-cash interest expense at an effective rate to 29% from the fourth quarter of 2018 through the first three quarters of 2019, reflecting an increase in the estimated implicit interest rate over the life of the agreement from 17.6% to approximately 18.7% due to increases in the forecasted sales of MIRCERA®. During the fourth quarter of 2019, we recognized non-cash interest expense an effective rate to 38%, which we also expect to use during 2020, reflecting an increase in the estimated implicit interest rate over the life of the agreement from 18.7% to approximately 19.5% due to increases in the forecasted sales of CIMZIA® and MIRCERA®.

Over the term of this arrangement, the net proceeds of the transaction of $114.0 million, consisting of the original proceeds of $124.0 million, net of $10.0 million in payments from us to RPI, is amortized as the difference between the non-cash royalty revenue and the non-cash interest expense. To date, we have amortized $40.4 million of the net proceeds. We periodically assess future non-cash royalty revenues, and we may adjust the prospective effective interest rate based on our best estimates of future non-cash royalty revenue such that future non-cash interest expense will amortize the remaining $73.6 million of the net proceeds. There are a number of factors that could materially affect our estimated interest rate, in particular, the amount and timing of royalty payments from future net sales of CIMZIA® and MIRCERA®. As a result, future interest rates could differ significantly, and we will adjust any such change in our estimated interest rate prospectively.

We expect non-cash royalty revenues for 2020 to be consistent with 2019 , and we also expect non-cash interest expense for 2020 to increase compared to 2019 as a result of the increase in the effective interest rate during the fourth quarter of 2019 as noted above.

Interest Income and Other Income (Expense), net (in thousands, except percentages)

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Interest income and other income (expense), net	$ 46,335	$ 37,571	$ 8,764	23%

Interest income and other income (expense), net increased for the year ended December 31, 2019 compared to the year ended December 31, 2018, primarily due to increased interest income resulting from a higher interest rate on our investment balances and higher average investments balances due to the $1.85 billion received in April 2018 from BMS under the BMS

Collaboration Agreement and the Share Purchase Agreement. We expect that our interest income and other income (expense), net will decrease for 2020 compared to 2019 due to lower investments balances which have been utilized to fund our operations.

Income Tax Expense

	Year Ended December 31,		Increase/ (Decrease) 2019 vs. 2018	Percentage Increase/ (Decrease) 2019 vs. 2018
	2019	2018		
Provision for income taxes	$ 613	$ 1,412	$ (799)	(57)%

For the year ended December 31, 2019, our income tax expense primarily results from taxable income in our Nektar India subsidiary. For the year ended December 31, 2018, as a result of taxable income in the U.S. and India resulting primarily from income recognized from the upfront payment from BMS, we recorded a global income tax provision, resulting in an effective tax rate of approximately 0.2%. Our tax provision resulted from estimated tax liabilities in certain states where we do not have sufficient net operating losses to offset our estimated apportioned taxable income, as well taxable income from our Nektar India operations.

Our income tax expense in the U.S. for the year ended December 31, 2018 was based on certain assumptions and other estimates regarding the apportionment of taxable income and the states in which we have nexus in 2018. Our apportionment of taxable income includes estimates of the apportionment of the BMS upfront payment based on estimates of activities to be carried out under the collaboration agreement with BMS, as well as the apportionment of other sources of income. Our income tax expense reflects the release of the valuation allowance of net operating loss carryforwards and other tax credits to offset U.S. federal and state taxable income. Our remaining deferred tax assets continue to be fully reserved, as we believe it is not more likely than not that the benefit of such assets will be realized in the future.

Due to our expected net loss in 2020, we expect income tax expense to be consistent with 2019 and reflect taxable income for our Nektar India operations.

Liquidity and Capital Resources

We have financed our operations primarily through revenue from upfront and milestone payments under our strategic collaboration agreements, royalties and product sales, as well as public offering and private placements of debt and equity securities. At December 31, 2019, we had approximately $1.6 billion in cash and investments in marketable securities and had debt of $250.0 million in principal of senior secured notes due in October 2020.

We estimate that we have working capital to fund our current business plans through at least March 1, 2021. We expect the clinical development of our proprietary drug candidates including bempegaldesleukin, NKTR-358, NKTR-262 and NKTR-255 will continue to require significant investment to continue to advance in clinical development with the objective of entering into a collaboration partnership or obtaining regulatory approval. In the past, we have received a number of significant payments from collaboration agreements and other significant transactions. In April 2018, we received a total of $1.85 billion from BMS including a $1.0 billion upfront payment and an $850.0 million premium investment in our common stock. In July 2017, we entered into a collaboration agreement for NKTR-358 with Lilly, under which we received a $150.0 million upfront payment. In the future, we expect to receive substantial payments from our collaboration agreements with BMS and Lilly and other existing and future collaboration transactions if drug candidates in our pipeline achieve positive clinical or regulatory outcomes. In particular, under the BMS Collaboration Agreement, we are entitled to $1.455 billion of clinical, regulatory and commercial launch milestones, $650.0 million of which are associated with approval and launch of bempegaldesleukin in its first indication in the U.S., EU and Japan (subject to $100.0 million in creditable payments based on clinical milestones that could occur prior to the approval and launch of bempegaldesleukin). As a result, whether and when bempegaldesleukin is approved in any indication will have a significant impact on our future liquidity and capital resources. We have no credit facility or any other sources of committed capital.

Due to the potential for adverse developments in the credit markets, we may experience reduced liquidity with respect to some of our investments in marketable securities. These investments are generally held to maturity, which, in accordance with our investment policy, is less than two years. However, if the need arises to liquidate such securities before maturity, we may experience losses on liquidation. At December 31, 2019, the average time to maturity of the investments held in our portfolio was approximately [eight months]. To date we have not experienced any liquidity issues with respect to these

securities. We believe that, even allowing for potential liquidity issues with respect to these securities, our remaining cash and investments in marketable securities will be sufficient to meet our anticipated cash needs for at least the next twelve months.

Our current business plan is subject to significant uncertainties and risks as a result of, among other factors, clinical and regulatory outcomes for bempegaldesleukin, the sales levels of our products, if and when they are approved, the sales levels for those products for which we are entitled to royalties, clinical program outcomes, whether, when and on what terms we are able to enter into new collaboration transactions, expenses being higher than anticipated, unplanned expenses, cash receipts being lower than anticipated, and the need to satisfy contingent liabilities, including litigation matters and indemnification obligations.

The availability and terms of various financing alternatives, if required in the future, substantially depend on many factors including the success or failure of drug development programs in our pipeline. The availability and terms of financing alternatives and any future significant payments from existing or new collaborations depend on the positive outcome of ongoing or planned clinical studies, whether we or our partners are successful in obtaining regulatory authority approvals in major markets, and if approved, the commercial success of these drugs, as well as general capital market conditions. We may pursue various financing alternatives to fund the expansion of our business as appropriate.

Cash flows from operating activities

Cash flows used in operating activities for the year ended December 31, 2019 totaled $328.7 million, which includes $319.5 million of net operating cash uses and $19.2 million for interest payments on our senior secured notes, partially offset by a $10.0 milestone from our collaboration agreement with Baxalta.

Cash flows provided by operating activities for the year ended December 31, 2018 totaled $718.2 million, which includes $1,059.8 million of the payments received under the BMS Collaboration Agreement in April 2018 and a $10.0 million milestone payment from our collaboration agreement with Baxalta, partially offset by $332.1 million of net operating cash uses as well as $19.5 million for interest payments on our senior secured notes.

We expect that cash flows used in operating activities, excluding upfront, milestone and other contingent payments received, if any, will increase in 2020 compared to 2019 primarily as a result of increased research and development expenses.

Cash flows from investing activities

We paid $26.3 million and $14.2 million to purchase or construct property, plant and equipment in the years ended December 31, 2019 and 2018, respectively. The significant increase in capital expenditures for 2019 is primarily due to the construction of leasehold improvements at our new facility on Third Street as more fully described in Note 6 of our Consolidated Financial Statements. For 2018, we also received $2.6 million from the sale of property, plant and equipment, primarily from the sale of a former research facility in Huntsville, Alabama.

For the year ended December 31, 2018, we purchased $1.4 billion of investments in debt securities, net of maturities of investments, primarily as a result of the $1.85 billion received in April 2018 from BMS under the BMS Collaboration Agreement and the Share Purchase Agreement.

Cash flows from financing activities

As described in Note 10 to our Consolidated Financial Statements, we received $850.0 million for the issuance of our common stock to BMS under our Share Purchase Agreement in April 2018, of which we recorded $790.2 million in equity as a financing activity.

We received proceeds from issuance of common stock related to our employee option and stock purchase plans of $23.4 million and $61.7 million in the years ended December 31, 2019 and 2018, respectively.

During 2020, we expect to repay the $250.0 million in principal of our senior notes.

Contractual Obligations (in thousands)

	Payments Due by Period				
	Total	<=1 Yr 2020	2-3 Yrs 2021-2022	4-5 Yrs 2023-2024	2025+
Obligations[1]					
7.75% senior secured notes due October 2020, including interest [2]	$ 269,106	$ 269,106	$ —	$ —	$ —
Operating leases[3]	237,072	16,832	43,738	46,498	130,004
Purchase commitments[4]	25,819	25,819	—	—	—
	$ 531,997	$ 311,757	$ 43,738	$ 46,498	$ 130,004

(1) The above table does not include certain commitments and contingencies which are discussed in Note 8 to our Consolidated Financial Statements.
(2) The amount reflects the repayment of the principal and interest payments through the maturity of the Notes in October 2020. However, we expect to redeem the Notes in the second quarter of 2020 and therefore expect to pay interest only through the redemption date.
(3) These amounts primarily result from our Mission Bay Facility and Third Street Facility leases, which both expire in 2030. The leases are discussed in Note 6 to our Consolidated Financial Statements. Our commitment for the Third Street Facility lease includes certain fixed amounts payable that we have excluded from our lease commitment disclosed in Note 6 to our Consolidated Financial Statements.
(4) Substantially all of this amount was subject to open purchase orders as of December 31, 2019 that were issued under existing contracts. This amount does not represent minimum contract termination liabilities for our existing contracts.

Off Balance Sheet Arrangements

We do not utilize off-balance sheet financing arrangements as a source of liquidity or financing.

Critical Accounting Policies

The preparation and presentation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form our basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources, and evaluate our estimates on an ongoing basis. Actual results may differ materially from those estimates under different assumptions or conditions. We have determined that for the periods in this report, the following accounting policies and estimates are critical in understanding our financial condition and the results of our operations.

Collaborative Arrangements

When we enter into collaboration agreements with pharmaceutical and biotechnology partners, we assess whether the arrangements fall within the scope of Accounting Standards Codification (ASC) 808, *Collaborative Arrangements* (ASC 808) based on whether the arrangements involve joint operating activities and whether both parties have active participation in the arrangement and are exposed to significant risks and rewards. To the extent that the arrangement falls within the scope of ASC 808, we assess whether the payments between us and our collaboration partner fall within the scope of other accounting literature. If we conclude that payments from the collaboration partner to us represent consideration from a customer, such as license fees and contract research and development activities, we account for those payments within the scope of ASC 606, *Revenue from Contracts with Customers*. However, if we conclude that our collaboration partner is not a customer for certain activities and associated payments, such as for certain collaborative research, development, manufacturing and commercial activities, we record such payments as a reduction of research and development expense or general and administrative expense, based on where we record the underlying expense.

Revenue Recognition

We recognize license, collaboration and other research revenue based on the facts and circumstances of each contractual agreement and includes recognition of upfront fees and milestone payments. At the inception of each agreement, we determine which promises represent distinct performance obligations, for which management must use significant judgment. Additionally, at inception and at each reporting date thereafter, we must determine and update, as appropriate, the transaction price, which includes variable consideration such as development milestones. We must use judgment to determine when to include variable consideration in the transaction price such that inclusion of such variable consideration will not result in a significant reversal of revenue recognized when the contingency surrounding the variable consideration is resolved. We must also allocate the arrangement consideration to performance obligations based on their relative standalone selling prices, which we generally base on our best estimates and which require significant judgment. For example, in estimating the standalone selling prices for granting licenses for our drug candidate, our estimates may include revenue forecasts, clinical development timelines and costs, discount rates and probabilities of clinical and regulatory success. For performance obligations satisfied over time, we recognize revenue based on our estimates of expected future costs or other measures of progress.

Accrued Clinical Trial Expenses

We record an accrued expense for the estimated unbilled costs of our clinical study activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients and completion of certain clinical trial activities. We generally accrue costs associated with the start-up and reporting phases of the clinical trials ratably over the estimated duration of the start-up and reporting phases. We generally accrue costs associated with the treatment phase of clinical trials based on the estimated activities performed by our third parties. We may also accrue expenses based on the total estimated cost of the treatment phase on a per patient basis and expense the per patient cost ratably over the estimated patient treatment period based on patient enrollment in the trials. In specific circumstances, such as for certain time-based costs, we recognize clinical trial expenses using a methodology that we consider to be more reflective of the timing of costs incurred.

Advance payments for goods or services that will be used or rendered for future research and development activities are capitalized as prepaid expenses and recognized as expense as the related goods are delivered or the related services are performed. We base our estimates on the best information available at the time. However, additional information may become available to us which may allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. Such increases or decreases in cost are generally considered to be changes in estimates and will be reflected in research and development expenses in the period identified.

Accrued Contract Manufacturing Expenses

We record accruals for the estimated unbilled costs of our contract manufacturing activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts include upfront payments and milestone payments, which depend on factors such as the achievement of the completion of certain stages of the manufacturing process. For purposes of recognizing expense, we assess whether we consider the production process sufficiently defined to be considered the delivery of a good, as evidenced by predictive or contractually required yields, or the delivery of a service, where processes and yields are developing and less certain. If we consider the process to be the delivery of a good, we recognize expense when the drug product is delivered, or we otherwise bear risk of loss. If we consider the process to be the delivery of a service, we recognize expense based on our best estimates of the contract manufacturer's progress towards completion of the stages in the contract. We base our estimates on the best information available at the time. However, additional information may become available to us which may allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. In certain circumstances, we may be entitled to reductions of amounts due under these arrangements if delivery is delayed or the yield from the production process is lower than expected. Given the uncertainties with such reductions, we may only recognize such decrease when the contract manufacturer agrees with such reduction. Such increases or decreases in cost are generally considered to be changes in estimates and will be reflected in research and development expenses in the period identified.

Recent Accounting Pronouncements

In November 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2018-18: Clarifying the Interaction between Topic 808 and Topic 606 (ASU 2018-18). The guidance clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASC 606 when the collaborative

arrangement participant is a customer for a promised good or service that is distinct within the collaborative arrangement. The guidance also precludes entities from presenting amounts related to transactions with a collaborative arrangement participant that is not a customer as revenue, unless those transactions are directly related to third-party sales. ASU 2018-18 is effective in the first quarter of 2020 and should be applied retrospectively to January 1, 2018, when we adopted ASC 606. Early adoption is permitted. We are evaluating the effect of adoption, but we do not expect a material effect on our revenue.

In June 2016, the FASB issued ASU 2016-13: Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The guidance modifies the measurement and recognition of credit losses for most financial assets and certain other instruments. The amendment updates the guidance for measuring and recording credit losses on financial assets measured at amortized cost by replacing the “incurred loss” model with an “expected loss” model. Accordingly, we will present these financial assets at the net amount we expect to collect. The amendment also requires that we record credit losses related to available-for-sale debt securities as an allowance through net income rather than reducing the carrying amount under the current, other-than-temporary-impairment model. ASU 2016-13 is effective in the first quarter of 2020. Early adoption is permitted. We do not expect that adoption will have a material effect on our Consolidated Financial Statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate and Market Risk

The primary objective of our investment activities is to preserve principal while at the same time maximizing yields without significantly increasing risk. To achieve this objective, we invest in liquid, high quality debt securities. Our investments in debt securities are subject to interest rate risk. To minimize the exposure due to an adverse shift in interest rates, we invest in securities with maturities of two years or less and maintain a weighted average maturity of one year or less.

A hypothetical 50 basis point increase in interest rates would result in an approximate $4.3 million decrease, less than 1%, in the fair value of our available-for-sale securities at December 31, 2019. This potential change is based on sensitivity analyses performed on our investment securities at December 31, 2019. Actual results may differ materially. The same hypothetical 50 basis point increase in interest rates would have resulted in an approximate $6.7 million decrease, less than 1%, in the fair value of our available-for-sale securities at December 31, 2018.

As of December 31, 2019, we held $1.5 billion of available-for-sale investments, excluding money market funds, with an average time to maturity of seven months. To date we have not experienced any liquidity issues with respect to these securities, but should such issues arise, we may be required to hold some, or all, of these securities until maturity. We believe that, even allowing for potential liquidity issues with respect to these securities, our remaining cash, cash equivalents, and investments in marketable securities will be sufficient to meet our anticipated cash needs for at least the next twelve months. Based on our available cash and our expected operating cash requirements, we currently do not intend to sell these securities prior to maturity and it is more likely than not that we will not be required to sell these securities before we recover the amortized cost basis. Accordingly, we believe there are no other-than-temporary impairments on these securities and have not recorded any provisions for impairment.

Foreign Currency Risk

The majority of our revenue, expense, and capital purchasing activities are transacted in U.S. dollars. However, we have contracts with contract manufacturing organizations in Europe, transacted in the British pound sterling or Euros. Additionally, a portion of our operations consists of research and development activities outside the United States, with transactions in the Indian Rupee. Finally, although our payments from our collaboration partners for our royalty revenues are in U.S. dollars, a portion of the payment is based on net sales in foreign currency translated into U.S. dollars for such period. Accordingly, we are subject to foreign currency exchange risk for these transactions.

Our international operations are subject to risks typical of international operations, including, but not limited to, differing economic conditions, changes in political climate, differing tax structures, other regulations and restrictions, and foreign exchange rate volatility. We do not utilize derivative financial instruments to manage our exchange rate risks. We do not believe that inflation has had a material adverse impact on our revenues or operations in any of the past three years.

Item 8. Financial Statements and Supplementary Data

NEKTAR THERAPEUTICS
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Nektar Therapeutics

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Nektar Therapeutics (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 27, 2020 expressed an unqualified opinion thereon.

Adoption of ASU No. 2014-09

As discussed in Note 1 to the consolidated financial statements, the Company changed its method for recognizing revenue as a result of the adoption of Accounting Standards Updated (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), using the modified retrospective method effective January 1, 2018.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. 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 audits 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 financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Accounting for accrued research and development expenses

Description of the Matter

As more fully described in Note 1 to the consolidated financial statements, the Company records expenses and accruals for estimated costs of research and development activities, including third party contract services costs for clinical research and contract manufacturing. Clinical trial and contract manufacturing activities performed by third parties are expensed based upon estimates of work completed in accordance with agreements with the respective Clinical Research Organization ("CRO") or Contract Manufacturing Organization ("CMO"). Billing terms and payments are reviewed by management to ensure estimates of outstanding obligations are appropriate as of period end. Tracking the progress of completion for clinical trial and contract manufacturing activities performed by third parties allows the Company to record the appropriate expense and accruals under the terms of the agreements. During 2019, the Company incurred $434.6 million of research and development expenses. The Company recorded an accrued liability of $32.6 million and $7.3 million for clinical trial and contract manufacturing expenses, respectively, as of December 31, 2019.

Auditing the accounting for accrued clinical trial and contract manufacturing expenses is complex because of the high volume of data used in management's estimates, the assumptions used by management to develop their estimates and verifying the cost and extent of unbilled work performed during the reporting period.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the accounting for accrued research and development expenses, including the Company's assessment and estimation of accrued costs for clinical trial and contract manufacturing activities performed by third parties. This assessment was done with the Company's financial and operational personnel to determine the appropriate project status and estimated accrual of costs.

To test the Company's accounting for accrued clinical trial and contract manufacturing expenses, our audit procedures included, among others, obtaining supporting evidence from third parties of the research and development activities performed for significant clinical trials and contract manufacturing services. We agreed, on a sample basis, the Company schedules to key milestones and completion terms, activities, timing, and costs to signed CMO and CRO contracts in order to evaluate the status of completion and accuracy of invoices received from the vendors. We met with clinical and manufacturing personnel to understand the status of significant research and development activities. We also tested a sample of subsequent payments by agreeing the invoice to the original accrual and the invoice payments to bank statements.

Accounting for cost-sharing under the Bristol-Myers Squibb (BMS) Collaboration Agreement

Description of the Matter

The Company and Bristol-Myers Squibb Company (BMS) both conduct research and development activities under a Strategic Collaboration Agreement for bempegaldesleukin (NKTR-214). As more fully explained in note 10 to the consolidated financial statements, the Company and BMS share certain internal and external development costs under the collaboration agreement. The Company's research and development costs include external actual and estimated Clinical Research Organizations ("CRO") and Contract Manufacturing Organization ("CMO") costs in addition to internal employee costs. BMS provides reports to support their research and development activities performed and costs incurred in the relevant period under the terms of the agreement. Estimates included in each party's research and development costs are trued up to actuals by each party when known. Eligible costs incurred by each party during the reporting period are offset and the net amount is owed to the party with the excess costs. The Company has a net receivable of $24.0 million from BMS under the collaboration as of December 31, 2019. During a reporting period in which there is a net receivable to the Company, the net amount of BMS' reimbursement of collaboration expense is recorded as a reduction of research and development expense.

Auditing the cost-sharing under the collaboration agreement was especially challenging because of the complexity of the data used by the Company for determining the actual and estimated research and development activities that are eligible for reimbursement under the collaboration agreement. The research and development expenses include management's judgment regarding the estimated third party contract service costs for clinical research and contract manufacturing incurred during the reporting period. Additionally, the Company evaluates the costs incurred and activities performed by BMS to assess their eligibility for reimbursement under the agreement.

How We Addressed the Matter in Our Audit

We evaluated the design and tested the operating effectiveness of controls over the accounting for the cost-sharing conducted under the collaboration agreement, including the Company's assessment and measurement of its and BMS's activities performed and costs incurred that are eligible for reimbursement. This includes conducting meetings with program management, clinical operations and manufacturing personnel to determine the progress to date under the collaboration and substantiating the calculation of eligible costs and activities.

Our audit procedures included, among others, testing the eligibility of the Company's research and development costs against the terms of the agreement. We met with Company personnel and reviewed meeting minutes to understand discussions held with BMS during various committee meetings to corroborate our knowledge of the collaboration activities that have occurred to date. We tested the activities reported by the Company and BMS for appropriate classification and disclosure under the collaboration agreement. We obtained an external confirmation from BMS for the net amount owed to the Company.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1993.

Redwood City, California
February 27, 2020

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Nektar Therapeutics

Opinion on Internal Control over Financial Reporting

We have audited Nektar Therapeutics' internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Nektar Therapeutics (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated February 27, 2020 expressed an unqualified opinion thereon.

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 Annual 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 included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and 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/ Ernst & Young LLP

Redwood City, California
February 27, 2020

NEKTAR THERAPEUTICS
CONSOLIDATED BALANCE SHEETS
(In thousands, except par value information)

	December 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 96,363	$ 194,905
Short-term investments	1,228,499	1,140,445
Accounts receivable	36,802	43,213
Inventory	12,665	11,381
Advance payments to contract manufacturers	31,834	26,450
Other current assets	15,387	21,293
Total current assets	1,421,550	1,437,687
Long-term investments	279,119	582,889
Property, plant and equipment, net	64,999	48,851
Operating lease right-of-use assets	134,177	—
Goodwill	76,501	76,501
Other assets	1,010	4,244
Total assets	$ 1,977,356	$ 2,150,172
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 19,234	$ 5,854
Accrued compensation	11,467	9,937
Accrued clinical trial expenses	32,626	14,700
Accrued contract manufacturing expenses	7,304	23,841
Other accrued expenses	11,414	9,087
Senior secured notes, net	248,693	—
Interest payable	4,198	4,198
Lease liability, current portion	12,516	—
Deferred revenue, current portion	5,517	13,892
Other current liabilities	924	493
Total current liabilities	353,893	82,002
Senior secured notes, net	—	246,950
Lease liability, less current portion	142,730	—
Liability related to the sale of future royalties, net	72,020	82,911
Deferred revenue, less current portion	2,554	10,744
Other long-term liabilities	768	9,990
Total liabilities	571,965	432,597
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000 shares authorized; no shares designated, issued or outstanding at December 31, 2019 or 2018	—	—
Common stock, $0.0001 par value; 300,000 shares authorized; 176,505 shares and 173,530 shares issued and outstanding at December 31, 2019 and 2018, respectively	17	17
Capital in excess of par value	3,271,097	3,147,925
Accumulated other comprehensive loss	(1,005)	(6,316)
Accumulated deficit	(1,864,718)	(1,424,051)
Total stockholders' equity	1,405,391	1,717,575
Total liabilities and stockholders' equity	$ 1,977,356	$ 2,150,172

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

NEKTAR THERAPEUTICS
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share information)

	Year Ended December 31,		
	2019	2018	2017
Revenue:			
Product sales	$ 20,117	$ 20,774	$ 32,688
Royalty revenue	41,222	41,976	33,527
Non-cash royalty revenue related to sale of future royalties	36,303	33,308	30,531
License, collaboration and other revenue	16,975	1,097,265	210,965
Total revenue	114,617	1,193,323	307,711
Operating costs and expenses:			
Cost of goods sold	21,374	24,412	30,547
Research and development	434,566	399,536	268,461
General and administrative	98,712	81,443	52,364
Impairment of equipment and other costs for terminated program	—	—	15,981
Total operating costs and expenses	554,652	505,391	367,353
Income (loss) from operations	(440,035)	687,932	(59,642)
Non-operating income (expense):			
Interest expense	(21,310)	(21,582)	(22,085)
Non-cash interest expense on liability related to sale of future royalties	(25,044)	(21,196)	(18,869)
Interest income and other income (expense), net	46,335	37,571	4,520
Total non-operating expense, net	(19)	(5,207)	(36,434)
Income (loss) before provision for income taxes	(440,054)	682,725	(96,076)
Provision for income taxes	613	1,412	616
Net income (loss)	$ (440,667)	$ 681,313	$ (96,692)
Net income (loss) per share			
Basic	$ (2.52)	$ 4.02	$ (0.62)
Diluted	$ (2.52)	$ 3.78	$ (0.62)
Weighted average shares outstanding used in computing net income (loss) per share			
Basic	174,993	169,600	155,953
Diluted	174,993	180,119	155,953

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

NEKTAR THERAPEUTICS
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Net income (loss)	$ (440,667)	$ 681,313	$ (96,692)
Other comprehensive income (loss):			
Net unrealized gain (loss) on available-for-sale investments	5,693	(2,975)	(533)
Net foreign currency translation gain (loss)	(382)	(1,230)	785
Other comprehensive income (loss)	5,311	(4,205)	252
Comprehensive income (loss)	$ (435,356)	$ 677,108	$ (96,440)

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

NEKTAR THERAPEUTICS
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Shares	Par Value	Capital in Excess of Par Value	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2016	153,212	$ 15	$ 2,111,483	$ (2,363)	$ (2,021,010)	$ 88,125
Shares issued under equity compensation plans	6,312	—	59,528	—	—	59,528
Stock-based compensation	—	—	36,615	—	—	36,615
Other comprehensive income	—	—	239	252	(239)	252
Net loss	—	—	—	—	(96,692)	(96,692)
Balance at December 31, 2017	159,524	15	2,207,865	(2,111)	(2,117,941)	87,828
Shares issued under equity compensation plans	5,721	1	61,728	—	—	61,729
Stock-based compensation	—	—	88,101	—	—	88,101
Sale of stock to Bristol-Myers Squibb (Note 10)	8,285	1	790,231	—	—	790,232
Adoption of new accounting standards	—	—	—	—	12,577	12,577
Other comprehensive loss	—	—	—	(4,205)	—	(4,205)
Net income	—	—	—	—	681,313	681,313
Balance at December 31, 2018	173,530	17	3,147,925	(6,316)	(1,424,051)	1,717,575
Shares issued under equity compensation plans	2,975	—	23,377	—	—	23,377
Stock-based compensation	—	—	99,795	—	—	99,795
Other comprehensive income	—	—	—	5,311	—	5,311
Net loss	—	—	—	—	(440,667)	(440,667)
Balance at December 31, 2019	176,505	$ 17	$ 3,271,097	$ (1,005)	$ (1,864,718)	$ 1,405,391

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

NEKTAR THERAPEUTICS
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2019	**2018**	**2017**
Cash flows from operating activities:			
Net income (loss)	$ (440,667)	$ 681,313	$ (96,692)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Non-cash royalty revenue related to sale of future royalties	(36,303)	(33,308)	(30,531)
Non-cash interest expense on liability related to sale of future royalties	25,044	21,196	18,869
Stock-based compensation	99,795	88,101	36,615
Depreciation and amortization	13,156	10,870	14,741
Impairment of equipment from terminated program	—	—	15,081
Accretion of discounts, net, and other non-cash transactions	(11,394)	(10,952)	(881)
Changes in operating assets and liabilities:			
Accounts receivable	6,411	(25,505)	10,664
Inventory	(1,284)	(655)	383
Operating lease right-of-use assets, net of operating lease liabilities	13,090	—	—
Other assets	1,190	(31,652)	(4,800)
Accounts payable	12,967	971	2,074
Accrued compensation	1,530	1,674	(10,017)
Other accrued expenses	3,816	27,947	7,277
Deferred revenue	(16,565)	(15,331)	(28,269)
Other liabilities	533	3,545	(14,928)
Net cash provided by (used in) operating activities	(328,681)	718,214	(80,414)
Cash flows from investing activities:			
Purchases of investments	(1,380,865)	(2,271,250)	(404,425)
Maturities of investments	1,614,036	890,957	347,743
Sales of investments	—	11,963	37,549
Purchases of property, plant and equipment	(26,285)	(14,239)	(9,676)
Sales of property and plant	—	2,633	—
Net cash provided by (used in) investing activities	206,886	(1,379,936)	(28,809)
Cash flows from financing activities:			
Issuance of common stock to Bristol-Myers Squibb (Note 10)	—	790,231	—
Proceeds from shares issued under equity compensation plans	23,355	61,735	59,522
Payment of capital lease obligations	—	—	(5,131)
Net cash provided by financing activities	23,355	851,966	54,391
Effect of exchange rates on cash and cash equivalents	(102)	(101)	(46)
Net increase (decrease) in cash and cash equivalents	(98,542)	190,143	(54,878)
Cash and cash equivalents at beginning of year	$ 194,905	$ 4,762	$ 59,640
Cash and cash equivalents at end of year	$ 96,363	$ 194,905	$ 4,762
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 19,199	$ 19,471	$ 20,116
Cash paid for income taxes	$ 555	$ 618	$ 556
Right-of-use assets recognized in exchange for operating lease liabilities	$ 57,691	$ —	$ —

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

NEKTAR THERAPEUTICS

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2019

Note 1 — Organization and Summary of Significant Accounting Policies

Organization

We are a research-based biopharmaceutical company headquartered in San Francisco, California and incorporated in Delaware. We are developing a pipeline of drug candidates that utilize our advanced polymer conjugate technology platforms, which are designed to enable the development of new molecular entities that target known mechanisms of action. Our research and development pipeline of new investigational drugs includes treatments for cancer and autoimmune disease.

Our research and development activities have required significant ongoing investment to date and are expected to continue to require significant investment. As a result, with the exception of the income resulting from the upfront payment in April 2018 from our collaboration agreement with Bristol-Myers Squibb Company (BMS), we expect to continue to incur substantial losses and negative cash flows from operations in the future. We have financed our operations primarily through cash generated from licensing, collaboration and manufacturing agreements and financing transactions. At December 31, 2019, we had approximately $1.6 billion in cash and investments in marketable securities and had debt of $250.0 million in principal of senior secured notes due in October 2020.

Basis of Presentation, Principles of Consolidation and Use of Estimates

Our Consolidated Financial Statements include the financial position, results of operations and cash flows of our wholly-owned subsidiaries: Inheris Biopharma, Inc. (Inheris), Nektar Therapeutics (India) Private Limited and Nektar Therapeutics UK Limited. We have eliminated all intercompany accounts and transactions in consolidation.

Our Consolidated Financial Statements are denominated in U.S. dollars. Accordingly, changes in exchange rates between the applicable foreign currency and the U.S. dollar will affect the translation of each foreign subsidiary's financial results into U.S. dollars for purposes of reporting our consolidated financial results. We include translation gains and losses in accumulated other comprehensive loss in the stockholders' equity section of our Consolidated Balance Sheets. To date, such cumulative currency translation adjustments have not been significant to our consolidated financial position.

Our comprehensive income (loss) consists of our net income (loss) plus our foreign currency translation gains and losses and unrealized holding gains and losses on available-for-sale securities, neither of which were significant during the years ended December 31, 2019, 2018, and 2017. In addition, there were no significant reclassifications out of accumulated other comprehensive loss to the statements of operations during the years ended December 31, 2019, 2018 and 2017.

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Accounting estimates and assumptions are inherently uncertain. Actual results could differ materially from those estimates and assumptions. Our estimates include those related to the selling prices of performance obligations and amounts of variable consideration in collaboration agreements, royalty revenue, and other assumptions required for revenue recognition as described further below; the net realizable value of inventory; the impairment of investments, goodwill and long-lived assets; contingencies, accrued clinical trial, contract manufacturing and other expenses; non-cash royalty revenue and non-cash interest expense from our liability related to our sale of future royalties; assumptions used in stock-based compensation; and ongoing litigation, among other estimates. We base our estimates on historical experience and on other assumptions that management believes are reasonable under the circumstances. These estimates form the basis for making judgments about the carrying values of assets and liabilities when these values are not readily apparent from other sources. As appropriate, we assess estimates each period, update them to reflect current information, and will generally reflect any changes in estimates in the period first identified.

Cash, Cash Equivalents, and Investments, and Fair Value of Financial Instruments

We consider all investments in marketable securities with an original maturity of three months or less when purchased to be cash equivalents. We classify investments in securities with remaining maturities of less than one year, or where our intent is to use the investments to fund current operations or to make them available for current operations, as short-term investments. We classify investments in securities with remaining maturities of over one year as long-term investments.

Investments are designated as available-for-sale and are carried at fair value, with unrealized gains and losses reported in stockholders' equity as accumulated other comprehensive income (loss). The disclosed fair value related to our cash equivalents and investments is based on market prices from a variety of industry standard data providers and generally represent quoted prices for similar assets in active markets or have been derived from observable market data.

We include coupon interest on securities classified as available-for-sale, as well as amortization of premiums and accretion of discounts to maturity, in interest income. We include realized gains and losses and declines in value of available-for-sale securities judged to be other-than-temporary, if any, in other income (expense). The cost of securities sold is based on the specific identification method.

Our cash, cash equivalents, short-term investments and long-term investments are exposed to credit risk in the event of default by the third parties that hold or issue such assets. Our cash, cash equivalents, short-term investments and long-term investments are held by financial institutions that management believes are of high credit quality. Our investment policy limits investments to fixed income securities denominated and payable in U.S. dollars such as corporate bonds, corporate commercial paper, U.S. government obligations, and money market funds and places restrictions on maturities and concentrations by type and issuer.

Accounts Receivable and Significant Customer Concentrations

Our customers are primarily pharmaceutical and biotechnology companies that are primarily located in the U.S. and Europe and with whom we have multi-year arrangements. Our accounts receivable balance contains billed and unbilled trade receivables from product sales, milestones, other contingent payments and royalties, and cost-sharing billings from collaborative research and development agreements. For the year ended December 31, 2019, our accounts receivable included $12.8 million under customer contracts from our collaboration partners and $24.0 million for unbilled net expense reimbursements from our collaboration partner Bristol-Myers Squibb Company (BMS). For the year ended December 31, 2018, our accounts receivable included $24.2 million from customer contracts and $19.0 million for unbilled net expense reimbursements from BMS. We generally do not require collateral from our partners. We perform a regular review of our partners' credit risk and payment histories, including payments made subsequent to year-end. When appropriate, we provide for an allowance for doubtful accounts by reserving for specifically identified doubtful accounts, although historically we have not experienced credit losses from our accounts receivable. At December 31, 2019, three partners represented 65%, 17% and 14%, respectively, of our accounts receivable. At December 31, 2018, three different partners represented 44%, 36% and 12%, respectively, of our accounts receivable.

Inventory and Significant Supplier Concentrations

We generally manufacture inventory upon receipt of firm purchase orders from our collaboration partners, and we may manufacture certain intermediate work-in-process materials and purchase raw materials based on purchase forecasts from our collaboration partners. Inventory includes direct materials, direct labor, and manufacturing overhead, and we determine cost on a first-in, first-out basis for raw materials and on a specific identification basis for work-in-process and finished goods. We value inventory at the lower of cost or net realizable value, and we write down defective or excess inventory to net realizable value based on historical experience or projected usage. We expense inventory related to our research and development activities when we purchase or manufacture it. Before the regulatory approval of our drug candidates, we recognize research and development expense for the manufacture of drug products that could potentially be available to support the commercial launch of our drug candidates, if approved.

We are dependent on our suppliers and contract manufacturers to provide raw materials and drug candidates of appropriate quality and reliability and to meet applicable contract and regulatory requirements. In certain cases, we rely on single sources of supply of one or more critical materials. Consequently, if supplies are delayed or interrupted for any reason, our ability to develop and produce our drug candidates or our ability to meet our supply obligations could be significantly impaired, which could have a material adverse effect on our business, financial condition and results of operations.

Leases

On January 1, 2019, we adopted Accounting Standards Codification (ASC) 842, *Leases* (ASC 842). ASC 842 supersedes the guidance in ASC 840, *Leases* (ASC 840). Under ASC 842, an entity recognizes a right-of-use asset and a corresponding lease liability, measured as the present value of the lease payments. In our adoption, we used the package of practical expedients, which, among other things, allowed us to carry forward our historical lease classification of those leases in effect as of January 1, 2019. We present results for the year ended December 31, 2019 under ASC 842. We have not restated the

results for the years ended December 31, 2018 and 2017 and our financial position as of December 31, 2018, and continue to report them under ASC 840.

We determine if an arrangement contains a lease at the inception of the arrangement. Right-of-use assets represent our right to use an underlying asset for the lease term, and lease liabilities represent our obligation to make lease payments arising from the lease. We recognize operating lease right-of-use assets and liabilities at the lease commencement date based on the present value of lease payments over the expected lease term. In determining the present value of lease payments, we use our incremental borrowing rate based on the information available at the lease commencement date. However, in determining the present value of our lease payments for leases in effect when we adopted ASC 842, we used our incremental borrowing rate as of January 1, 2019.

We elected the practical expedient to account for the lease and non-lease components, such as common area maintenance charges, as a single lease component for our facilities leases, and elected the short-term lease recognition exemption for our short-term leases, which allows us not to recognize lease liabilities and right-of-use assets for leases with an original term of twelve months or less.

Our expected lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise any such options. We recognize lease expense for our operating leases on a straight-line basis over the expected lease term.

We have elected to recognize lease incentives, such as tenant improvement allowances, at the lease commencement date as a reduction of the right-of-use asset and lease liability until paid to us by the lessor to the extent that the lease provides a specified fixed or maximum level of reimbursement and we are reasonably certain to incur reimbursable costs at least equaling such amounts. For leases in effect as of January 1, 2019, we recognized our lease incentives as part of our transition adjustment.

As a result of our adoption of ASC 842, we recorded right-of-use assets of $83.5 million and lease liabilities of $96.2 million for our facilities operating leases, with no effect on our opening balance of accumulated deficit. Please see Note 6 for additional information regarding our leases.

Long-Lived Assets

We state property, plant and equipment at cost, net of accumulated depreciation. We capitalize major improvements and expense maintenance and repairs as incurred. We generally recognize depreciation on a straight-line basis. We depreciate manufacturing, laboratory and other equipment over their estimated useful lives of generally three to ten years, depreciate buildings over the estimated useful life of generally twenty years and amortize leasehold improvements over the shorter of the estimated useful lives or the remaining term of the related lease.

Goodwill represents the excess of the price paid for another entity over the fair value of the assets acquired and liabilities assumed in a business combination. We are organized in one reporting unit and evaluate the goodwill for the Company as a whole. Goodwill has an indefinite useful life and is not amortized, but instead tested for impairment at least annually in the fourth quarter of each year using an October 1 measurement date.

We assess the impairment of long-lived assets whenever events or changes in business circumstances indicate that the carrying amounts of the assets may not be fully recoverable. In the case of property, plant and equipment and right-of-use assets for our leases, we determine whether there has been an impairment by comparing the carrying value of the asset to the anticipated undiscounted net cash flows associated with the asset. If such cash flows are less than the carrying value, we write down the asset to its fair value, which may be measured as anticipated discounted net cash flows associated with the asset. In the case of goodwill impairment, we compare the carrying value of the reporting unit to its fair value, which we generally measure using market capitalization for our single reporting unit. If an impairment exists, we write down goodwill such that the carrying value of the reporting units equals its fair value.

Collaborative Arrangements

We enter into collaboration arrangements with pharmaceutical and biotechnology collaboration partners, under which we may grant licenses to our collaboration partners to further develop and commercialize one of our proprietary drug candidates, either alone or in combination with the collaboration partners' compounds, or grant licenses to partners to use our technology to research and develop their own proprietary drug candidates. We may also perform research, development, manufacturing and supply activities under our collaboration agreements. Consideration under these contracts may include an upfront payment, development and regulatory milestones and other contingent payments, expense reimbursements, royalties

based on net sales of approved drugs, and commercial sales milestone payments. Additionally, these contracts may provide options for the customer to purchase our proprietary PEGylation materials, drug candidates or additional contract research and development services under separate contracts.

When we enter into collaboration agreements, we assess whether the arrangements fall within the scope of ASC 808, *Collaborative Arrangements* (ASC 808) based on whether the arrangements involve joint operating activities and whether both parties have active participation in the arrangement and are exposed to significant risks and rewards. To the extent that the arrangement falls within the scope of ASC 808, we assess whether the payments between us and our collaboration partner fall within the scope of other accounting literature. If we conclude that payments from the collaboration partner to us represent consideration from a customer, such as license fees and contract research and development activities, we account for those payments within the scope of ASC 606, *Revenue from Contracts with Customers* (ASC 606). However, if we conclude that our collaboration partner is not a customer for certain activities and associated payments, such as for certain collaborative research, development, manufacturing and commercial activities, we present such payments as a reduction of research and development expense or general and administrative expense, based on where we present the underlying expense. Additionally, if we reimburse our collaboration partners for these activities, we present such reimbursements as research and development expense or general and administrative expense, depending upon the nature of the underlying expense.

Revenue Recognition

For elements of those arrangements that we determine should be accounted for under ASC 606, we assess which activities in our collaboration agreements are performance obligations that should be accounted for separately and determine the transaction price of the arrangement, which includes the assessment of the probability of achievement of future milestones and other potential consideration. For arrangements that include multiple performance obligations, such as granting a license or performing contract research and development activities or participation on joint steering or other committees, we allocate upfront and milestone payments under a relative standalone selling price method. Accordingly, we develop assumptions that require judgment to determine the standalone selling price for each performance obligation identified in the contract. These key assumptions may include revenue forecasts, clinical development timelines and costs, discount rates and probabilities of clinical and regulatory success.

Product sales

Product sales are primarily derived from manufacturing and supply agreements with our customers. We have assessed our current manufacturing and supply arrangements and have generally determined that they provide the customer an option to purchase our proprietary PEGylation materials. Accordingly, we treat each purchase order as a discrete exercise of the customer's option (i.e. a separate contract) rather than as a component of the overall arrangement. The pricing for the manufacturing and supply is generally at a fixed price and may be subject to annual producer price index (PPI) adjustments. We invoice and recognize product sales when title and risk of loss pass to the customer, which generally occurs upon shipment. Customer payments are generally due 30 days from receipt of invoice. We test our products for adherence to technical specifications prior to shipment; accordingly, we have not experienced any significant returns from our customers.

Royalty revenue

Generally, we are entitled to royalties from our collaboration partners based on the net sales of their approved drugs that are marketed and sold in one or more countries where we hold royalty rights. For arrangements that include sales-based royalties, including commercial milestone payments based on the level of sales, we have concluded that the license is the predominant item to which the royalties relate. Accordingly, we recognize royalty revenue, including for our non-cash royalties, when the underlying sales occur based on our best estimates of sales of the drugs. Our partners generally pay royalties or commercial milestones after the end of the calendar quarter in accordance with contractual terms. We present commercial milestone payments within license, collaboration and other revenue.

License, collaboration and other revenue

License Grants: For collaboration arrangements that include a grant of a license to our intellectual property, we consider whether the license grant is distinct from the other performance obligations included in the arrangement. Generally, we would conclude that the license is distinct if the customer is able to benefit from the license with the resources available to it. For licenses that are distinct, we recognize revenues from nonrefundable, upfront payments and other consideration allocated to the license when the license term has begun and we have provided all necessary information regarding the underlying intellectual property to the customer, which generally occurs at or near the inception of the arrangement.

Milestone Payments: At the inception of the arrangement and at each reporting date thereafter, we assess whether we should include any milestone payments or other forms of variable consideration in the transaction price, based on whether a significant reversal of revenue previously recognized is not probable upon resolution of the uncertainty. Since milestone payments may become payable to us upon the initiation of a clinical study or filing for or receipt of regulatory approval, we review the relevant facts and circumstances to determine when we should update the transaction price, which may occur before the triggering event. When we do update the transaction price for milestone payments, we allocate it on a relative standalone selling price basis and record revenue on a cumulative catch-up basis, which results in recognizing revenue for previously satisfied performance obligations in such period. Our partners generally pay development milestones after achievement of the triggering event.

Research and Development Services: For amounts allocated to our research and development obligations in a collaboration arrangement, we recognize revenue over time using a proportional performance model, representing the transfer of goods or services as we perform activities over the term of the agreement.

Shipping and Handling Costs

We recognize costs related to shipping and handling of product to customers in cost of goods sold.

Research and Development Expense

Research and development costs are expensed as incurred and include salaries, benefits and other operating costs such as outside services, supplies and allocated overhead costs. We perform research and development for our proprietary drug candidates and technology development and for certain third parties under collaboration agreements. For our proprietary drug candidates and our internal technology development programs, we invest our own funds without reimbursement from a third party. Where we perform research and development activities under a clinical joint development collaboration, such as our collaboration with BMS, we record the cost reimbursement from our partner as a reduction to research and development expense when reimbursement amounts are due to us under the agreement.

We record an accrued expense for the estimated costs of our clinical trial activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients, and completion of certain clinical trial activities. We generally accrue costs associated with the start-up and reporting phases of the clinical trials ratably over the estimated duration of the start-up and reporting phases. We generally accrue costs associated with the treatment phase of clinical trials based on the estimated activities performed by our third parties. We may also accrue expenses based on the total estimated cost of the treatment phase on a per patient basis and expense the per patient cost ratably over the estimated patient treatment period based on patient enrollment in the trials. In specific circumstances, such as for certain time-based costs, we recognize clinical trial expenses using a methodology that we consider to be more reflective of the timing of costs incurred.

We record an accrued expense for the estimated unbilled costs of our contract manufacturing activities performed by third parties. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts include upfront payments and milestone payments, which depend on factors such as the achievement of the completion of certain stages of the manufacturing process. For purposes of recognizing expense, we assess whether we consider the production process is sufficiently defined to be considered the delivery of a good, as evidenced by predictive or contractually required yields in the production process, or the delivery of a service, where processes and yields are developing and less certain. If we consider the process to be the delivery of a good, we recognize expense when the drug product is delivered, or we otherwise bear risk of loss. If we consider the process to be the delivery of a service, we recognize expense based on our best estimates of the contract manufacturer’s progress towards completion of the stages in the contracts. We recognize and amortize upfront payments and accrue liabilities based on the specific terms of each arrangement. Certain arrangements may provide upfront payments for certain stages of the arrangement and milestone payments for the completion of certain stages, and, accordingly, we may record advance payments for services that have not been completed or goods not delivered and liabilities for stages where the contract manufacturer is entitled to a milestone payment.

We capitalize advance payments for goods or services that will be used or rendered for future research and development activities and recognize expense as the related goods are delivered or the services performed. We base our estimates on the best information available at the time. However, additional information may become available to us which may allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. We consider such

increases or decreases in cost as changes in estimates and reflect them in research and development expenses in the period identified.

Stock-Based Compensation

Stock-based compensation arrangements include stock option grants and restricted stock unit (RSU) awards under our equity incentive plans, as well as shares issued under our Employee Stock Purchase Plan (ESPP), through which employees may purchase our common stock at a discount to the market price.

We use the Black-Scholes option pricing model for the respective grant to determine the estimated fair value of the option on the date of grant (grant date fair value) and the estimated fair value of common stock purchased under the ESPP. The Black-Scholes option pricing model requires the input of highly subjective assumptions, including but not limited to, our stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. Because our employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models may not provide a reliable single measure of the fair value of our employee stock options or common stock purchased under the ESPP. The fair value of an RSU is equal to the closing price of our common stock on the grant date. Management will continue to assess the assumptions and methodologies used to calculate the estimated fair value of stock-based compensation. Circumstances may change and additional data may become available over time, which could result in changes to these assumptions and methodologies, and which could materially impact our fair value determination.

We expense the grant date fair value of the option or award on a straight line basis over the requisite service periods in our Consolidated Statements of Operations and recognize forfeitures of options and awards as they occur. For options and awards that vest upon the achievement of performance milestones, we estimate the vesting period based on our evaluation of the probability of achievement of each respective milestone and the related estimated date of achievement. We recognize stock-based compensation expense for purchases under the ESPP over the respective six-month purchase period. We report expense amounts in cost of goods sold, research and development expense, and general and administrative expense based on the function of the applicable employee. Stock-based compensation charges are non-cash charges and have no effect on our reported cash flows.

Net Income (Loss) Per Share

For all periods presented in the Consolidated Statements of Operations, the net income (loss) available to common stockholders is equal to the reported net income (loss). We calculate basic net income (loss) per share based on the weighted-average number of common shares outstanding during the periods presented and calculate diluted net income (loss) per share based on the weighted-average number of shares of common stock outstanding, including potentially dilutive securities, which consist of common shares underlying stock options and restricted stock units (RSUs). For 2019 and 2017, basic and diluted net loss per share are the same due to our net losses and the requirement to exclude potentially dilutive securities which would have an antidilutive effect on net loss per share. We excluded weighted average outstanding stock options and RSUs totaling 17.9 million and 20.6 million for 2019 and 2017, respectively. For 2018, the effect of these dilutive securities under the treasury stock method was approximately 10.5 million, and we excluded approximately 3.3 million of weighted-average shares of common stock underlying outstanding stock options from the computation of diluted net income per share because their effect was antidilutive.

Income Taxes

We account for income taxes under the liability method. Under this method, we determine deferred tax assets and liabilities based on differences between the financial reporting and tax reporting bases of assets and liabilities, measured using enacted tax rates and laws that we expect to be in effect when we expect the differences to reverse. Realization of deferred tax assets is dependent upon future earnings, the timing and amount of which are uncertain. We record a valuation allowance against deferred tax assets to reduce their carrying value to an amount that is more likely than not to be realized. When we establish or reduce the valuation allowance related to the deferred tax assets, our provision for income taxes will increase or decrease, respectively, in the period we make such determination.

We utilize a two-step approach to recognize and measure uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained upon tax authority examination, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount of benefit, determined on a cumulative probability basis, that is more than 50% likely of being realized upon ultimate settlement.

Comprehensive income (loss)

Comprehensive income (loss) is the change in stockholders' equity from transactions and other events and circumstances other than those resulting from investments by stockholders and distributions to stockholders. Our other comprehensive income (loss) includes net income (loss), gains and losses from the foreign currency translation of the assets and liabilities of our India and UK subsidiaries, and unrealized gains and losses on investments in available-for-sale securities.

Recently Adopted Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12 - Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (ASU 2019-12). ASU 2019-12 created an exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items (for example, discontinued operations or other comprehensive income). Under the historical guidance, in this situation, an entity would record an income tax provision from other items, such as unrealized gains on available-for-sale reported in other comprehensive income, with an offsetting income tax benefit in continuing operations. Under ASU 2019-12, an entity would record no income tax provision. We elected to adopt ASU 2019-12 effective January 1, 2019 on a prospective basis in accordance with the guidance. Because we reported a net loss and unrealized gains on available-for-sale securities for our quarterly reporting periods during 2019 and accordingly recorded a tax provision pursuant to the legacy guidance, we have recast such results for our Selected Quarterly Financial Data in Note 15 under ASU 2019-12. As a result, we eliminated the tax benefit in continuing operations and tax provision in other comprehensive income, which totaled $1.3 million for the nine months ended September 30, 2019.

On January 1, 2018, we adopted ASC 606, *Revenue Recognition - Revenue from Contracts with Customers*. ASC 606 supersedes the guidance in ASC 605, *Revenue Recognition*. We adopted ASC 606 on a modified retrospective basis under which we recognized the cumulative effect of adoption as a transition adjustment to opening accumulated deficit. Accordingly, we continue to report our results for the year ended December 31, 2017 under the historical revenue guidance ASC 605. Our transition adjustment totaled $12.7 million, and included $10.7 million related to the recognition of royalty revenue and $2.0 million for the reduction of deferred revenue related to one of our collaboration arrangements.

Recent Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13: Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The guidance modifies the measurement and recognition of credit losses for most financial assets and certain other instruments. The amendment updates the guidance for measuring and recording credit losses on financial assets measured at amortized cost by replacing the "incurred loss" model with an "expected loss" model. Accordingly, we will present these financial assets at the net amount we expect to collect. The amendment also requires that we record credit losses related to available-for-sale debt securities as an allowance through net income rather than reducing the carrying amount under the current, other-than-temporary-impairment model. ASU 2016-13 is effective in the first quarter of 2020. Early adoption is permitted. We do not expect that adoption will have a material effect on our Consolidated Financial Statements.

In November 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2018-18: Clarifying the Interaction between Topic 808 and Topic 606 (ASU 2018-18). The guidance clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASC 606 when the collaborative arrangement participant is a customer for a promised good or service that is distinct within the collaborative arrangement. The guidance also precludes entities from presenting amounts related to transactions with a collaborative arrangement participant that is not a customer as revenue, unless those transactions are directly related to third-party sales. ASU 2018-18 is effective in the first quarter of 2020 and should be applied retrospectively to January 1, 2018, when we adopted ASC 606. Early adoption is permitted. We are evaluating the effect of adoption, but we do not expect a material effect on our revenue.

Note 2 — Cash and Investments in Marketable Securities

Cash and investments in marketable securities, including cash equivalents, are as follows (in thousands):

	Estimated Fair Value at	
	December 31, 2019	December 31, 2018
Cash and cash equivalents	$ 96,363	$ 194,905
Short-term investments	1,228,499	1,140,445
Long-term investments	279,119	582,889
Total cash and investments in marketable securities	$ 1,603,981	$ 1,918,239

We invest in liquid, high quality debt securities. Our investments in debt securities are subject to interest rate risk. To minimize the exposure due to an adverse shift in interest rates, we invest in securities with maturities of two years or less and maintain a weighted average maturity of one year or less. All of our long-term investments as of December 31, 2019 and 2018 had maturities between one and two years.

Gross unrealized gains and losses were not significant at either December 31, 2019 or 2018. During the year ended December 31, 2019, we sold no available-for-sale securities and during the years ended December 31, 2018 and 2017, we sold available-for-sale securities totaling $12.0 million and $37.5 million, respectively, and realized gains and losses were not significant in any of those periods.

Our portfolio of cash and investments in marketable securities includes (in thousands):

	Fair Value Hierarchy Level	Estimated Fair Value at	
		December 31, 2019	December 31, 2018
Corporate notes and bonds	2	$ 1,132,182	$ 1,288,986
Corporate commercial paper	2	375,473	498,048
Obligations of U.S. government agencies	2	—	12,977
Available-for-sale investments		1,507,655	1,800,011
Money market funds	1	83,546	105,656
Certificate of deposit	N/A	6,951	6,760
Cash	N/A	5,829	5,812
Total cash and investments in marketable securities		$ 1,603,981	$ 1,918,239

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

Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices for identical or similar assets or liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

We use a market approach to value our Level 2 investments. The disclosed fair value related to our investments is based on market prices from a variety of industry standard data providers and generally represents quoted prices for similar assets in active markets or has been derived from observable market data.

For the years ended December 31, 2019 and 2018, there were no transfers between Level 1 and Level 2 of the fair value hierarchy.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

At December 31, 2019 and 2018, we had letter of credit arrangements in favor of our landlords and certain vendors totaling $6.8 million and $6.6 million, respectively. These letters of credit are secured by investments of similar amounts.

Note 3 — Inventory

Inventory consists of the following (in thousands):

	December 31,	
	2019	2018
Raw materials	$ 1,673	$ 1,846
Work-in-process	8,267	6,403
Finished goods	2,725	3,132
Total inventory	$ 12,665	$ 11,381

Note 4 — Property, Plant and Equipment

Property, plant and equipment consists of the following (in thousands):

	December 31,	
	2019	2018
Building and leasehold improvements	$ 93,097	$ 77,771
Laboratory equipment	36,623	33,806
Computer equipment and software	26,910	23,395
Manufacturing equipment	22,030	21,339
Furniture, fixtures, and other	9,662	7,959
Depreciable property, plant and equipment at cost	188,322	164,270
Less: accumulated depreciation	(127,875)	(120,507)
Depreciable property, plant and equipment, net	60,447	43,763
Construction-in-progress	4,552	5,088
Property, plant and equipment, net	$ 64,999	$ 48,851

Building and leasehold improvements include our manufacturing, research and development and administrative facilities and the related improvements to these facilities. Our leasehold improvements increased significantly during the year ended December 31, 2019 due to the construction of leasehold improvements for our new facilities on Third Street as further described in Note 6. Laboratory and manufacturing equipment include assets that support both our manufacturing and research and development efforts. Construction-in-progress includes assets being built to enhance our manufacturing and research and development efforts.

Depreciation and amortization expenses on property, plant and equipment for the years ended December 31, 2019, 2018, and 2017 was $11.0 million, $8.8 million, and $12.6 million, respectively.

In November 2017, Bayer announced that the Phase 3 Amikacin Inhale clinical program did not meet its primary endpoint or key secondary endpoints and, in December 2017, Bayer terminated our related collaboration agreement. Under this collaboration, we were responsible for the development, manufacturing and supply of our proprietary nebulizer device included in the Amikacin product and had acquired specific manufacturing equipment for this purpose. As a result of the termination of the program, in the three months ended December 2017, we expensed program specific manufacturing equipment with an original cost of $23.4 million and a net book value of $15.1 million. We completed the disposal of this equipment in the first quarter of 2018. In addition, in the three months ended December 31, 2017, we incurred approximately $0.9 million of other program termination costs related to our manufacturing obligations.

Note 5 — Senior Secured Notes

On October 5, 2015, we completed the sale and issuance of $250.0 million in aggregate principal amount of 7.75% senior secured notes due 2020 (the Notes). The Notes are secured by a first-priority lien on substantially all of our assets (except our right-of-use assets) and bear interest at a rate of 7.75% per annum payable in cash quarterly in arrears on January 15, April 15, July 15, and October 15 of each year. Interest is calculated based on actual days outstanding over a 360 days year. The Notes will mature on October 5, 2020, at which time the outstanding principal will be due and payable.

In connection with the issuance of the Notes, we paid fees and expenses of $8.9 million, of which $8.7 million of transaction and facility fees paid directly to the purchasers of the Notes and other direct issuance costs were recorded as a discount to the senior secured notes, net liability balance in our Consolidated Balance Sheet. The unamortized balance of these costs totals $1.3 million at December 31, 2019, which we will amortize to interest expense over the remaining term of the Notes.

The agreement, pursuant to which the Notes were issued, contains customary covenants, including covenants that limit or restrict our ability to incur liens, incur indebtedness, declare or pay dividends, redeem stock, issue preferred stock, make certain investments, merge or consolidate, make dispositions of assets, or enter into certain new businesses or transactions with affiliates, but do not contain covenants related to future financial performance. In particular, the Notes agreement requires us to maintain a minimum cash and investments in marketable securities balance of $60.0 million during the term of the Notes. We may currently redeem some or all of these notes at a redemption price equal 100% of the principal amount of the Notes plus accrued and unpaid interest to the applicable redemption date. If we experience certain change of control events, the holders of the Notes will have the right to require us to purchase all or a portion of the Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest to the date of purchase. In addition, upon certain asset sales, we may be required to offer to use the net proceeds thereof to purchase some of the Notes at 100% of the principal amount thereof, plus accrued and unpaid interest to the date of purchase.

As of December 31, 2019, based on a discounted cash flow analysis using Level 3 inputs including financial discount rates, we estimate that the fair value of the Notes is approximately $252.6 million.

Note 6 — Leases

Operating Leases

In August 2017, we entered into a Lease Agreement (the Mission Bay Lease) with ARE-San Francisco No. 19, LLC (ARE) and terminated our sublease with Pfizer, effectively extending our lease term from 2020 to 2030 for our 148,263 square foot corporate office and R&D facility located at 455 Mission Bay Boulevard, San Francisco, California (the Mission Bay Facility). The term of the Mission Bay Lease commenced on September 1, 2017, and will expire January 31, 2030, subject to our right to extend the term of the lease for two consecutive five-year periods, which we have excluded from our determination of the lease term. The monthly base rent for the Mission Bay Facility will escalate over the term of the lease at various intervals. During the term of the Mission Bay Lease, we are responsible for paying our share of operating expenses specified in the lease, including utilities, common area maintenance, insurance costs and taxes. During the year ended December 31, 2019, ARE delivered 13,907 square feet of space, and therefore we recognized right-of-use assets and lease liabilities of $6.7 million for the space. The Mission Bay Lease also obligates us to rent from ARE a total of an additional approximately 4,940 square feet of space at the Mission Bay Facility at specified delivery dates. The Mission Bay Lease includes various covenants, indemnities, defaults, termination rights, security deposits and other provisions customary for lease transactions of this nature.

In May 2018, we entered into a Lease Agreement (the Third Street Lease) with Kilroy Realty Finance Partnership, L.P. (Kilroy) to lease 135,936 square feet of space located at 360 Third Street, San Francisco, California (the Third Street Facility) from June 2018 to January 31, 2030, subject to our right to extend the term for a consecutive five-year period, which we have excluded from our determination of the lease term. Kilroy delivered an initial 1,726 square feet in June 2018, a total of 67,105 square feet in December 2018, and the final 67,105 square feet in August 2019. As a result of the delivery of the final spaces during the year ended December 31, 2019, we recognized an additional right-of-use asset and lease liability of $51.0 million. The Third Street Lease provides us additional facilities to support our San Francisco-based R&D activities. Our fixed annual base rent on an industrial gross lease basis includes certain expenses and property taxes paid directly by the landlord and will escalate each year over the term at specified intervals. We have a one-time right of first offer with respect to certain additional rental space at the Third Street Facility. The Third Street Lease includes various covenants, indemnities, defaults, termination rights, security deposits and other provisions customary for lease transactions of this nature.

We recognize rent expense for these operating leases on a straight-line basis over the lease period. The components of lease costs, which we include in operating expenses in our Condensed Consolidated Statements of Operations, were as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Operating lease cost	$ 14,697	$ 7,972	$ 4,515
Variable lease cost	6,408	4,497	3,077
Total lease costs	$ 21,105	$ 12,469	$ 7,592

During the year ended December 31, 2019, we recorded operating lease expense of $14.7 million and paid $8.4 million of operating lease payments related to our lease liabilities, which we include in net cash provided by (used in) operating activities in our Consolidated Statement of Cash Flows.

As of December 31, 2019, the maturities of our operating lease liabilities were as follows (in thousands):

Year ending December 31,		
2020	$	14,571
2021		19,219
2022		19,832
2023		20,461
2024		21,110
2025 and thereafter		118,058
Total lease payments		213,251
Less: portion representing interest		(54,741)
Less: lease incentives		(3,264)
Operating lease liabilities		155,246
Less: current portion		(12,516)
Operating lease liabilities, less current portion	$	142,730

As of December 31, 2019, the weighted-average remaining lease term is 10.1 years and the weighted-average discount rate used to determine the operating lease liability was 5.9%.

Under the historical guidance of ASC 840, our deferred rent balance at December 31, 2018 totaled $9.3 million and our future minimum lease payments for our operating leases at December 31, 2018 were as follows (in thousands):

Year ending December 31,		
2019	$	7,914
2020		10,617
2021		13,649
2022		14,117
2023		14,599
2024 and thereafter		98,315
Total future minimum lease payments	$	159,211

Note 7 — Liability Related to the Sale of Future Royalties

On February 24, 2012, we entered into a Purchase and Sale Agreement (the Purchase and Sale Agreement) with RPI Finance Trust (RPI), an affiliate of Royalty Pharma, pursuant to which we sold, and RPI purchased, our right to receive royalty payments (the Royalty Entitlement) arising from the worldwide net sales, from and after January 1, 2012, of (a) CIMZIA®, under our license, manufacturing and supply agreement with UCB Pharma (UCB), and (b) MIRCERA®, under our license, manufacturing and supply agreement with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (together referred to as Roche). We received aggregate cash proceeds of $124.0 million for the Royalty Entitlement. As part of this sale, we incurred approximately $4.4 million in transaction costs, which we will amortize to interest expense over the estimated life of the Purchase and Sale Agreement. Although we sold all of our rights to receive royalties from the CIMZIA® and MIRCERA® products, as a result of our ongoing manufacturing and supply obligations related to the generation of these royalties, we will continue to account for these royalties as revenue, and we recorded the $124.0 million in proceeds from this transaction as a liability (Royalty Obligation) that will be amortized using the interest method over the estimated life of the Purchase and Sale Agreement as royalties from the CIMZIA® and MIRCERA® products are remitted directly to RPI.

The following table shows the activity within the liability account during the year ended December 31, 2019 and for the period from the inception of the royalty transaction on February 24, 2012 (inception) to December 31, 2019 (in thousands):

	Year ended December 31, 2019	Period from inception to December 31, 2019
Liability related to the sale of future royalties—beginning balance	$ 84,810	$ —
Proceeds from sale of future royalties	—	124,000
Payments from Nektar to RPI	—	(10,000)
Non-cash CIMZIA® and MIRCERA® royalty revenue	(36,303)	(207,142)
Non-cash interest expense recognized	25,044	166,693
Liability related to the sale of future royalties – ending balance	73,551	73,551
Less: unamortized transaction costs	(1,531)	(1,531)
Liability related to the sale of future royalties, net	$ 72,020	$ 72,020

Pursuant to the Purchase and Sale Agreement, in March 2014 and March 2013, we were required to pay RPI $7.0 million and $3.0 million, respectively, as a result of worldwide net sales of MIRCERA® for the 12 month periods ended December 31, 2013 and 2012 not reaching certain minimum thresholds. The Purchase and Sale Agreement does not include any other potential payments related to minimum net sales thresholds and, therefore, we do not expect to make any further payments to RPI related to this agreement.

During the years ended December 31, 2019, 2018 and 2017, we recognized $36.3 million, $33.3 million, and $30.5 million, respectively, in non-cash royalties from net sales of CIMZIA® and MIRCERA®, and we recorded $25.0 million, $21.2 million and $18.9 million, respectively, of related non-cash interest expense.

As royalties are remitted to RPI from Roche and UCB, the balance of the Royalty Obligation will be effectively repaid over the life of the agreement. To determine the amortization of the Royalty Obligation, we are required to estimate the total amount of future royalty payments to be received by RPI. The sum of these amounts less the $124.0 million proceeds we received, net of our payments to RPI, will be recorded as interest expense over the life of the Royalty Obligation. We periodically assess the estimated royalty payments to RPI from UCB and Roche and to the extent the amount or timing of such payments is materially different than our original estimates, we will prospectively adjust the amortization of the Royalty Obligation. From inception through 2017, our estimate of the total interest expense on the Royalty Obligation resulted in an effective annual interest rate of approximately 17%. During the three months ended December 31, 2017, our estimate of the effective annual interest rate over the life of the agreement increased to 17.6%, which resulted in a prospective interest rate of 21%. During the three month period ended December 31, 2018, primarily as a result of increases in the forecasted sales of MIRCERA®, our estimate of the effective annual interest rate over the life of the agreement increased to 18.7%, which resulted in a prospective interest rate of 29%. During the three month period ended December 31, 2019, primarily as a result of increases in the forecasted sales of CIMZIA® and MIRCERA®, our estimate of the effective annual interest rate over the life of the agreement increased to 19.5%, which results in a prospective interest rate of 38%.

There are a number of factors that could materially affect the amount and timing of royalty payments from CIMZIA® and MIRCERA®, most of which are not within our control. Such factors include, but are not limited to, changing standards of care, the introduction of competing products, manufacturing or other delays, biosimilar competition, intellectual property matters, adverse events that result in governmental health authority imposed restrictions on the use of the drug products, significant changes in foreign exchange rates as the royalties remitted to RPI are made in U.S. dollars (USD) while significant portions of the underlying sales of CIMZIA® and MIRCERA® are made in currencies other than USD, and other events or circumstances that could result in reduced royalty payments from CIMZIA® and MIRCERA®, all of which would result in a reduction of non-cash royalty revenues and the non-cash interest expense over the life of the Royalty Obligation. Conversely, if sales of CIMZIA® and MIRCERA® are more than expected, the non-cash royalty revenues and the non-cash interest expense recorded by us would be greater over the term of the Royalty Obligation.

In addition, the Purchase and Sale Agreement grants RPI the right to receive certain reports and other information relating to the Royalty Entitlement and contains other representations and warranties, covenants and indemnification obligations that are customary for a transaction of this nature. To our knowledge, we are currently in compliance with these provisions of the Purchase and Sale Agreement; however, if we were to breach our obligations, we could be required to pay damages to RPI that are not limited to the purchase price we received in the sale transaction.

Note 8 — Commitments and Contingencies

Purchase Commitments

In the normal course of business, we enter into various firm purchase commitments related to contract manufacturing, clinical development and certain other items. As of December 31, 2019, these commitments were approximately $25.8 million, all of which we expect to pay in 2020.

Legal Matters

From time to time, we are involved in lawsuits, audits, arbitrations, claims, investigations and proceedings, consisting of intellectual property, commercial, employment, regulatory, and other matters, which arise in the ordinary course of business. We make provisions for liabilities when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Such provisions are reviewed at least quarterly and adjusted to reflect the impact of settlement negotiations, judicial and administrative rulings, advice of legal counsel, and other information and events pertaining to a particular case. Litigation is inherently unpredictable. If any unfavorable ruling were to occur in any specific period, there exists the possibility of a material adverse impact on the results of our operations of that period and on our cash flows and liquidity.

On October 30, 2018, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on May 15, 2019. Also, on February 13, 2019, and February 18, 2019, shareholder derivative complaints were filed in the U.S. District Court for the District of Delaware naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder derivative actions assert, among other things, that for a period beginning at least from November 11, 2017 through October 2, 2018, our stock was inflated due to alleged misrepresentations about the efficacy and safety of bempegaldesleukin. In addition, on August 19, 2019, we and certain of our executives were named in a putative securities class action complaint filed in the U.S. District Court for the Northern District of California, which complaint was subsequently amended on January 24, 2020. Also, on February 11, 2020, and on February 20, 2020, shareholder derivative complaints were filed in the U.S. District Court for the Northern District of California naming the CEO, CFO and certain members of Nektar's board. These class action and shareholder derivative actions assert, among other things, that for a period between February 15, 2019 and August 8, 2019, inclusive, our stock was inflated due to an alleged failure to disclose a reduction in the planned number of bempegaldesleukin clinical trials and a bempegaldesleukin manufacturing issue. All of these cases are in the early stages. Accordingly, we cannot reasonably estimate a potential future loss or a range of potential future losses, and we have not recorded any accrual for a contingent liability associated with these legal proceedings. However, an unfavorable resolution could potentially have a material adverse effect on our business, financial condition, and results of operations or prospects, and potentially result in paying monetary damages. We have recorded no liability for these matters on our Consolidated Balance Sheets as of December 31, 2019 or 2018.

Foreign Operations

We operate in a number of foreign countries. As a result, we are subject to numerous local laws and regulations that can result in claims made by foreign government agencies or other third parties that are often difficult to predict even after the application of good faith compliance efforts.

Indemnification Obligations

During the course of our normal operating activities, we have agreed to certain contingent indemnification obligations as further described below. The term of our indemnification obligations is generally perpetual. There is generally no limitation on the potential amount of future payments we could be required to make under these indemnification obligations. To date, we have not incurred significant costs to defend lawsuits or settle claims based on our indemnification obligations. If any of our indemnification obligations is triggered, we may incur substantial liabilities. Because the aggregate amount of any potential indemnification obligation is not a stated amount, we cannot reasonably estimate the overall maximum amount of any such obligations. We have recorded no liabilities for these obligations on our Consolidated Balance Sheets as of December 31, 2019 or 2018.

Indemnifications in Connection with Commercial Agreements

As part of our collaboration agreements with our partners related to the license, development, manufacture and supply of drugs and PEGylation materials based on our proprietary technologies and drug candidates, we generally agree to defend, indemnify and hold harmless our partners from and against third party liabilities arising out of the agreement, including product

liability (with respect to our activities) and infringement of intellectual property to the extent the intellectual property is developed by us and licensed to our partners. The term of these indemnification obligations is generally perpetual any time after execution of the agreement. There is generally no limitation on potential amount of future payments we could be required to make under these indemnification obligations.

From time to time, we enter into other strategic agreements such as divestitures and financing transactions pursuant to which we are required to make representations and warranties and undertake to perform or comply with certain covenants, including our obligation to RPI described in Note 7. In the event it is determined that we breached certain of the representations and warranties or covenants made by us in any such agreements, we could incur substantial indemnification liabilities depending on the timing, nature, and amount of any such claims.

Indemnification of Underwriters and Initial Purchasers of our Securities

In connection with our sale of equity and senior secured debt securities, we have agreed to defend, indemnify and hold harmless our underwriters or initial purchasers, as applicable, as well as certain related parties from and against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

Director and Officer Indemnifications

As permitted under Delaware law, and as set forth in our Certificate of Incorporation and our Bylaws, we indemnify our directors, executive officers, other officers, employees, and other agents for certain events or occurrences that may arise while in such capacity. The maximum potential amount of future payments we could be required to make under this indemnification is unlimited; however, we have insurance policies that may limit our exposure and may enable us to recover a portion of any future amounts paid. Assuming the applicability of coverage, the willingness of the insurer to assume coverage, and subject to certain retention, loss limits and other policy provisions, we believe any obligations under this indemnification would not be material, other than up to $5.0 million per incident for merger and acquisition related claims, $5.0 million per incident for securities related claims and $1.5 million per incident for non-securities related claims retention deductible per our insurance policy. However, no assurances can be given that the covering insurers will not attempt to dispute the validity, applicability, or amount of coverage without expensive litigation against these insurers, in which case we may incur substantial liabilities as a result of these indemnification obligations.

Note 9 — Stockholders' Equity

Common Stock

As discussed in Note 10, on April 3, 2018, we completed the issuance and sale of 8,284,600 shares of our common stock under a Share Purchase Agreement with BMS. These shares are unregistered and subject to certain lock-up and stand-still provisions for a five-year period.

Equity Compensation Plans

At December 31, 2019, we had 28,962,018 reserved shares of common stock, all of which are reserved for issuance under our equity compensation plans, of which approximately 19,817,000 shares may be issued upon the exercise of outstanding options or the vesting of restricted stock units (RSUs) and 9,145,000 shares are available for issuance under equity compensation plans.

2017 Performance Incentive Plan

Our 2017 Performance Incentive Plan (2017 Plan) was adopted by our board of directors (Board of Directors) on March 28, 2017 and was approved by our stockholders on June 14, 2017. On the date of approval, any shares of our common stock that were available for issuance under our 2012 Performance Incentive Plan (2012 Plan) ceased to be available for future grants.

Subject to the terms of the 2017 Plan, 8,300,000 shares of our common stock, reduced by the number of shares of common stock subject to awards granted under the 2012 Plan on or after March 31, 2017 and prior to the adoption of the 2017 Plan, were initially available for awards under the 2017 Plan. On June 26, 2018, our stockholders approved an amendment to the 2017 Plan whereby 10,900,000 additional shares were made available for award grants under the 2017 Plan. Shares issued in respect of any "full-value award" granted under the 2017 Plan will be counted against the share limit described in the preceding sentences as 1.5 shares for every one share actually issued in connection with the award. Shares that are subject to or underlie awards which expire or for any reason are cancelled or terminated, are forfeited, fail to vest, or for any other reason are

not paid or delivered under the 2017 Plan or any Prior Plan (as defined below) will again be available for subsequent awards under the 2017 Plan (with any such shares subject to full-value awards increasing the 2017 Plan's share limit based on the full-value award ratio described above or, in the case of an award granted under a Prior Plan, the full-value award ratio set forth in such Prior Plan). Notwithstanding the foregoing, shares that are exchanged by a participant or withheld by us to pay the exercise price of an option granted under the 2017 Plan, as well as any shares exchanged or withheld to satisfy the tax withholding obligations related to any award, will not be available for subsequent awards under the 2017 Plan.

The purpose of the 2017 Plan and our other incentive plans is to promote our success by providing an additional means for us to attract, motivate, retain and reward directors, officers, employees, and other eligible persons through the grant of awards. Equity-based awards are also intended to further align the interests of award recipients and our stockholders. The 2017 Plan authorizes stock options, stock appreciation rights, stock bonuses, restricted stock, performance stock, stock units, phantom stock or similar rights to purchase or acquire shares, and other forms of awards granted or denominated in our common stock or units of our common stock, as well as cash bonus awards. Members of the Board of Directors, officers or employees, certain consultants and advisors and our subsidiaries are eligible to receive awards under the 2017 Plan. Pursuant to the 2017 Plan, we granted or issued non-qualified stock options and RSUs to employees, officers, and non-employee directors during 2018 and 2019. The requisite service period for stock options granted to our employees under the 2017 Plan as well as our Prior Plans is generally four years; the requisite service period for stock options granted to our directors is generally one year. The requisite service period for RSUs granted under the 2017 Plan and our Prior Plans is generally three years for employees and one year for directors.

The 2017 Plan will terminate on March 27, 2027, unless earlier terminated by the Board of Directors. The maximum term of a stock option or stock appreciation right under the 2017 Plan and our Prior Plans is eight years from the date of grant. The per share exercise price of an option generally may not be less than the fair market value of a share of our common stock on the NASDAQ Stock Market on the date of grant.

Other Equity Incentive Plans

In addition to the 2017 Plan, we have other equity incentive plans under which options and restricted stock units granted remain outstanding but no new options or restricted stock units may be granted either as a result of the effectiveness of the 2017 Plan or the expiration of such other plan. These other equity incentive plans include: (i) the 2012 Plan which was adopted by the Board of Directors on April 4, 2012 and approved by our stockholders on June 28, 2012, amended on June 16, 2015 by approval of our stockholders to make available for award grants 7,000,000 additional shares, and replaced by the 2017 Plan; (ii) the 2008 Equity Incentive Plan (2008 Plan) which was adopted by the Board of Directors on March 20, 2008 and approved by our stockholders on June 6, 2008; (iii) the 2000 Equity Incentive Plan (2000 Plan) which was adopted by the Board of Directors on April 19, 2000 by amending and restating our 1994 Equity Incentive Plan, and which expired on February 9, 2010; and (iv) the 1998 Non-Officer Equity Incentive Plan which was adopted by our Board of Directors on August 18, 1998, and amended and restated in its entirety and renamed the 2000 Non-Officer Equity Incentive Plan on June 6, 2000 (2000 Non-Officer Plan and collectively with the 2012 Plan, the 2008 Plan and the 2000 Plan, the Prior Plans).

Pursuant to the Prior Plans, we previously granted or issued incentive stock options to employees and officers and non-qualified stock options, rights to acquire restricted stock, restricted stock units, and stock bonuses to employees, officers, non-employee directors, and consultants. Pursuant to the 2000 Non-Officer Plan, we previously granted or issued non-qualified stock options, rights to acquire restricted stock and stock bonuses to employees and consultants who are neither officers nor directors of Nektar.

Employee Stock Purchase Plan

In February 1994, our Board of Directors adopted the Employee Stock Purchase Plan (ESPP) pursuant to section 423(b) of the Internal Revenue Code of 1986. Under the ESPP, 2,500,000 shares of our common stock have been authorized for issuance. The terms of the ESPP provide eligible employees with the opportunity to acquire an ownership interest in Nektar through participation in a program of periodic payroll deductions for the purchase of our common stock. Employees may elect to enroll or re-enroll in the ESPP on a semi-annual basis. Stock is purchased at 85% of the lower of the closing price on the first day of the enrollment period or the last day of the enrollment period.

401(k) Retirement Plan

We sponsor a 401(k) retirement plan whereby eligible employees may elect to contribute up to the lesser of 60% of their annual compensation or the statutorily prescribed annual limit allowable under Internal Revenue Service regulations. The 401(k) plan permits us to make matching contributions on behalf of all participants, up to a maximum of $6,000 per participant.

For the years ended December 31, 2019, 2018, and 2017, we recognized $3.5 million, $2.8 million, and $1.6 million, respectively, of compensation expense in connection with our 401(k) retirement plan.

Change in Control Severance Plan

On December 6, 2006, our Board of Directors approved a Change of Control Severance Benefit Plan (CIC Plan). This CIC Plan has subsequently been amended a number of times by our Board of Directors with the most recent amendment occurring on April 5, 2011. The CIC Plan is designed to make certain benefits available to our eligible employees in the event of a change of control of Nektar and, following such change of control, an employee's employment with us or a successor company is terminated in certain specified circumstances. We adopted the CIC Plan to support the continuity of the business in the context of a change of control transaction. The CIC Plan was not adopted in contemplation of any specific change of control transaction.

Under the CIC Plan, in the event of a change of control of Nektar and a subsequent termination of employment initiated by us or a successor company other than for Cause (as defined in the CIC Plan) or initiated by the employee for a Good Reason Resignation (as defined in the CIC Plan) in each case within twelve months following a change of control transaction, (i) the Chief Executive Officer would be entitled to receive cash severance pay equal to 24 months base salary plus annual target incentive pay, the extension of employee benefits over this severance period and the full acceleration of unvested outstanding equity awards, and (ii) our Senior Vice Presidents and Vice Presidents (including Principal Fellows) would each be entitled to receive cash severance pay equal to twelve months base salary plus annual target incentive pay, the extension of employee benefits over this severance period and the full acceleration of unvested outstanding equity awards. In the event of a change of control of Nektar and a subsequent termination of employment initiated by the Company or a successor company other than for Cause within twelve following a change of control transaction, all other employees would each be entitled to receive cash severance pay equal to 6 months base salary plus a pro-rata portion of annual target incentive pay, the extension of employee benefits over this severance period and the full acceleration of each such employee's unvested outstanding equity awards. Under the CIC Plan, as amended, non-employee directors would also be entitled to full acceleration of vesting of all outstanding stock awards in the event of a change of control transaction.

Note 10 — License and Collaboration Agreements

We have entered into various collaboration agreements including license agreements and collaborative research, development and commercialization agreements with various pharmaceutical and biotechnology companies. Under these collaboration arrangements, we are entitled to receive license fees, upfront payments, milestone and other contingent payments, royalties, sales milestone payments, and payments for the manufacture and supply of our proprietary PEGylation materials and/or reimbursement for research and development activities. Our partners may generally cancel our collaboration agreements without significant financial penalty. We generally include our costs of performing these services in research and development expense, except for costs for product sales to our collaboration partners which we include in cost of goods sold. We analyze our agreements to determine whether we should account for the agreements within the scope of ASC 808, *Collaborative Arrangements*, and, if so, we analyze whether we should account for any elements under the relevant revenue recognition guidance or whether we should record the reimbursements from our partner as contra research and development expense.

In accordance with our collaboration agreements, we recognized license, collaboration and other revenue as follows (in thousands):

Partner	Agreement	Year Ended December 31, 2019	2018	2017
Bristol-Myers Squibb	NKTR-214	$ —	$ 1,059,768	$ —
Eli Lilly and Company	NKTR-358	7,019	11,634	130,087
Amgen, Inc.	Neulasta®	5,000	5,000	5,000
Baxalta Incorporated / Takeda	Hemophilia, including ADYNOVATE® and ADYNOVI™	378	20,328	11,443
Ophthotech Corporation(1)	Fovista®	—	—	19,123
Bayer Healthcare LLC(1)	BAY41-6551 (Amikacin Inhale)	—	—	17,931
AstraZeneca AB	MOVANTIK® and MOVENTIG®	—	—	4,600
Other		4,578	535	22,781
License, collaboration and other revenue		$ 16,975	$ 1,097,265	$ 210,965

(1) These collaboration agreements were completed as of December 31, 2017.

For the years ended December 31, 2019 and 2018, we recognized $77.5 million and $95.3 million of revenue for performance obligations that we had satisfied in prior periods, respectively. For both years, this amount includes all of our royalty revenue and non-cash royalty revenue because these royalties substantially relate to the licenses that we had previously granted. For the year ended December 31, 2018, this amount also included the $10.0 million ADYNOVATE® sales milestone and the $10.0 million development milestone from Baxalta described below.

The following table presents the changes in our deferred revenue balance from our collaboration agreements during the year ended December 31, 2019 (in thousands):

	For the year ended December 31, 2019
Deferred revenue—December 31, 2018	$ 24,636
Recognition of previously unearned revenue	(16,565)
Deferred revenue—December 31, 2019	$ 8,071

Our balance of deferred revenue contains the transaction price from our collaboration agreements allocated to performance obligations which are partially unsatisfied. We expect to recognize $5.5 million of our deferred revenue over the next twelve months.

As of December 31, 2019, our collaboration agreements with partners included potential future payments for development milestones totaling approximately $1.7 billion, including amounts from our agreements with BMS and Lilly described below. In addition, under our collaboration agreements we are entitled to receive other contingent payments, including contingent sales milestones and royalty payments, as described below.

There have been no material changes to our collaboration agreements for the year ended December 31, 2019, except as described below.

Bristol-Myers Squibb (BMS): Bempegaldesleukin (previously referred to as NKTR-214)

On February 13, 2018, we entered into a Strategic Collaboration Agreement (BMS Collaboration Agreement) and a Share Purchase Agreement with BMS, both of which became effective on April 3, 2018. Pursuant to these agreements, we and BMS are jointly developing bempegaldesleukin, including, without limitation, in combination with BMS's Opdivo® and Opdivo® plus Yervoy® (ipilimumab), and other compounds of BMS, us or any third party. The parties have agreed to jointly commercialize bempegaldesleukin on a worldwide basis. We retained the right to record all worldwide sales for bempegaldesleukin. We will share global commercialization profits and losses with BMS for bempegaldesleukin, with Nektar sharing 65% and BMS sharing 35% of the net profits and losses. The parties will share the internal and external development costs for bempegaldesleukin in combination regimens based on each party's relative ownership interest in the compounds

included in the regimens. In accordance with the agreement, the parties will share development costs for bempegaldesleukin in combination with Opdivo®, 67.5% of costs to BMS and 32.5% to Nektar, and for bempegaldesleukin in a triplet combination with Opdivo® and Yervoy®, 78% of costs to BMS and 22% to Nektar. The parties will share costs for the manufacturing of bempegaldesleukin, 35% of costs to BMS and 65% to Nektar.

The BMS Collaboration Agreement superseded and replaced the Clinical Trial Agreement we entered into with BMS in September 2016 to develop bempegaldesleukin in combination with Opdivo®. Under the Clinical Trial Agreement, we acted as the sponsor of each Combination Therapy Trial and BMS was responsible for 50% of all out-of-pocket costs reasonably incurred in connection with third party contract research organizations, laboratories, clinical sites and institutional review boards. We recorded cost reimbursement payments to us from BMS as a reduction to research and development expense. Each party was otherwise responsible for its own internal costs, including internal personnel costs, incurred in connection with each Combination Therapy Trial.

Upon the effective date of the BMS Collaboration Agreement in April 2018, BMS paid us a non-refundable upfront cash payment of $1.0 billion. We are eligible to receive additional cash payments up to a total of approximately $1.4 billion upon the achievement of certain development and regulatory milestones and up to a total of $350.0 million upon the achievement of certain sales milestones. In April 2018, BMS also purchased 8,284,600 shares of our common stock pursuant to the Share Purchase Agreement for total additional cash consideration of $850.0 million.

On January 9, 2020, we and BMS entered into Amendment No. 1 (the Amendment) to the BMS Collaboration Agreement. Pursuant to the Amendment, we and BMS agreed to update the Collaboration Development Plan under which we are collaborating and developing bempegaldesleukin. The cost sharing under the Amendment remains unchanged. Additionally, we are eligible to receive an additional non-refundable, non-creditable milestone payment of $25.0 million following the achievement of the first patient, first visit in the registrational adjuvant melanoma trial, studying the combination of bempegaldesleukin and Opdivo®. We are also eligible to receive non-refundable, creditable milestone payments of $25.0 million and $75.0 million following the achievement of the first patient, first visit in a registrational muscle-invasive bladder cancer trial and a registrational first-line non-small-cell lung cancer trial, respectively, in each case studying the combination of bempegaldesleukin and Opdivo®. For the two creditable milestones, BMS is entitled to deduct the amounts paid pursuant to these milestones from future development milestones due to us under the original agreement. In January 2020, the milestone for the first patient, first visit milestone for the registrational muscle-invasive bladder cancer trial was achieved.

BMS has the right, at its sole discretion, to terminate co-funding its share of the development costs for the adjuvant melanoma collaboration study if the metastatic melanoma collaboration study fails to meet the primary endpoint of progression free survival. If BMS exercises such right, we have the right, in our sole discretion, to continue the adjuvant melanoma study.

We determined that the BMS Collaboration Agreement falls within the scope of ASC 808. As mentioned above, BMS shares certain percentages of development costs incurred by us and we share certain percentages of development costs incurred by BMS. We consider these activities to represent collaborative activities under ASC 808 and we recognize such cost sharing proportionately with the performance of the underlying services. We recognize BMS' reimbursement of our expenses as a reduction of research and development expense and our reimbursement of BMS' expenses as research and development expense. For the years ended December 31, 2019, 2018 and 2017, we recorded $105.4 million and $62.5 million and $7.8 million, respectively, as a reduction of research and development expenses for BMS' share of our expenses, net of our share of BMS' expenses. As of December 31, 2019 and 2018, we have recorded an unbilled receivable of $24.0 million and $19.0 million, respectively, from BMS in accounts receivable in our Consolidated Balance Sheet.

We analogized to ASC 606 for the accounting for our two performance obligations, consisting of the delivery of the licenses to develop and commercialize bempegaldesleukin and our participation on joint steering and other collaboration committees. We determined that our committee participation is not material.

We aggregated the total consideration of $1.85 billion received under the agreements and allocated it between the stock purchase and the revenue generating elements, because we and BMS negotiated the agreements together and the effective date of the BMS Collaboration Agreement was dependent upon the effective date of the Share Purchase Agreement. We recorded the estimated fair value of the shares of $790.2 million in stockholders' equity based on the closing date price of our common stock of $99.36 per share, adjusted for a discount for lack of marketability reflecting the unregistered nature of the shares. We allocated the remaining $1,059.8 million to the transaction price of the collaboration agreement. We consider the future potential development, regulatory and sales milestones of up to approximately $1.8 billion to be variable consideration. We excluded these milestones from the transaction price as of December 31, 2018 and December 31, 2019 because we determined such payments to be fully constrained under ASC 606 as the achievement of such milestone payments are uncertain

and highly susceptible to factors outside of our control. We will re-evaluate the transaction price at each reporting period and as uncertain events are resolved or other changes in circumstances occur.

Accordingly, we allocated the entire transaction price of $1,059.8 million to the granting of the licenses and therefore recognized $1,059.8 million for the year ended December 31, 2018 as license, collaboration and other revenue.

Baxalta Incorporated/Takeda: *Hemophilia*

We are a party to an exclusive research, development, license and manufacturing and supply agreement with Baxalta Incorporated (Baxalta), a subsidiary of Takeda Pharmaceutical Company Ltd. (Takeda), entered into in September 2005 to develop products designed to improve therapies for Hemophilia A patients using our PEGylation technology. Under the terms of the agreement, we are entitled to research and development funding for our active programs, which are now complete for Factor VIII, and are responsible for supplying Takeda with its requirements of our proprietary materials. Takeda is responsible for all clinical development, regulatory, and commercialization expenses. The agreement is terminable by the parties under customary conditions.

This Hemophilia A program includes ADYNOVATE®, which was approved by the Food and Drug Administration (FDA) in November 2015 for use in adults and adolescents, aged 12 years and older, who have Hemophilia A, and is now marketed in the U.S., the European Union, and many other countries. As a result of the marketing authorization in the EU in January 2018, we earned a $10.0 million development milestone, which was received in March 2018. We updated the arrangement transaction price for this milestone upon achievement since we had previously excluded it due to the significant uncertainty from regulatory approval. Based on the terms of this milestone, we allocated the entire milestone to the license grant and research and development services, and therefore recognized the entire $10.0 million in year ended December 31, 2018 as we had previously satisfied those performance obligations. In the three months ended December 31, 2018, we recognized an additional $10.0 million milestone for annual sales of ADYNOVATE®/ADYNOVI™ reaching a certain specified amount, which we report in license, collaboration and other revenue . We are entitled to an additional sales milestone upon achievement of an annual sales target and royalties based on annual worldwide net sales of products resulting from this agreement.

In October 2017, we entered into a right to sublicense agreement with Baxalta, under which we granted to Baxalta the right to grant a nonexclusive sublicense to certain patents that were previously exclusively licensed to Baxalta under our 2005 agreement. Under the right to sublicense agreement, Baxalta paid us $12.0 million in November 2017 and agreed to pay us single digit royalty payments based upon net sales of the products covered under the sublicense throughout the term of the agreement.

We have an unsatisfied performance obligation related to our ongoing supply of PEGylation materials at a price less than their standalone selling prices. As of December 31, 2019, our deferred revenue related to this agreement is not significant.

Eli Lilly and Company (Lilly): *NKTR-358*

On July 23, 2017, we entered into a worldwide license agreement with Eli Lilly and Company (Lilly), which became effective on August 23, 2017, to co-develop NKTR-358, a novel immunological drug candidate that we invented. Under the terms of the agreement, we (i) received an initial payment of $150.0 million in September 2017 and are eligible for up to $250.0 million in additional development milestones, (ii) will co-develop NKTR-358 with Lilly for which we are responsible for completing Phase 1 clinical development and certain drug product development and supply activities, (iii) will share with Lilly Phase 2 development costs with 75% of those costs borne by Lilly and 25% of the costs borne by Nektar, (iv) will have the option to contribute funding to Phase 3 development on an indication-by-indication basis ranging from zero to 25% of development costs, and (v) will have the opportunity to receive up to double-digit sales royalty rates that escalate based upon our Phase 3 development cost contribution and the level of annual global product sales. Lilly will be responsible for all costs of global commercialization, and we will have an option to co-promote in the U.S. under certain conditions. A portion of the development milestones may be reduced by 50% under certain conditions, related to the final formulation of the approved product and the timing of prior approval (if any) of competitive products with a similar mechanism of action, which could reduce these milestone payments by 75% if both conditions occur.

The agreement will continue until Lilly no longer has any royalty payment obligations to us or, if earlier, the termination of the agreement in accordance with its terms. The agreement may be terminated by Lilly for convenience, and may also be terminated under certain other circumstances, including material breach.

We identified our license grant to Lilly, our ongoing Phase 1 clinical development obligation, our drug product development obligation and our obligation to supply clinical trial materials as the significant performance obligations under the

agreement and concluded that each of these deliverables represents a separate unit of accounting. The valuation of each performance obligation involves significant estimates and assumptions, including but not limited to, expected market opportunity and pricing, assumed royalty rates, clinical trial costs, timelines and likelihood of success; in each case these estimates and assumptions covering long time periods. We determined the selling price for the license based on a discounted cash flow analysis of projected revenues from NKTR-358 and development and commercial costs using a discount rate based on a market participant's weighted average cost of capital adjusted for forecasting risk. We determined the selling prices for Phase 1 clinical development, and drug product development deliverables based on the nature of the services to be performed and estimates of the associated efforts and third-party rates for similar services.

Although we are entitled to significant development milestones under this arrangement, we did not include any of such milestones in the transaction price and have not updated the transaction prices for any milestones as of December 31, 2019 due to the significant uncertainties involved with clinical development. We have therefore determined the transaction price to consist of the upfront payment of $150.0 million in September 2017. Based on our estimates of the standalone selling prices of the performance obligations, we allocated the $150.0 million upfront payment as $125.9 million to the license, $17.6 million to the Phase 1 clinical development and $6.5 million to the drug product development.

Under our adoption of ASC 606 as of January 1, 2018, we made no changes to our deferred revenue balance as our conclusions remain unchanged. We recognize revenue for the Phase 1 clinical development and drug product development using an input method, using costs incurred, as this method depicts our progress towards providing Lilly with the results of clinical trials and drug production processes. As of December 31, 2019, we have deferred revenue of approximately $1.3 million related to this agreement, which we expect to recognize through early 2020.

***Amgen, Inc.**: Neulasta®*

In October 2010, we amended and restated an existing supply and license agreement by entering into a supply, dedicated suite and manufacturing guarantee agreement (the amended and restated agreement) and a license agreement with Amgen Inc. and Amgen Manufacturing, Limited (together referred to as Amgen). Under the terms of the amended and restated agreement, we guarantee the manufacture and supply of our proprietary PEGylation materials (Polymer Materials) to Amgen in an existing manufacturing suite to be used exclusively for the manufacture of Polymer Materials for Amgen (the Manufacturing Suite) in our manufacturing facility in Huntsville, Alabama (the Facility). This supply arrangement is on a non-exclusive basis (other than the use of the Manufacturing Suite and certain equipment) whereby we are free to manufacture and supply the Polymer Materials to any other third party and Amgen is free to procure the Polymer Materials from any other third party. Under the terms of the amended and restated agreement, we received a $50.0 million payment in the fourth quarter of 2010 in return for our guaranteeing the supply of certain quantities of Polymer Materials to Amgen including without limitation the Additional Rights described below and manufacturing fees that are calculated based on fixed and variable components applicable to the Polymer Materials ordered by Amgen and delivered by us. Amgen has no minimum purchase commitments. If quantities of the Polymer Materials ordered by Amgen exceed specified quantities, significant additional payments become payable to us in return for our guaranteeing the supply of additional quantities of the Polymer Materials.

The term of the amended and restated agreement ends on October 29, 2020. In the event we become subject to a bankruptcy or insolvency proceeding, we cease to own or control the Facility, we fail to manufacture and supply or certain other events, Amgen or its designated third party will have the right to elect, among certain other options, to take title to the dedicated equipment and access the Facility to operate the Manufacturing Suite solely for the purpose of manufacturing the Polymer Materials. Amgen may terminate the amended and restated agreement for convenience or due to an uncured material default by us.

Under our adoption ASC 606, we determined that our obligation to manufacture and supply of our PEGylation materials and to maintain the dedicated manufacturing suite solely for the production of such materials for Amgen represented an obligation to stand ready to manufacture such materials. We concluded that we should recognize revenue based on the passage of time as this method depicts the satisfaction of Amgen's right to require production of PEGylation materials at any time. As of December 31, 2019, we have deferred revenue of approximately $4.2 million related to this agreement, which we expect to recognize through October 2020, the estimated end of our obligations under this agreement.

***Ophthotech Corporation**: Fovista®*

On October 27, 2017, we terminated our license and supply agreement with Ophthotech Corporation (Ophthotech) dated September 2006, pursuant to which Ophthotech received a worldwide, exclusive license to certain of our proprietary PEGylation technology to develop, manufacture and sell Fovista®. Under the terms of our agreement, we were the exclusive supplier of all of Ophthotech's clinical and commercial requirements for our proprietary PEGylation reagent used in Fovista®.

The termination of our agreement with Ophthotech followed Opthotech's previous announcements, in December 2016 and August 2017, that their three pivotal Phase 3 studies investigating the Fovista® in certain combination therapies did not achieve the pre-specified primary endpoints.

Under our agreement with Ophthotech, in June 2014, we received a $19.8 million payment from Ophthotech in connection with its licensing agreement with Novartis. In addition, in January 2017, we received a $12.7 million advance payment from Ophthotech, which included $10.4 million for reagent shipments recognized in the second quarter of 2017 as well as approximately $2.3 million for 2017 minimum purchase requirements. As a result of the termination of this agreement, we recognized the remaining $18.0 million of deferred revenue from this arrangement in the three months ended December 31, 2017.

***Bayer Healthcare LLC**: BAY41-6551 (Amikacin Inhale)*

In December 2017, Bayer Healthcare LLC (Bayer) terminated our co-development, license and co-promotion agreement entered into in August 2007 to develop a specially-formulated inhaled Amikacin using our proprietary nebulizer devices. The termination of this agreement followed Bayer's announcement in November 2017 that the Phase 3 Amikacin Inhale clinical program for the treatment of intubated and mechanically ventilated patients with Gram-negative pneumonia did not meet its primary endpoint or key secondary endpoints.

Under this collaboration, we received an upfront payment of $40.0 million (which was paid to us in 2007) and milestone payments totaling $30.0 million (the last of which was paid to us in 2013). As a result of the termination of the agreement, we recognized the remaining $16.8 million of deferred revenue related to this arrangement in the three months ended December 31, 2017.

***AstraZeneca AB**: MOVANTIK® (naloxegol oxalate), previously referred to as naloxegol and NKTR-118,*

In September 2009, we entered into an agreement with AstraZeneca AB (AstraZeneca) under which we granted AstraZeneca a worldwide, exclusive license under our patents and other intellectual property to develop, market, and sell MOVANTIK®. AstraZeneca is responsible for all research, development and commercialization and is responsible for all drug development and commercialization decisions for MOVANTIK®. In September 2014 and December 2014, MOVANTIK® /MOVENTIG® was approved in the US and EU, respectively. As of December 31, 2019, we have received a total of $385.0 million of upfront and contingent milestone payments from this agreement, all of which was received in or before 2015. We are entitled to significant and escalating double-digit royalty payments and sales milestone payments based on annual worldwide net sales of MOVANTIK® / MOVENTIG ®.

In March 2016, AstraZeneca announced that it had entered into an agreement with ProStrakan Group plc, a subsidiary of Kyowa Hakko Kirin Co. Ltd. (Kirin), granting Kirin exclusive marketing rights to MOVENTIG® in the EU, Iceland, Liechtenstein, Norway and Switzerland. Under our license agreement with AstraZeneca, we and AstraZeneca will share the upfront payment, market access milestone payments, royalties and sales milestone payments made by Kirin to AstraZeneca with AstraZeneca receiving 60% and Nektar receiving 40%. In the year ended December 31, 2017, we recognized a total of $4.6 million related to our share of license-related payments made from Kirin to AstraZeneca.

As of December 31, 2019, we do not have deferred revenue related to our agreement with AstraZeneca.

Other

In addition, as of December 31, 2019, we have a number of other collaboration agreements, including with our collaboration partner UCB Pharma, under which we are entitled to up to a total of $40.0 million of development milestone payments upon achievement of certain development objectives, as well as sales milestones upon achievement of annual sales targets and royalties based on net sales of commercialized products, if any. However, given the current phase of development of the potential products under these collaboration agreements, we cannot estimate the probability or timing of achieving these milestones and, therefore, have excluded all development milestones from the respective transaction prices for these agreements. In the three months ended December 31, 2019, one of our collaboration partners terminated the collaboration agreement with us, and we recognized $4.0 million of deferred revenue resulting from this arrangement. As of December 31, 2019, we have deferred revenue of approximately $2.0 million related to these other collaboration agreements.

Note 11 — Stock-Based Compensation

We recognize total stock-based compensation expense in our Condensed Consolidated Statements of Operations as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Cost of goods sold	$ 4,294	$ 4,629	$ 2,333
Research and development	63,224	56,193	21,252
General and administrative	32,277	27,279	13,030
Total stock-based compensation	$ 99,795	$ 88,101	$ 36,615

As of December 31, 2019, total unrecognized compensation costs of $213.7 million related to unvested stock-based compensation arrangements are expected to be recognized as expense over a weighted-average period of 1.75 years.

Stock-based compensation expense resulting from our ESPP was not significant in the years ended December 31, 2019, 2018, and 2017.

Black-Scholes Assumptions

The following table lists the Black-Scholes option-pricing model assumptions used to calculate the fair value of employee and director stock options, as well as the resulting grant-date fair value:

	Year Ended December 31,		
	2019	2018	2017
Average risk-free interest rate	1.8%	2.8%	2.0%
Dividend yield	0.0%	0.0%	0.0%
Average volatility factor	62.2%	61.0%	54.2%
Weighted-average expected life	5.6 years	5.1 years	5.3 years
Weighted-average grant-date fair value of options granted	$ 12.25	$ 29.86	$ 20.08

The average risk-free interest rate is based on the U.S. treasury yield curve in effect at the time of grant for periods commensurate with the expected life of the stock-based award. We have never paid dividends, nor do we expect to pay dividends in the foreseeable future; therefore, we used a dividend yield of zero. Our estimate of expected volatility is based on the daily historical trading data of our common stock at the time of grant over a historical period commensurate with the expected life of the stock-based award. We estimated the weighted-average expected life based on the contractual and vesting terms of the stock options, as well as historical cancellation and exercise data.

Summary of Stock Option Activity

The table below presents a summary of stock option activity under our equity incentive plans (in thousands, except for price per share and contractual life information):

	Number of Shares	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (in Years)	Aggregate Intrinsic Value(1)
Outstanding at December 31, 2018	15,930	$ 26.18		
Options granted	1,842	21.86		
Options exercised	(1,629)	11.68		
Options forfeited & canceled	(1,258)	49.91		
Outstanding at December 31, 2019	14,885	$ 25.23	4.31	$ 73,134
Exercisable at December 31, 2019	9,938	20.79	3.14	$ 66,707

(1) Aggregate intrinsic value represents the difference between the exercise price of the option and the closing market price of our common stock on December 31, 2019.

The intrinsic value of options exercised during the years ended December 31, 2019, 2018 and 2017 totaled $30.6 million, $303.4 million and $84.0 million, respectively.

Summary of RSU Activity

A summary of RSU award activity is as follows (in thousands except for per share amounts):

	Units Issued	Weighted-Average Grant Date Fair Value	Aggregate Intrinsic Value(1)
Balance at December 31, 2018	3,320	$ 41.57	
Granted	3,189	23.32	
Vested and released	(1,159)	36.33	
Forfeited and canceled	(415)	43.19	
Balance at December 31, 2019	4,935	$ 30.85	$ 106,506

The fair value of restricted stock that vested in the years ended December 31, 2019, 2018 and 2017 totaled $32.4 million, $80.4 million and $22.3 million, respectively.

Note 12 — Income Taxes

Income (loss) before provision for income taxes includes the following components (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Domestic	$ (441,494)	$ 680,423	$ (97,938)
Foreign	1,440	2,302	1,862
Income (loss) before provision for income taxes	$ (440,054)	$ 682,725	$ (96,076)

Provision for Income Taxes

The provision for income taxes consists of the following (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Current:			
Federal	$ —	$ —	$ —
State	139	699	1
Foreign	495	620	580
Total Current	634	1,319	581
Deferred:			
Federal	—	—	—
State	—	—	—
Foreign	(21)	93	35
Total Deferred	(21)	93	35
Provision for income taxes	$ 613	$ 1,412	$ 616

Income tax provision related to continuing operations differs from the amount computed by applying the statutory income tax rate of 21% for the years ended December 31, 2019 and 2018 and 35% for the year ended December 31, 2017 to pretax income (loss) as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Income tax expense (benefit) at federal statutory rate	$ (92,411)	$ 143,372	$ (33,627)
Research credits	(10,511)	(17,295)	(8,038)
Sale of future royalties	(7,624)	(6,995)	(8,236)
Stock-based compensation	(672)	(66,716)	(20,665)
Premium on equity issuance	—	(12,551)	—
Change in valuation allowance	104,440	(46,885)	(186,124)
Non-cash interest expense on liability related to sale of future royalties	5,259	4,451	6,604
Non-deductible officers' compensation	737	3,182	2,547
Tax law changes	23	45	248,155
Other	1,372	804	—
Provision for income taxes	$ 613	$ 1,412	$ 616

Tax Law Changes

The U.S. Tax Cuts and Jobs Act (the TCJA) was enacted on December 22, 2017. The TCJA reduced the U.S. federal corporate tax rate from 35% in 2017 to 21% in 2018, required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and created new taxes on certain foreign sourced earnings. At December 31, 2018, we completed our accounting for the tax effects of the TCJA, which, other than the decrease in the valuation of our federal deferred tax assets discussed below, did not have a material effect on our Consolidated Financial Statements.

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net tax effects of loss and credit carryforwards and temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. We remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. Significant components of our deferred tax assets for federal and state income taxes are as follows (in thousands):

	December 31,	
	2019	2018
Deferred tax assets:		
Net operating loss carryforwards	$ 399,361	$ 300,693
Research and other credits	128,015	116,955
Operating lease liabilities	36,907	—
Stock-based compensation	30,875	21,518
Property, plant and equipment	5,021	2,124
Capitalized research expenses	3,705	8,072
Reserves and accruals	2,934	8,066
Deferred revenue	1,908	4,467
Deferred tax assets before valuation allowance	608,726	461,895
Valuation allowance for deferred tax assets	(575,087)	(460,455)
Total deferred tax assets	33,639	1,440
Operating lease right-of-use assets	(31,718)	—
Other	(1,725)	(1,270)
Total deferred tax liabilities	(33,443)	(1,270)
Net deferred tax assets	$ 196	$ 170

Realization of our deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Because of our lack of U.S. earnings history, other than income resulting from revenue recognized from the BMS Collaboration Agreement, and projected future losses, we have fully reserved our net U.S. deferred tax assets with a valuation allowance. The valuation allowance increased by $114.6 million during the year ended December 31, 2019 due to our net loss and decreased by $35.7 million and $169.3 million during the years ended December 31, 2018 and 2017, respectively. The decrease in the valuation allowance for the year ended December 31, 2018 reflects the utilization of net operating loss carryforwards to offset federal and state taxable income, and the decrease in the valuation allowance for the year ended December 31, 2017 primarily reflects the change in the federal rate. The valuation allowance includes approximately $35.6 million of income tax benefit at both December 31, 2019 and December 31, 2018 related to stock-based compensation that will be included in income tax expense in our Consolidated Statement of Operations when realized.

For 2017, the one-time transition tax under the TCJA was based on our total post-1986 earnings and profits (E&P) that we previously deferred from U.S. income taxes. We concluded that there was negative E&P on an aggregate basis and we did not record any amount for any one-time transition tax triggered by the Tax Act. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

Net Operating Loss and Tax Credit Carryforwards

As of December 31, 2019, we had a net operating loss carryforward for federal income tax purposes of approximately $1,721.7 million, portions of which will begin to expire in 2022. As of December 31, 2019, we had a total state net operating loss carryforward of approximately $1,221.3 million, portions of which will begin to expire in 2026. Utilization of some of the federal and state net operating loss and credit carryforwards are subject to annual limitations due to the “change in ownership” provisions of the Internal Revenue Code of 1986 and similar state provisions.

We have federal research credits of approximately $94.8 million, which will begin to expire in 2020 and state research credits of approximately $49.4 million which have no expiration date. We have federal orphan drug credits of $17.7 million which will begin to expire in 2026. These tax credits are subject to the same limitations discussed above.

Unrecognized tax benefits

With the exception of net income recognized in 2018, we have incurred net operating losses since inception. Our policy is to include interest and penalties related to unrecognized tax benefits, if any, within the provision for income taxes in the consolidated statements of operations. If we are eventually able to recognize our uncertain positions, our effective tax rate may be reduced. We currently have a full valuation allowance against our U.S. net deferred tax asset which would impact the timing of the effective tax rate benefit should any of these uncertain tax positions be favorably settled in the future. Adjustments to the substantial majority of our uncertain tax positions would result in an adjustment of our net operating loss or tax credit carry forwards rather than resulting in a cash outlay.

We file income tax returns in the U.S., California, Alabama, certain other states and India. Because of net operating losses and research credit carryovers, substantially all of our domestic tax years remain open and subject to examination. We are currently under examination in India for the fiscal years ending 2009, 2016, 2017 and 2018.

We have the following activity relating to unrecognized tax benefits (in thousands):

	December 31,		
	2019	2018	2017
Beginning balance	$ 27,419	$ 20,483	$ 18,413
Tax positions related to current year			
Additions:			
Federal	1,365	2,019	1,206
State	48,493	3,645	1,666
Reductions	—	—	—
Tax positions related to prior year			
Additions:			
Federal	—	669	—
State	277	603	—
Foreign	—	—	—
Reductions	(144)	—	(802)
Settlements	—	—	—
Lapses in statute of limitations	—	—	—
Ending balance	$ 77,410	$ 27,419	$ 20,483

Although it is reasonably possible that certain unrecognized tax benefits may increase or decrease within the next twelve months, we do not anticipate any significant changes to unrecognized tax benefits over the next twelve months. During the years ended December 31, 2019, 2018 and 2017, no significant interest or penalties were recognized relating to unrecognized tax benefits.

Note 13 — Segment Reporting

We operate in one business segment which focuses on applying our technology platforms to develop novel drug candidates. Our business offerings have similar economics and other characteristics, including the nature of products and manufacturing processes, types of customers, distribution methods and regulatory environment. We are comprehensively managed as one business segment by our Chief Executive Officer.

Our revenue is derived primarily from customers in the pharmaceutical and biotechnology industries. Revenue from UCB Pharma, Takeda, and AstraZeneca represented 28%, 19% and 17% of our revenue, respectively, for the year ended December 31, 2019. Revenue from BMS represented 89% of our revenue, for the year ended December 31, 2018. Revenue from Lilly and UCB Pharma represented 42% and 12% of our revenue, respectively, for the year ended December 31, 2017.

Revenue by geographic area is based on the headquarters or shipping locations of our partners. The following table sets forth revenue by geographic area (in thousands):

	Year Ended December 31,		
	2019	2018	2017
United States	$ 27,093	$ 1,090,794	$ 190,810
Rest of World	87,524	102,529	116,901
Total revenue	$ 114,617	$ 1,193,323	$ 307,711

At December 31, 2019, $59.7 million, or approximately 92%, of the net book value of our property, plant and equipment was located in the United States and $5.3 million, or approximately 8%, was located in India. At December 31, 2018, $42.9 million, or approximately 88%, of the net book value of our property, plant and equipment was located in the United States and $5.9 million, or approximately 12%, was located in India.

Note 14 — Subsequent Event

On January 14, 2020, the FDA held an Advisory Committee meeting regarding our NDA for NKTR-181. The Advisory Committee voted against approval. We subsequently decided to withdraw our NDA and to make no further

investments in this program. On February 26, 2020, the Audit Committee of our Board of Directors approved management's plan for the wind-down of Inheris and the NKTR-181 program.

As a result, in the first quarter of 2020, we expect to incur charges of $45.0 million to $50.0 million, including non-cash charges of $19.7 million for the impairment of advance payments to contract manufacturers for commercial batches of NKTR-181, as well as other charges, primarily for non-cancellable commitments to our contract manufacturers and certain severance costs.

Note 15 — Selected Quarterly Financial Data (Unaudited)

The following table sets forth certain unaudited quarterly financial data. In our opinion, the unaudited information set forth below has been prepared on the same basis as our audited information and includes all adjustments necessary to present fairly the information set forth herein. We have experienced fluctuations in our quarterly results and expect these fluctuations to continue in the future. Due to these and other factors, we believe that quarter-to-quarter comparisons of our operating results will not be meaningful, and the results for any one quarter may not be indicative of our future performance. We have reclassified certain items previously reported in specific financial statement captions to conform to the current period presentation. Such reclassifications have not materially impacted previously reported total revenues, operating income (loss) or net income (loss). All data is in thousands except per share information.

	Year Ended December 31, 2019				Year Ended December 31, 2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Product sales	$ 4,398	$ 4,346	$ 5,558	$ 5,815	$ 6,295	$ 5,863	$ 4,256	$ 4,360
Total revenue	$ 28,222	$ 23,315	$ 29,218	$ 33,862	$ 38,018	$ 1,087,717	$ 27,762	$ 39,826
Cost of goods sold	$ 5,440	$ 5,018	$ 4,927	$ 5,989	$ 6,646	$ 5,522	$ 4,783	$ 7,461
Research and development expenses	$ 118,463	$ 106,686	$ 99,048	$ 110,369	$ 99,424	$ 88,334	$ 102,895	$ 108,883
Operating income (loss)	$ (120,687)	$ (110,970)	$ (98,740)	$ (109,638)	$ (86,739)	$ 973,600	$ (98,634)	$ (100,295)
Net income (loss) (1)	$ (119,632)	$ (110,286)	$ (98,585)	$ (112,164)	$ (95,792)	$ 971,460	$ (96,143)	$ (98,212)
Net income (loss) per share(1) (2)								
Basic	$ (0.69)	$ (0.63)	$ (0.56)	$ (0.64)	$ (0.60)	$ 5.67	$ (0.56)	$ (0.57)
Diluted	$ (0.69)	$ (0.63)	$ (0.56)	$ (0.64)	$ (0.60)	$ 5.33	$ (0.56)	$ (0.57)

(1) As discussed in Note 1, in the fourth quarter of 2019, we adopted ASU 2019-12, effective January 1, 2019, which affected previously reported amounts of net loss and net loss per share for the first three quarters of 2019. We have recast such amounts for the effects of adoption.

(2) Quarterly income (loss) per share amounts may not total to the year-to-date income (loss) per share due to rounding.

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

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Securities Exchange Act of 1934 (Exchange Act) reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required financial disclosure.

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Exchange Act Rule 13a-15. Based upon, and as

of the date of, this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures were effective. Accordingly, management believes that the financial statements included in this report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our internal control over financial reporting is 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 GAAP.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In making its assessment of internal control over financial reporting, management used the criteria described in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework).

Based on our evaluation under the framework described in *Internal Control — Integrated Framework*, our management concluded that our internal control over financial reporting was effective as of December 31, 2019.

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

Changes in Internal Control Over Financial Reporting

We continuously seek to improve the efficiency and effectiveness of our internal controls. This results in refinements to processes throughout the Company. There was no change in our internal control over financial reporting during the quarter ended December 31, 2019, which was identified in connection with our management's evaluation required by Exchange Act Rules 13a-15(f) and 15d-15(f) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on the Effectiveness of Controls

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 9B. *Other Information*

None.

PART III

Item 10. ***Directors,*** **Executive** ***Officers and Corporate Governance***

Information relating to our executive officers required by this item is set forth in Part I — Item 1 of this report under the caption "Executive Officers of the Registrant" and is incorporated herein by reference. The other information required by this Item is incorporated by reference from the definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A (Proxy Statement) not later than 120 days after the end of the fiscal year covered by this Form 10-K under the captions "Corporate Governance and Board of Directors," "Proposal 1 — Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance."

Information regarding our audit committee financial expert will be set forth in the Proxy Statement under the caption "Audit Committee," which information is incorporated herein by reference.

We have a Code of Business Conduct and Ethics applicable to all employees, including the principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The Code of Business Conduct and Ethics is posted on our website at www.nektar.com. Amendments to, and waivers from, the Code of Business Conduct and Ethics that apply to any of these officers, or persons performing similar functions, and that relate to any element of the code of ethics definition enumerated in Item 406(b) of Regulation S-K will be disclosed at the website address provided above and, to the extent required by applicable regulations, on a current report on Form 8-K.

As permitted by SEC Rule 10b5-1, certain of our executive officers, directors and other employees have or may set up a predefined, structured stock trading program with their broker to sell our stock. The stock trading program allows a broker acting on behalf of the executive officer, director or other employee to trade our stock during blackout periods or while such executive officer, director or other employee may be aware of material, nonpublic information, if the trade is performed according to a pre-existing contract, instruction or plan that was established with the broker when such executive officer, director or employee was not aware of any material, nonpublic information. Executive officers and directors can only sell our stock in accordance with our securities trading policy and pursuant to a stock trading program set up under Rule 10b5-1 (wherein "exercise and hold" and stock purchases are exempted, and sales outside such a program can proceed upon approval of the Nominating and Corporate Governance Committee of our Board of Directors. Employees who are not executive officers may trade our stock outside of the stock trading programs set up under Rule 10b5-1 subject to our securities trading policy.

Item 11. ***Executive Compensation***

The information required by this Item is included in the Proxy Statement and incorporated herein by reference.

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

The information required by this Item is included in the Proxy Statement and incorporated herein by reference.

Item 13. ***Certain Relationships and Related Transactions and Director Independence***

The information required by this Item is included in the Proxy Statement and incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services***

The information required by this Item is included in the Proxy Statement and incorporated herein by reference.

PART IV

Item *15. Exhibits and Financial Statement Schedules*

(a) The following documents are filed as part of this report:

(1) Consolidated Financial Statements:

The following financial statements are filed as part of this Annual Report on Form 10-K under Item 8 “Financial Statements and Supplementary Data.”

(2) *Financial Statement Schedules:*

All financial statement schedules have been omitted because they are not applicable, or the information required is presented in our consolidated financial statements and notes thereto under Item 8 of this Annual Report on Form 10-K.

(3) *Exhibits.*

Except as so indicated in Exhibit 32.1, the following exhibits are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K.

Exhibit Number	Description of Documents
2.1(1)	Asset Purchase Agreement, dated October 20, 2008, by and between Nektar Therapeutics, a Delaware corporation, AeroGen, Inc., a Delaware corporation and wholly-owned subsidiary of Nektar Therapeutics, Novartis Pharmaceuticals Corporation, a Delaware corporation, and Novartis Pharma AG, a Swiss corporation.+
3.1(2)	Certificate of Incorporation of Inhale Therapeutic Systems (Delaware), Inc.
3.2(3)	Certificate of Amendment of the Amended Certificate of Incorporation of Inhale Therapeutic Systems, Inc.
3.3(4)	Certificate of Ownership and Merger of Nektar Therapeutics.
3.4(5)	Certificate of Ownership and Merger of Nektar Therapeutics AL, Corporation with and into Nektar Therapeutics.
3.5(6)	Amended and Restated Bylaws of Nektar Therapeutics.
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4, and 3.5.
4.2(4)	Specimen Common Stock certificate.
4.3(7)	Indenture dated October 5, 2015 by and between Nektar Therapeutics and Wilmington Trust, National Association, and TC Lending, LLC including the form of 7.75% Senior Secured Note due 2020.
4.4(28)	Description of Securities.

Exhibit Number	Description of Documents
10.1(8)	2000 Equity Incentive Plan, as amended and restated.++
10.2(8)	2000 Non-Officer Equity Incentive Plan, as amended and restated.++
10.3(8)	2008 Equity Incentive Plan, as amended and restated.++
10.4(8)	Discretionary Incentive Compensation Policy++
10.5(8)	Amended and Restated Change of Control Severance Benefit Plan.++
10.6(9)	2012 Performance Incentive Plan.++
10.7(10)	Forms of Stock Option Agreement, Performance Stock Option Agreement, Restricted Stock Unit Agreement and Performance Restricted Stock Unit Agreement under the 2012 Performance Incentive Plan.++
10.8(11)	Nektar Therapeutics Amended and Restated 2017 Performance Incentive Plan.++
10.9(12)	Forms of Stock Option Agreement, Performance Stock Option Agreement, Non-Employee Director Stock Option Agreement, Restricted Stock Unit Agreement, Performance Restricted Stock Unit Agreement, and Non-Employee Director Restricted Stock Unit Agreement under the Amended and Restated 2017 Performance Incentive Plan.++
10.10(13)	Employee Stock Purchase Plan, as amended and restated.++
10.11(14)	Amended and Restated Compensation Plan for Non-Employee Directors.++
10.12(15)	401(k) Retirement Plan.++
10.13(16)	Form of Severance Letter for executive officers of the company.++
10.14(1)	Amended and Restated Letter Agreement, executed effective on December 1, 2008, with Howard W. Robin.++
10.15(1)	Amended and Restated Letter Agreement, executed effective on December 1, 2008, with John Nicholson.++
10.16(17)	Letter Agreement, executed effective on December 10, 2009, with Stephen K. Doberstein, Ph.D.++
10.17(28)	Transition, Separation and General Release Agreement, dated as of January 9, 2020, by and between Stephen K. Doberstein and Nektar Therapeutics. ++
10.18(19)	Separation, Consulting and General Release Agreement effective as of October 15, 2019, by and between Nektar Therapeutics and John Nicholson.++
10.19(28)	Employment Agreement effective as of December 4, 2019, by and between Nektar Therapeutics and John Northcott.++
10.20(16)	Amended and Restated Built-to-Suit Lease between Nektar Therapeutics and BMR-201 Industrial Road LLC, dated August 17, 2004, as amended on January 11, 2005 and July 19, 2007.

Exhibit Number	Description of Documents
10.21(18)	Lease Agreement dated August 4, 2017, as amended by the First Amendment to Lease dated as of August 29, 2017, by and between ARE-San Francisco No. 19, LLC and Nektar Therapeutics.
10.22(20)	Settlement Agreement and General Release, dated June 30, 2006, by and between The Board of Trustees of the University of Alabama, The University of Alabama in Huntsville, Nektar Therapeutics AL, Corporation (a wholly-owned subsidiary of Nektar Therapeutics), Nektar Therapeutics and J. Milton Harris.
10.23(1)	Exclusive Research, Development, License and Manufacturing and Supply Agreement, by and among Nektar AL Corporation, Baxter Healthcare SA, and Baxter Healthcare Corporation, dated September 26, 2005, as amended.+
10.24(1)	Exclusive License Agreement, dated December 31, 2008, between Nektar Therapeutics, a Delaware corporation, and Novartis Pharma AG, a Swiss corporation.+
10.25(17)	Supply, Dedicated Suite and Manufacturing Guarantee Agreement, dated October 29, 2010, by and among Nektar Therapeutics, Amgen Inc. and Amgen Manufacturing, Limited.+
10.26(21)	License Agreement by and between AstraZeneca AB and Nektar Therapeutics, dated September 20, 2009.+
10.27(22)	Collaboration and License Agreement dated as of May 30, 2016, by and between Daiichi Sankyo Europe GmbH and Nektar Therapeutics.
10.28(18)	License Agreement effective as of August 23, 2017, by and between Eli Lilly and Company and Nektar Therapeutics.
10.29(7)	Purchase Agreement dated September 30, 2015 by and among Nektar Therapeutics and TC Lending, LLC and TAO Fund, LLC.
10.30(7)	Pledge and Security Agreement dated October 5, 2015 by and among Nektar Therapeutics and TC Lending, LLC.
10.31(23)	Purchase and Sale Agreement, dated as of February 24, 2012, between Nektar Therapeutics and RPI Finance Trust.+
10.32(24)	Amendment No. 1 to License Agreement dated effective as of August 8, 2013, by and between Nektar Therapeutics and AstraZeneca AB.+
10.33(25)	Investor Agreement, dated as of February 13, 2018, by and between Bristol-Myers Squibb and Company and Nektar Therapeutics.+
10.34(25)	Strategic Collaboration Agreement, dated as of February 13, 2018, by and between Bristol-Myers Squibb and Company and Nektar Therapeutics.+
10.35(28)	Amendment No. 1 to Strategic Collaboration Agreement dated as of January 9, 2020, by and between Bristol-Myers Squibb and Company and Nektar Therapeutics.+
10.36(26)	Share Purchase Agreement, dated as of February 13, 2018, by and between Bristol-Myers Squibb and Company and Nektar Therapeutics.
10.37(27)	Office Lease, effective as of May 31, 2018, by and between Kilroy Realty Finance Partnership, L.P., and Nektar Therapeutics.

Exhibit Number	Description of Documents
21.1(28)	Subsidiaries of Nektar Therapeutics.
23.1(28)	Consent of Independent Registered Public Accounting Firm.
24	Power of Attorney (reference is made to the signature page).
31.1(28)	Certification of Nektar Therapeutics' principal executive officer required by Rule 13a-14(a) or Rule 15d-14(a).
31.2(28)	Certification of Nektar Therapeutics' principal financial officer required by Rule 13a-14(a) or Rule 15d-14(a).
32.1*	Section 1350 Certifications.
101.SCH**	Inline XBRL Taxonomy Extension Schema Document.
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE**	Inline XBRL Taxonomy Extension Presentation Label Linkbase Document.
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document.
104**	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

+	Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.
++	Management contract or compensatory plan or arrangement.
*	Exhibit 32.1 is being furnished and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall such exhibit be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act of 1933, as amended, or the Securities Exchange Act, except as otherwise stated in such filing.
**	Inline XBRL information is filed herewith.
(1)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2008.
(2)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended June 30, 1998.
(3)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended June 30, 2000.
(4)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on January 23, 2003.
(5)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2009.
(6)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on December 12, 2019.
(7)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on October 6, 2015.
(8)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2011.
(9)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on June 17, 2015.
(10)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K filed on December 17, 2015.
(11)	Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on June 27, 2018.

(12) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2018.
(13) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K, filed on June 27, 2014.
(14) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2012.
(15) Incorporated by reference to the indicated exhibit in Nektar Therapeutics Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.
(16) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended September 30, 2007.
(17) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2010.
(18) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended September 30, 2017.
(19) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended September 30, 2019.
(20) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.
(21) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended September 30, 2009.
(22) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.
(23) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended March 31, 2012.
(24) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended September 30, 2013.
(25) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended March 31, 2018.
(26) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Current Report on Form 8-K filed on February 14, 2018.
(27) Incorporated by reference to the indicated exhibit in Nektar Therapeutics' Quarterly Report on Form 10-Q for the quarter ended June 30, 2018.
(28) Filed herewith.

Item 16. ***Form 10-K Summary***

None.

SIGNATURES

Pursuant to 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, in the City and County of San Francisco, State of California on February 27, 2020.

By: /s/ GIL M. LABRUCHERIE

Gil M. Labrucherie

Senior Vice President, Chief Operating Officer, and Chief Financial Officer

By: /s/ JILLIAN B. THOMSEN

Jillian B. Thomsen

Senior Vice President, Finance and Chief Accounting Officer

POWER OF ATTORNEY

KNOW ALL PERSON BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gil M. Labrucherie and Jillian B. Thomsen and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K 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 and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratify and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ HOWARD W. ROBIN **Howard W. Robin**	Chief Executive Officer, President and Director (Principal Executive Officer)	February 27, 2020
/s/ GIL M. LABRUCHERIE **Gil M. Labrucherie**	Senior Vice President, Chief Operating Officer, and Chief Financial Officer (Principal Financial Officer)	February 27, 2020
/s/ JILLIAN B. THOMSEN **Jillian B. Thomsen**	Senior Vice President, Finance and Chief Accounting Officer (Principal Accounting Officer)	February 27, 2020
/s/ ROBERT B. CHESS **Robert B. Chess**	Director, Chairman of the Board of Directors	February 27, 2020
/s/ JEFFREY R. AJER **Jeffrey R. Ajer**	Director	February 27, 2020
/s/ MYRIAM J. CURET **Myriam J. Curet**	Director	February 27, 2020
/s/ KARIN EASTHAM **Karin Eastham**	Director	February 27, 2020
/s/ R. SCOTT GREER **R. Scott Greer**	Director	February 27, 2020
/s/ LUTZ LINGNAU **Lutz Lingnau**	Director	February 27, 2020
/s/ ROY A. WHITFIELD **Roy A. Whitfield**	Director	February 27, 2020

Exhibit 4.4

DESCRIPTION OF THE COMPANY'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

As of December 31, 2019, Nektar Therapeutics ("Nektar," the "Company," "we," "us," and "our") had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: our common stock.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our certificate of incorporation, as amended and currently in effect (our "Certificate of Incorporation") and our amended and restated bylaws (our "Bylaws"), each of which is incorporated by reference as an exhibit to our Annual Report on Form 10-K for the year ended December 31, 2019.

Authorized Capital Stock

Our authorized capital stock consists of 300,000,000 shares of common stock, par value $0.0001 per share, and 10,000,000 shares of preferred stock, par value $0.0001 per share

Common Stock

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Directors are elected by a plurality vote and the holders of common stock are not entitled to cumulative voting rights with respect to the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors.

Subject to preferences that may be applicable to any shares of preferred stock currently outstanding or issued in the future, holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable.

Listing

Our common stock is listed on The Nasdaq Global Select Market under the symbol "NKTR."

Transfer Agent and Registrar

Computershare Investor Services, LLC is the transfer agent and registrar for our common stock.

Preferred Stock

Our board of directors has the authority, without further vote or action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix, by filing a certificate of designation pursuant to the Delaware General Corporation Law, the rights, preferences, privileges and restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms

and the number of shares constituting any series or the designation of such series. The issuance of preferred stock could adversely affect the voting power or other rights of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation and could have the effect of delaying, deferring or preventing a change in control.

The Delaware General Corporation Law ("DGCL") provides that the holders of preferred stock will have the right to vote separately as a class on a proposed amendment to our certificate of incorporation involving certain fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided in the applicable certificate of designation. The issuance of preferred stock could adversely affect the voting power, conversion or other rights of holders of common stock and reduce the likelihood that holders of common stock will receive dividend payments and payments upon liquidation. Preferred stock could be issued quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock could have the effect of decreasing the market price of our common stock.

Provisions of our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law

Charter Documents

Our certificate of incorporation provides for our board of directors to be divided into three classes, with staggered three-year terms. As a result, only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Stockholders have no cumulative voting rights. Subject to the rights of the holders of any outstanding series of preferred stock, directors may not be removed without cause. Any vacancies on the board of directors shall be filled by the affirmative vote of a majority of the directors then in office, unless the board of directors otherwise determines that the vacancy shall be filled by stockholders entitled to vote for directors.

Our certificate of incorporation also requires that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of the stockholders and may not be effected by a consent in writing. The stockholders may amend, or adopt new, bylaws and amend certain provisions of our certificate of incorporation, including the provisions related to stockholder actions and the calling of special meetings of stockholders, only by the affirmative vote of the holders of 66 2/3 percent of the voting power of all of the outstanding shares of the voting stock of the Company entitled to vote at an election of directors. These provisions may have the effect of delaying, deferring or preventing a change in control.

The classification of our board of directors and lack of cumulative voting will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and in the policies of our board of directors and to discourage certain types of transactions that may involve an actual or threatened change in control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, such provisions also may inhibit increases in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management.

Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than the close of business on the sixtieth (60th) day nor earlier than the close of business on the ninetieth (90th) day prior to the first anniversary of the annual meeting for the preceding year. The notice must contain certain information specified in the bylaws. These provisions may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions

may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

Delaware Anti-Takeover Law

We are subject to the provisions of Section 203 of the DGCL ("Section 203"). In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with such person's affiliates and associates, owns, or did own within three years prior to such determination, 15% or more of the corporation's voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or
- at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

NEKTAR

TRANSITION, SEPARATION, AND GENERAL RELEASE AGREEMENT

RECITALS

This Transition, Separation, and General Release Agreement ("Agreement") is entered into as of November 13, 2019 (the "Effective Date") and is made by and between Stephen Doberstein, Ph.D. ("Doberstein") and Nektar Therapeutics ("Company").

WHEREAS, Doberstein and Company entered into an Employee Agreement, dated December 10, 2009, regarding various nondisclosure, non-solicitation and invention assignment obligations (the "Employee Confidentiality Agreement");

WHEREAS, on September 25, 2019, Doberstein decided to step down from his position as the Company's Senior Vice President, Research & Development and Chief Research & Development Officer;

WHEREAS, the Parties wish to provide for Doberstein's orderly transition of his duties as the Company's Senior Vice President, Research & Development and Chief Research & Development Officer, and, therefore, wish to continue Doberstein's status as a full-time employee as the Company's Chief Scientific Fellow through the "Transition Services Term" (as defined below) and then the Parties desire that Doberstein be available for, and, as needed, perform requested consulting services through the "Consulting Services Term" (as defined below);

NOW, THEREFORE, in consideration of the mutual promises and respective agreements, representations, warranties, covenants, conditions contained in this Agreement, the parties hereby agree as follows:

1. Transition Services.

(a) Transition Services and Term. As the Company's Chief Scientific Fellow, Doberstein will remain a full-time employee working to assist the Company in its preparation of a potential NKTR-181 advisory committee meeting, to participate in the NKTR-181 advisory committee meeting (in the event one is held), to assist in the orderly transition of his duties to other employees, and to perform such other tasks as may be reasonably requested by the Company (collectively, the "Transition Services"). Subject only to termination for gross misconduct, the term of these Transition Services (the "Transition Services Term") shall continue from September 25, 2019, through to the earliest of: (i) two weeks following the conclusion of the NKTR-181 advisory committee meeting; (ii) two weeks following the Company receiving official notice that no NKTR-181 advisory committee meeting will be held; (iii) two weeks following NKTR-181 receiving marketing authorization from the Food and Drug Administration, and (iv) July 31, 2020. Notwithstanding the foregoing, Doberstein will remain (subject

only to termination for gross misconduct) a full-time employee through at least March 6, 2020.

(b) Consideration during the Transition Services Term. During the Transition Services Term (subject to termination for gross misconduct), the Company will continue to pay Doberstein at the same annual base compensation Doberstein earned immediately prior to his assumption as Chief Scientific Fellow in accordance with the Company's normal payroll practices and be subject to the usual and required withholdings. Accordingly, Doberstein shall be entitled to the same rights, benefits, equity, salary, and vesting of equity awards, under any employee benefit or compensation plan or program sponsored by Company or any of its parent, subsidiary or affiliated entities as (as such benefit, plan or program may be amended from time to time) that Doberstein was entitled to immediately prior to his assumption as Chief Scientific Fellow. Doberstein will not, however, be entitled to any further grants of performance equity awards (e.g., grants of stock options or restricted stock units) pursuant to the 2019 performance review process (and any subsequent year's performance review process). In the event NKTR181 receives a positive vote at a NKTR-181 Food and Drug Administration advisory committee meeting, then (subject to termination for gross misconduct) Doberstein shall be entitled to a cash bonus award in the amount of one hundred fifty-four thousand, three hundred fifty dollars (which amount corresponds to 50% of Doberstein's target annual bonus) less all applicable withholdings and standard deductions.

(c) Bonus for Transition Services. On the date that the Transition Services Term concludes pursuant to Section 1 (a) (the "Separation Date"), unless Doberstein has been terminated for gross misconduct, Doberstein will be entitled to receive a bonus (the "Transition Services Bonus") in the amount of one hundred fifty thousand dollars ($150,000.00), not grossed up and less all applicable withholdings and standard deductions, which Transition Services Bonus is payable to Doberstein within fifteen (15) business days. This bonus is separate from and in addition to any cash bonus awarded pursuant to Section 1 (b).

(d) RSU Vesting During the Transition Services Term. Doberstein is the recipient of the following RSU grants: RSU Grant No. 9812522 (granted December 13, 2016); RSU Grant No. 9812523 (granted December 13, 2016); RSU Grant No. 9813250 (granted December 15, 2017); RSU Grant No. 9813251 (granted December 15, 2017); and RSU Grant No. 9813610 (granted December 14, 2019) (the combination of these five grants hereinafter referred to as the "RSU Grants"). Doberstein and Company hereby agree to a one-time modification of the vesting schedule of the RSU Grants as follows: the RSU vesting dates of November 15, 2019, and February 15, 2020, are both modified to March 6, 2020. For clarity, other than the preceding, one-time modification, all other terms and vesting of the RSU Grants remain unchanged.

2. Separation from Company and Severance Benefits.

(a) Separation. Effective on the date that the Transition Services Term concludes pursuant to Section 1 (a) (the "Separation Date"), Doberstein's

employment as Chief Scientific Fellow of the Company, as well as Doberstein's employment in any other capacity for the Company or any of its affiliates, shall terminate. In addition, with respect to stock options ("the Options") and restricted stock units ("the RSUs") the Company previously granted to Doberstein, Doberstein acknowledges and agrees that any such Options and any such RSUs not vested by the Separation Date are forfeited in accordance with the terms of the stock option and restricted stock unit agreements and related stock option and related restricted stock unit notices and the applicable equity incentive plan of the Company. Doberstein acknowledges and agrees that he has no further right or benefits under any agreement to receive or acquire any security or derivative security in or with respect to the Company or any of its affiliates or subsidiaries. Following the Separation Date, Doberstein shall not be authorized to transact any business on behalf of the Company or any its affiliates or subsidiaries unless authorized to do so in writing by an officer of the Company.

(b) Severance Benefits. Provided that Doberstein complies with all of the terms of this Agreement and duly signs and delivers to the Company a supplemental release (the "Supplemental Release" attached hereto as Exhibit A), the Company shall provide Doberstein with the following severance benefits (the "Severance Benefits"): (a) the Company will make a severance payment to Doberstein within fifteen (15) business days of the Separation Date in the amount of nine hundred twenty-six thousand, one hundred dollars ($926, 100.00) (the "Severance Payment") [which amount corresponds to the sum of one year of Doberstein's annual base salary of six hundred-seventeen thousand, four hundred dollars ($617,400.00), plus one hundred percent (100%) of Doberstein's target incentive bonus award of fifty percent (50%) of Doberstein's annual base salary, i.e., three hundred eight thousand, seven hundred dollars ($308,700.00)], less all applicable withholdings and standard deductions; (b) Doberstein's Options, to the extent outstanding and vested as of the Separation Date, will remain exercisable for a period ending three (3) months following the conclusion of the Consulting Services Term (defined below); and (c) provided that Doberstein timely exercises his right to continue his health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA"), the Company will pay the monthly health insurance coverage fees for Doberstein and his eligible dependents for a period commencing on the Separation Date and ending on the later of (i) the twelve month anniversary of the Separation Date, and (ii) March 31, 2021, subject to the proviso that in all cases the Company's obligation to pay the monthly health insurance coverage fees shall end on the date Doberstein becomes eligible to receive health insurance coverage from any subsequent employer. Doberstein shall notify the Company promptly upon accepting employment with any other person or entity, but no later than three calendar days prior to commencing such employment, and at the same time, Doberstein shall notify the Company whether he is eligible to receive health coverage in connection with such employment.
Doberstein acknowledges that at least certain of the Severance Benefits represent payments that he would not otherwise be entitled to receive, now or in the future, without entering into this Agreement, and constitutes valuable consideration for the promises and undertakings set forth in this Agreement.

3. Payment of Salary and Expenses. On Doberstein's Separation Date, the Company will pay Doberstein a total of (i) all accrued and unpaid salary, and (ii) an amount equaling his effective hourly rate multiplied by the number of hours of accrued, but unused, paid time off [collectively, (i) and (ii), the "Accrued Obligations"]. In the

event that Doberstein has a negative paid time off balance, Doberstein agrees that such amount will be deducted from the Company's payment to him of his Accrued Obligations. Doberstein agrees that, by the Separation Date, he will submit his final documented expense reimbursement statement reflecting all business expenses he incurred through the Separation Date, if any, for which he seeks reimbursement. The Company will reimburse Doberstein for these expenses pursuant to its regular business practice.

4. Consulting Services.

(a) Consulting Services and Term. Immediately effective upon the Separation Date and through to March 31, 2021 (the "Consulting Services Term"), and subject only to termination for gross misconduct, Doberstein will serve as an independent contractor to the Company to perform such other tasks as may be reasonably requested by the Company's Chief Executive Officer or his designee (the "Consulting Services"). Unless requested to do so by Company's Chief Executive Officer or his designee, Doberstein will not enter or visit Company' s premises and Doberstein is expected to provide Consulting Services from a location remote from any of Company's premises. Generally, during the Consulting Services Term, Doberstein is expected to be available upon reasonable notice for consultation by phone and email during regular business hours. During the Consulting Services Term, Doberstein will have no authority to represent the Company to third parties or to bind the Company to any contractual obligations, whether written, oral or implied, or represent that Doberstein has such authority, unless authorized to do so in writing by an officer of the Company. During the Consulting Services Term, Doberstein shall continue to abide by all of the Company's policies and procedures in effect from time to time and perform duties requested of Doberstein in good faith to the best of his abilities.

(b) Consideration and Fee Reimbursement during the Consulting Services Term. During the Consulting Services Term, Company will compensate Doberstein at the rate of two thousand dollars ($2,000.00) per month. Doberstein will bill his first 4 hours worked in any given month against the Retainer at the rate of $500 per hour. Any time worked in any given month more than 4 hours will be billed at the rate of $500 per hour. Any residual amount left over from the $2,000 Retainer in any given month as a result of Doberstein working fewer than 4 hours is non-reimbursable. In no event shall Doberstein be required to work more than 4 hours a month during the Consulting Services Term absent mutual agreement between the Company and Doberstein. Doberstein will also be reimbursed for reasonable out-of-pocket travel costs and other expenses that are approved in advance by email or writing by Company's Chief Operating Officer or his designee. All required Company travel during the Consulting Services Term shall be billed to the Company at $250 per hour. All required air travel shall be, to the extent available, business class.

(c) Invoices. During the Consulting Services Term and after a complete calendar month of Consulting Services, Doberstein shall provide to the Company on or before the seventh (7th) calendar day of the immediately following month an invoice for two thousand dollars ($2,000.00), plus $500 per hour for any hours worked over and above 4 hours. In the event the Consulting Services Term commences on a day other than the first of a calendar month, then the first and last invoices provided to the Company in connection with the Consulting Services shall

be pro-rated to correspond to the number of days in the month covered by the Consulting Services Term. In addition, Doberstein shall provide to the Company within seven (7) days at the end of each calendar month during the Consulting Services Term a true and correct invoice for any approved reasonable out-of-pocket travel costs and other expenses incurred during the prior month. The Company shall pay each invoice within fifteen (15) business days of receiving such invoice from Doberstein. Doberstein shall submit each invoice and direct all communications to the Company's Vice President, Human Resources (or such other person as delegated by Vice President, Human Resources).

(d) Independent Contractor Status. It is the express intention of Doberstein and the Company that, during the Consulting Services Term, Doberstein shall be an independent contractor, and shall be classified by Company as such for all purposes, and shall not be an officer, employee, agent, joint venturer, or partner of Company. Accordingly, Doberstein shall not be entitled to earn or accrue during the Consulting Services Term and thereafter any rights, benefits, equity, or salary, or vest in any equity awards, under any employee benefit or compensation plan or program sponsored by Company or any of its parent, subsidiary or affiliated entities at any time, including, but not limited to health, dental, vision, 401 (k), Change of Control Severance Benefit Plan, or other employee welfare benefits, and Doberstein shall be solely responsible for his insurance, taxes, fees, licenses, costs, equipment, expenses, and providing himself with office space, if necessary, to perform his duties as a consultant. Nothing in this Agreement shall be interpreted or construed as creating or establishing an employment relationship between Doberstein and Company at any time after the Separation Date. Doberstein will receive a form 1099 for services performed for the Company during the Consulting Services Term.

(e) Equity Awards. Pursuant to the applicable Equity Incentive Plan ("Equity Plans") and the equity award notices and agreements issued to Doberstein thereunder (collectively, the "Award Agreements"), Doberstein's right to exercise any vested stock options shall end on the earlier of (i) three months following the conclusion of the Consulting Services Term, or (ii) the expiration of the term of Doberstein's stock options. Doberstein's stock options and restricted stock units continue to remain subject to all other terms and conditions of the Award Agreements. Other than the modification to the vesting schedule for the RSU Grants set forth in Section 1 (d), in the event of any conflict between the terms of the Equity Plans and Award Agreements and this Agreement, the terms of the Equity Plans and Award Agreements will control. For purposes of Doberstein's right to exercise any vested stock options, the Transition Services Term and the Consulting Services Term shall together with Mr. Doberstein's employment to date constitute Continuous Service, as that term is defined in the Equity Plans and Award Agreements, such that pursuant to the Equity Plans and Award Agreements, Doberstein's right to exercise any vested stock options shall end on the earlier of (i) three months following the conclusion of the Consulting Services Term, or (ii) the expiration of the term of Doberstein's stock options; provided that, for the avoidance of doubt, the vesting of the RSU Grants identified in Section 4(d) shall be modified pursuant to Section 4(d).

5. Employee Acknowledgements.

(a) Acknowledgements and Representations. Doberstein acknowledges: (a) as of the Effective Data, receipt of all compensation and benefits due to him through the Effective Date as a result of services performed for the Company; (b) he has reported to the Company any and all work-related injuries incurred during employment; (c) the Company properly provided any leave of absence because of his or a family member's health condition, and he has not been subjected to any improper treatment, conduct or actions due to a request for or taking such leave; (d) he has provided the Company with written notice of any and all concerns regarding suspected ethical and compliance issues or violations on the part of the Company or any Released Party; (e) he has not filed any complaints, claims, or actions against the Company or any Released Party; and (f) he has not raised a claim of sexual harassment or abuse with the Company. Doberstein further represents that he will not bring any action in the future in which he seeks to recover any damages from the Company relating to or arising from his employment or his separation from the Company, other than an action to enforce his rights under this Agreement.

(b) Confidential Information. Doberstein shall continue to maintain the confidentiality of all confidential and proprietary information of Company and shall continue to comply with the continuing obligations of the Employee Confidentiality Agreement through the Transition Services Term, Consulting Services Term, and, as applicable, thereafter, including, without limitation, Section 4 of the Employee Confidentiality Agreement, which sets forth Doberstein's confidentiality obligations with respect to Company's Confidential Information (as defined in the Employee Confidentiality Agreement).

6. Release Provisions.

(a) General Release. In exchange for the consideration described in Sections 1 (b), 1 (c) and 2(b), Doberstein, personally and for Doberstein's heirs, executors, administrators, successors and assigns, hereby generally and completely release the Company and its subsidiaries, successors, predecessors and affiliates, and its and their respective partners, members, directors, officers, employees, stockholders, shareholders, agents, attorneys, predecessors, insurers, affiliates and assigns (all of whom are referred to throughout this Agreement as "Released Parties"), from any and all claims, demands, actions, causes of action, suits, damages, losses, expenses, liabilities, and obligations, both known and unknown, individually or as part of a group action, that arise out of or are in any way related to events, acts, conduct, or omissions occurring at any time through the date Doberstein signs this Agreement ("Claims"). This general release includes, but is not limited to, to all matters in law, equity, contract, tort, or pursuant to statute, including but not limited to any and all claims arising under the California Constitution, California statutory and common law; Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act, the California Fair Employment and Housing Act, the National Labor Relations Act; or any other federal, state or local statute, rule, ordinance, or regulation.

Doberstein further agrees and acknowledges that the release provided for in this Section 6 shall apply to all unknown and unanticipated injuries and/or damages. Doberstein acknowledges and understands that Section 1542 of the Civil Code of the State of California provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS/HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM/HER, WOULD HAVE MATERIALLY AFFECTED HIS/HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Doberstein intends these consequences even as to claims for damages that may exist as of the date this Agreement is executed that Doberstein does not know exist and which if known, would materially affect Doberstein's decision to execute this Agreement, regardless of whether the lack of knowledge is the result of ignorance, oversight, error, negligence or any other cause. Being aware of Section 1542 of the California Civil Code, Doberstein, by signing this Agreement, expressly waives the provisions of Section 1542 of the California Civil Code and any other similar provisions of law that may be applicable. Notwithstanding the foregoing, this release of claims does not waive claims for the breach of this Agreement.

(b) Exclusions from General Release. The above release does not waive claims: (i) for unemployment or workers' compensation, (ii) for vested rights under ERISA covered employee benefit plans as applicable on the date Doberstein signs this Agreement, (iii) that may arise after Doberstein signs this Agreement, (iv) for indemnification under California Labor Code section 2802, or (v) which cannot be released by private agreement.

7.Acknowledgement of Waiver of ADEA Claims. Doberstein acknowledges waiving and releasing any rights under the Age Discrimination in Employment Act of 1967 ("ADEA") and that this waiver and release is knowing and voluntary. Doberstein and the Company agree that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Doberstein acknowledges that the consideration given for this waiver and Agreement is in addition to anything of value to which Doberstein was already entitled. Doberstein further acknowledges notice by this writing that:

(a) Doberstein should consult with an attorney prior to executing this Agreement;

(b) Doberstein has up to twenty-one (21) calendar days within which to consider this Agreement;

(c) Doberstein has seven (7) calendar days following Doberstein's execution of this Agreement to revoke the Agreement;

(d) the ADEA waiver in this Agreement shall not be effective until the seven (7) day revocation period has expired; and

(e) nothing in this Agreement prevents or precludes Doberstein from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties or costs for doing so, unless specifically authorized by federal law; and

(f) in order to revoke this Agreement, Doberstein must deliver to Mark A . Wilson's attention at the following address a written revocation before 12:00 a.m. (midnight) p.s.t. on the seventh calendar day following the date Doberstein signs the Agreement:

Mark A. Wilson, Esq.
Nektar Therapeutics
455 Mission Bay Boulevard, South
Suite 100
San Francisco, CA 94158
Email: mwilson@nektar.com

8. Confidentiality of this Agreement. The provisions of this Agreement shall be held in strictest confidence by Doberstein and shall not be publicized or disclosed in any manner whatsoever by Doberstein at any time to any person other than Doberstein's lawyer or accountant, a governmental agency, or Doberstein's immediate family without the prior written consent of an officer of the Company, except as necessary in any legal proceedings directly related to the provisions and terms of this Agreement, to prepare and file income tax forms, or as required by subpoena or court order, in each case, after reasonable notice to the Company. Nothing in this Agreement shall prevent Doberstein from providing information to the NLRB upon request, nor shall this provision prevent Doberstein from exercising his rights under Section 7 of the National Labor Relations Act. Doberstein and the Company specifically disclaim any intent to enter into this Agreement in exchange for a promise not to reveal to any government entity, including any court or agency, conduct that could be construed as a violation of federal law.

9. Proprietary Information. Doberstein acknowledges access to and receipt of confidential business and proprietary information regarding the Company and its clients while working. This information may be in a variety of paper and electronic forms. Doberstein agrees not to make any such information known to any member of the public and to comply with all applicable ethical responsibilities related to client confidences and secrets.

10. Cooperation. Following the Effective Date, Doberstein agrees to reasonably cooperate with the Company in connection with: (a) any internal or governmental investigation or administrative, regulatory , arbitral or judicial proceeding involving the Company with respect to matters relating to Doberstein's service to the Company or any inquiries related to facts or circumstances that Doberstein knows as a result of service to the Company (collectively, "Litigation"); and (b) any audit of the financial statements of the Company with respect to the period of time when Doberstein was employed by the Company ("Audit"). Doberstein acknowledges that such cooperation may include, but shall not be limited to, Doberstein making himself reasonably available to the Company (or its respective attorneys or auditors) upon reasonable notice for: (i) interviews, factual investigations, and providing declarations or

affidavits that provide truthful information in connection with any Litigation or Audit; (ii) appearing at the request of the Company to give testimony without requiring service of a subpoena or other legal process; (iii) volunteering to the Company pertinent information related to any Litigation or Audit; (iv) providing information and legal representations to the auditors of the Company, in a reasonable form and within a reasonable time frame, with respect to the Company's financial statements for the period in which Doberstein was employed by the Company; and (v) turning over to the Company any documents relevant to any Litigation or Audit that are or may come into Doberstein's possession. In addition, Doberstein agrees that he will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against Company or any of its affiliates, unless under a subpoena or other court order to do so. Doberstein agrees both to immediately notify Company upon receipt of any such subpoena or court order, and to furnish, within three (3) business days of its receipt, a copy of such subpoena or other court order. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against Company or any of its affiliates, Doberstein shall state no more than that he cannot provide counsel or assistance. Notwithstanding anything to the contrary, nothing in this Agreement prevents Doberstein from providing truthful information to any governmental agency in connection with any governmental, regulatory or administrative agency proceeding. During the Consulting Services Term, Doberstein shall receive: (i) an hourly fee for the cooperation described in this Section 10 at a rate of $500 per hour; and (ii) the reimbursement of reasonable travel and other expenses incurred by Doberstein in the course of providing such cooperation, provided, however, that all such travel and other expenses shall be reimbursed only if approved by Company in advance. Following the end of the Consulting Services Term, Doberstein shall receive: (i) an hourly fee for the cooperation described in this Section 10 at a rate of $250 per hour; and (ii) the reimbursement of reasonable travel and other expenses incurred by Doberstein in the course of providing such cooperation, provided, however, that all such travel and other expenses shall be reimbursed only if approved by Company in advance. All required air travel incurred by Doberstein in the course of providing such cooperation shall be, to the extent available, business class.

11. Voluntary Waiver and Release, Advice of Counsel, Consideration and Other Information. Doberstein acknowledges and agrees that:

(a) his waiver and release of rights under this Agreement are voluntary, and that he is acting of his own free will in executing this Agreement;

(b) through this Agreement, he is releasing the Released Parties from any and all claims that he may have against any of the Released Parties;

(c) his waiver and release, as set forth in this Agreement, do not apply to any rights or claims that may arise after the date he signs this Agreement; and

(d) the Company hereby advises Doberstein that, before signing this Agreement, he should consult with an attorney, although he may choose voluntarily not to do so.

12. Tax Indemnification. Doberstein acknowledges and agrees that the Company has made no representations or Tax Indemnification warranties regarding the tax consequences of any amounts paid by the Company to Doberstein pursuant to this Agreement. Doberstein agrees to pay all federal or state taxes owed by him, if any, which are required by law to be paid with respect to the payments herein. Doberstein further agrees to indemnify and hold the Company harmless from any taxes owed by him, including interests or penalties owed by Doberstein, on account of this Agreement. Doberstein further agrees to reimburse Company for any attorney's fees and costs incurred by Company as a result of having to obtain indemnification under this Agreement. Doberstein will not be responsible for the employer's share of payroll taxes, if any, and does not indemnify Company for any failure on its part to pay the employer's share of payroll taxes, if any, on amounts paid by the Company to Doberstein pursuant to this Agreement.

13. Return of Company Property. Doberstein agrees that, on or before the beginning of the Consulting Services Term and to the extent not already completed, Doberstein will return to the Company all Company documents (and all copies thereof whether in physical or electronic format) and other Company property in Doberstein's possession or control, including, but not limited to: Company files, email, electronic messages, notes, memoranda, correspondence, agreements, draft documents, notebooks, logs, drawings, records, plans, proposals, reports, forecasts, financial information, sales and marketing information, research and development information, personnel information, specifications, computer-recorded information, tangible property and equipment, smart phones, cell phones, pagers, credit cards, entry cards, identification badges and keys; and any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof in whole or in part). If Doberstein has used any personal computer, server, or electronic system to receive, store, review, prepare or transmit any Company confidential or proprietary data, materials or information, Doberstein agrees to provide the Company with a computer-useable copy of such information and then permanently delete and expunge such Company confidential or proprietary information from those systems. Doberstein agrees to provide the Company access to his system as requested to verify that the necessary copying and/or deletion is completed. Doberstein agrees not to retain any paper or electronic copies of any Company documents or data (including but not limited to email and electronic messages) other than this Release and other documents evidencing his employment relationship with the Company.

14. No Interference with Rights. Nothing in this Release, including but not limited to the release of claims, the non-disclosure of confidential and proprietary information, the acknowledgements and promise not to sue, or the confidentiality agreements, (a) limits or affects Doberstein's right to challenge the validity of this release (b) prevents Doberstein from filing a charge or complaint with or from participating in an investigation or proceeding conducted by the EEOC, the National Labor Relations Board, the Securities and Exchange Commission, or any other federal, state or local agency charged with the enforcement of any laws, including providing documents or other information, or (c) prevents Doberstein from exercising his rights under Section 7 of the NLRA to engage in protected, concerted activity with other employees, although by signing this Agreement, Doberstein acknowledges waiving his right to recover any individual relief (including backpay, frontpay, reinstatement or other legal or equitable relief) in any charge, complaint, or lawsuit or other proceeding brought by Doberstein or on Doberstein' s behalf by any third party, except for any right Doberstein may have to receive a payment from a

government agency (and not the Company) for information provided to the government agency or where otherwise prohibited.

15. Right to Testify. Nothing in this Agreement shall be construed as a waiver of Doberstein's right to testify in an administrative, legislative, or judicial proceeding concerning alleged criminal conduct or alleged sexual harassment on the part of the Company, or on the part of the agents or employees of the Company, when Doberstein has been required or requested to attend such a proceeding pursuant to a court order, subpoena, or written request from an administrative agency or the legislature.

16. Entire Agreement; Modification. This Agreement is governed by California law. This Agreement, the Award Agreements and Doberstein's Employee Confidentiality Agreement constitute the complete and only agreements between Doberstein and the Company on these subjects. In entering this Agreement, Doberstein is not relying on any promise or representation, written or oral, other than those expressly contained in this Agreement. Any prior agreements between or directly involving Doberstein and the Company are superseded by this Agreement, except for the Employee Confidentiality Agreement with the Company, and the Award Agreements. This Agreement may not be modified except in a writing signed by both Doberstein and a Senior Vice President of the Company. This Agreement shall bind the heirs, personal representatives, successors and assigns of both Doberstein and the Company, and inure to the benefit of both Doberstein and the Released Parties, their heirs, successors and assigns. Any determination that a provision of this Agreement is invalid or unenforceable, in whole or in part, will not affect any other provision of this Agreement, and the provision in question shall be modified by the court so as to be rendered enforceable in accordance with the intent of the parties to the extent possible.

17. General. The headings in this Agreement are provided for reference only and shall not affect the substance of this Agreement. This Agreement may be signed in counterparts.

18. Costs. The parties shall each bear their own attorneys' fees and other fees incurred in connection with negotiating this Agreement.

19. Arbitration. The parties agree that any dispute regarding any aspect of this Agreement, including the confidentiality provisions, shall be submitted exclusively to final and binding arbitration before a mutually agreed upon arbitrator in accordance with the Federal Arbitration Act ("FAA"), 9 U.S.C. §1, et seq. In the event the FAA does not apply for any reason, then the arbitration will proceed pursuant to the California Arbitration Act, California Code of Civil Procedure 1280, et seq. The arbitrator shall be empowered to award any appropriate relief, including remedies at law, in equity or injunctive relief. Arbitration proceedings shall be held in San Francisco, California, or at any other location mutually agreed upon by the parties, and will be governed by JAMS' (Judicial Arbitration & Mediation Services) Employment Arbitration Rules and Procedures. The parties agree that this arbitration shall be the exclusive means of resolving any dispute under this Agreement and that no other action will be brought by them in any court or other forum. If the parties cannot agree on an arbitrator, then an arbitrator will be selected using the alternate striking method from a list of five (5) neutral arbitrators provided by JAMS. Employee will have the option of making the first strike. Each party will pay the fees for their own counsel, subject to any remedies to which that party may later be entitled under

applicable law. However, in all cases where required by applicable law, the Company will pay the arbitrator's fees and the arbitration costs.

20. Voluntary Execution of Agreement. This Agreement is executed voluntarily and without any duress or undue influence on the part or behalf of the parties hereto, with the full intent of releasing all claims. The parties acknowledge that: (a) they have read this Agreement; (b) they understand the terms and consequences of this Agreement and of the releases it contains; and (c) they are fully aware of the legal and binding effect of this Agreement.

21. Counterparts. This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned.

[Remainder of Page Intentionally Left Blank]

In exchange for the promises contained in this Agreement, the Company promises to provide the benefits set forth in this Agreement.

NEKTAR THERAPEUTICS

By: /s/ Dorian Hirth Dated: 11/13/19

DORIAN HIRTH

SVP, HUMAN RESOURCES & FACILITIES OPERATIONS

You have read and understood this Agreement, sign this Agreement knowing you could be waiving valuable rights, and acknowledge that this Agreement is final and binding.

By: /s/ Stephen Doberstein, Ph.D.

Stephen Doberstein, Ph.D. Dated: 4/13/19

EXHIBIT A

Supplemental Release

RECITALS

This supplemental release ("Supplemental Release") is entered into as of _____, 2020 (the "Supplemental Release Effective Date"), is made by and between Stephen Doberstein, Ph.D. ("Doberstein") and Nektar Therapeutics ("Company"), and is supplemental to that certain Transition, Separation, and General Release Agreement entered into on [DATE] by Doberstein and Company.

WHEREAS, Doberstein and Company entered into a Transition, Separation, and General Release Agreement, to, among other things, provide for the orderly transition of Doberstein's duties;

WHEREAS, on the parties wish to provide for the releases as set forth herein with immediate effect upon the Separation Date (as that term is defined in the Transition, Separation, and General Release Agreement);

NOW, THEREFORE, in consideration of the ongoing mutual promises and respective agreements, representations, warranties, covenants, conditions contained in the [DATE] Transition, Separation, and General Release Agreement, the parties hereby agree as follows:

1. General. The parties acknowledge and agree: Doberstein signed the Transition, Separation, and General Release Agreement; Doberstein's last day of employment was [Enter Calendar Date Corresponding to Separation Date]; Doberstein agrees to sign and deliver the Supplemental Release to the Company within twenty-one (21) calendar days of the Separation Date; Doberstein understands and agrees that signing this Supplemental Release extends all of the provisions and waivers in the [DATE] Transition, Separation, and General Release Agreement from its effective date through the date this Supplemental Release is signed, including Doberstein's release of any and all claims involving Doberstein's employment, association with and/or separation from Company; and, in consideration for this Supplemental Release, within twenty-one (21) calendar days of Doberstein's Separation Date (assuming Doberstein signs and delivers to the Company an executed version of the Supplemental Release), Doberstein shall receive payment of the Severance Payment as defined in the [DATE] Transition, Separation, and General Release Agreement.

2. Accrued Obligations. Upon receipt of (i) the Accrued Obligations detailed in Section 3 of the [DATE] Transition, Separation, and General Release Agreement, (ii) the

Transition Services Bonus for Transition Services detailed in Section 1 (c) of the [DATE] Transition, Separation, and General Release Agreement, (iii) and the Severance Benefits described in Section 2 of the [DATE] Transition, Separation, and General Release Agreement, Doberstein will have received all salary, wages, bonuses, accrued vacation and paid time off, and all other benefits and compensation due to him through the Separation Date.

3. Employee Acknowledgements

(a) Acknowledgements and Representations. Doberstein acknowledges:

(a) he has reported to the Company any and all work-related injuries incurred during employment; (b) the Company properly provided any leave of absence because of his or a family member's health condition, and he has not been subjected to any improper treatment, conduct or actions due to a request for or taking such leave; (c) he has provided the Company with written notice of any and all concerns regarding suspected ethical and compliance issues or violations on the part of the Company or any Released Party; (d) he has not filed any complaints, claims, or actions against the Company or any Released Party; and (e) he has not raised a claim of sexual harassment or abuse with the Company. Doberstein further represents that he will not bring any action in the future in which he seeks to recover any damages from the Company relating to or arising from his employment or his separation from the Company, other than an action to enforce his rights under this Supplemental Release and/or the Transition, Separation, and General Release Agreement.

(b) Confidential Information. Doberstein shall continue to maintain the confidentiality of all confidential and proprietary information of Company and shall continue to comply with the continuing obligations of the Employee Confidentiality Agreement, including, without limitation, Section 4 of the Employee Confidentiality Agreement, which sets forth Doberstein's confidentiality obligations with respect to Company's Confidential Information (as defined in the Employee Confidentiality Agreement).

4. Release Provisions

(a) General Release. In exchange for the consideration described in Sections I (b), 1 (c) and 2(b) of the [DATE] Transition, Separation, and General Release Agreement ("Agreement"), Doberstein, personally and for Doberstein's heirs, executors, administrators, successors and assigns, hereby generally and completely release the Company and its subsidiaries, successors, predecessors and affiliates, and its and their respective partners, members, directors, officers, employees, stockholders, shareholders, agents, attorneys, predecessors, insurers, affiliates and assigns (all of whom are referred to throughout this Agreement as "Released Parties"), from any and all claims, demands, actions, causes of action, suits, damages, losses, expenses, liabilities, and obligations, both known and unknown, individually or as part of a group action, that arise out of or are in any way related to events, acts, conduct, or omissions occurring at any time through the date Doberstein signs this Supplemental Release ("Claims"). This general release includes, but is not limited to, to all matters in law, equity, contract, tort, or pursuant to statute, including but not limited to any and all claims arising under the California Constitution, California statutory and common law; Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act, the California Fair Employment and Housing Act, the National Labor Relations Act; or any other federal, state or local statute, rule, ordinance, or regulation.

Doberstein further agrees and acknowledges that the release provided for in this Section 6 shall apply to all unknown and unanticipated injuries and/or damages. Doberstein acknowledges and understands that Section 1542 of the Civil Code of the State of California provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS/HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM/HER, WOULD HAVE MATERIALLY AFFECTED HIS/HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Doberstein intends these consequences even as to claims for damages that may exist as of the date this Supplemental Release is executed that Doberstein does not know exist and which if known, would materially affect Doberstein's decision to execute this Supplemental Release, regardless of whether the lack of knowledge is the result of ignorance, oversight, error, negligence or any other cause. Being aware of Section 1542 of the California Civil Code, Doberstein, by signing this Supplemental Release, expressly waives the provisions of Section 1542 of the California Civil Code and any other similar provisions of law that may be applicable. Notwithstanding the foregoing, this release of claims does not waive claims for the breach of this Supplemental Release.

(b) Exclusions from General Release. The above release does not waive claims: (i) for unemployment or workers' compensation, (ii) for vested rights under ERISA covered employee benefit plans as applicable on the date Doberstein signs this Supplemental Release, (iii) that may arise after Doberstein signs this Supplemental Release, (iv) for indemnification under California Labor Code section 2802, or (v) which cannot be released by private agreement.

5. Acknowledgement of Waiver of ADEA Claims. Doberstein acknowledges waiving and releasing any rights under the Age Discrimination in Employment Act of 1967 ("ADEA") and that this waiver and release is knowing and voluntary. Doberstein and the Company agree that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Doberstein acknowledges that the consideration given for this waiver and Supplemental Release is in addition to anything of value to which Doberstein was already entitled. Doberstein further acknowledges notice by this writing that:

(a) Doberstein should consult with an attorney prior to executing this Supplemental Release;

(b) Doberstein has up to twenty-one (21) calendar days within which to consider this Supplemental Release;

(c) Doberstein has seven (7) calendar days following Doberstein's execution of this Supplemental Release to revoke the Supplemental Release;

(d) the ADEA waiver in this Agreement shall not be effective until the seven (7) day revocation period has expired; and

(e) nothing in this Supplemental Release prevents or precludes Doberstein from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties or costs for doing so, unless specifically authorized by federal law; and

(f) in order to revoke this Supplemental Release, Doberstein must deliver to Mark A. Wilson's attention at the following address a written revocation before 12:00 a.m. (midnight) p.s.t. on the seventh calendar day following the date Doberstein signs the Supplemental Release:

Mark A. Wilson, Esq.
Nektar Therapeutics
455 Mission Bay Boulevard, South
Suite 100
San Francisco, CA 94158
Email: mwilson@nektar.com

6. Voluntary Waiver and Release, Advice of Counsel, Consideration and Other Information. Doberstein acknowledges and agrees that:

(a) his waiver and release of rights under this Supplemental Release are voluntary, and that he is acting of his own free will in executing this Supplement Release;

(b) through this Supplemental Release, he is releasing the Released Parties from any and all claims that he may have against any of the Released Parties;

(c) his waiver and release, as set forth in this Supplemental Release, do not apply to any rights or claims that may arise after the date he signs this Supplemental Release; and

(d) the Company hereby advises Doberstein that, before signing this Agreement, he should consult with an attorney, although he may choose voluntarily not to do so.

7. Counterparts. This Supplemental Release may be executed in counterparts, and each counterpart shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned.

[Remainder of Page Intentionally Left Blank]

In exchange for the ongoing promises contained in the [DATE] Transition, Separation, and General Release Agreement, the parties hereto, intending to be legally bound hereby, have caused this Supplemental Release to be executed.

NEKTAR THERAPEUTICS

By:_____ Dated•_____

SENIOR VICE PRESIDENT, NEKTAR THERAPEUTICS

You have read and understood this Supplemental Release, sign this Supplemental Release knowing you could be waiving valuable rights, and acknowledge that this Supplemental Release is final and binding.

STEPHEN DOBERSTEIN, PH.D.

Dated:_____

_____

Exhibit 10.19

EMPLOYEE AGREEMENT

In consideration of my employment or continued employment by Nektar Therapeutics, its subsidiaries or affiliates (collectively, the "Company"), I, John Northcott (name) residing at [***] (address) as of the date I was first employed by Company as follows:

1. Entire Agreement: This Agreement sets forth the complete and entire agreement between Company and me and supersedes any and all previous oral or written communications, discussions and agreements between Company and me with respect to the subject of this Agreement.

2. Employment:

a. Duty of Loyalty. During the period of my employment by the Company, I shall devote my full time and best efforts to the business of the Company, and I shall neither pursue any business opportunity outside the Company nor take any position with any organization other than as authorized in writing by the Chief Executive Officer of the Company. While employed by the Company, I will avoid all conflicts of interest and will not compete with the Company or undertake other acts of disloyalty.

b. Change in Jobs. I agree that all of my obligations under this Agreement will remain in full force and effect should I receive a promotion, demotion or experience a change in job title or duties while employed by the Company.

c. Employment at Will. I agree that this Agreement does not guarantee my continued employment with the Company. I acknowledge that, unless I enter into a written employment agreement with the Company that provides for a specified period of employment, I am employed "at-will," meaning that either the Company or I may terminate the employment relationship at any time, for any or no reason, with or without cause or prior notice.

3. Assignment of Developments:

a. Assignment to Company. If at any time or times during my employment or other association with the Company, I shall (either alone or with others) make, conceive, create, discover, invent or reduce to practice any development that (i) relates to the business of the Company or any of the products or services being developed, manufactured or sold by the Company or which may be used in relation therewith; or (ii) results from tasks assigned to me by the Company; or (iii) results from the use of premises or personal property (whether tangible or intangible) owned, leased or contracted for by the Company (hereinafter collectively referred to as "Developments"), then all such Developments and the benefits thereof are and shall immediately become the sole and absolute property of the Company and its assigns, as works made for hire or otherwise. I shall promptly disclose to the Company (or any persons designated by it) each such Development. I hereby assign all rights (including, but not limited to, rights to inventions, patentable subject matter, copyrights and trademarks) I may have or may acquire in the Developments, as well as all benefits and/or rights resulting therefrom, to the Company and its assigns without further compensation and shall communicate, without cost or delay, and without disclosing to others the same, all available information relating thereto (with all necessary plans and models) to the Company.

b. Requirement to Provide Assistance. I agree to assist the Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in the

Developments and any copyrights, patents, trademarks, and trade secret rights or other intellectual property rights in connection with any such Developments in any and all countries, including the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, assignments and all other instruments which the Company shall deem necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such Developments, and any copyrights, patents, trademark and other intellectual property rights relating thereto. I further agree that my obligation to execute or cause to be executed, when it is in my power to do so, any such instrument or papers shall continue after the termination of this Agreement. If the Company is unable, because of my mental or physical incapacity or for any other reason, to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Developments or original works of authorship assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact, to act for and in my behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of letters patent or copyright registrations thereon with the same legal force and effect as if executed by me.

c. Works Made For Hire. I will promptly disclose to the Company all material which I produce, compose or write, individually or in collaboration with others, which arises out of work delegated to me by the Company. I agree that all such material constitutes a work for hire, and at the expense of the Company, I will assign to the Company all my interest in such copyrightable material and will sign all papers and do all other acts necessary to assist the Company to obtain copyrights on such material in any and all countries.

d. Ongoing Notice Obligation. I agree that for a period of one (1) year following the termination of my employment for any reason, I will notify the Company immediately of any and all creations, discoveries, inventions or other developments made by me (either alone or with others) that relate to the business of the Company or relate to research and development in which I was involved during the course of my employment by the Company. Any such creation, discovery, invention or other development relating to the Company's business made by me (either alone or with others) within one (1) year following the termination of my employment shall be presumed to be owned by the Company.

e. Inventions Not Assigned to Company. I understand and acknowledge that the assignment of Developments under this Agreement does not apply to an invention which qualifies fully for protection under section 2870 California Labor Code section, a copy of which is attached as Appendix A, which pertains to any rights I may have acquired in connection with an invention, discovery or improvement that was developed entirely on my own time for which no equipment, supplies, facilities or trade secret information of the Company was used and (a) that does not relate directly or indirectly to the business of the Company or to the Company's actual or demonstrably anticipated research or development, or (b) that does not result from any work performed by me for the Company.

f. Disclosure of Prior Inventions. I represent that the creations, discoveries, inventions or other developments identified in Appendix B attached hereto ("Prior Developments"), if any, comprise all the Prior Developments that I made or conceived prior to my employment by the Company, which Prior Developments are excluded from this Agreement. I understand that it is only necessary to list the title of such Prior Developments and the purpose thereof, but not details of the Prior Development itself. IF THERE ARE ANY SUCH

DEVELOPMENTS TO BE EXCLUDED, THE UNDERSIGNED SHOULD INITIAL HERE; OTHERWISE IT WILL BE DEEMED THAT THERE ARE NO SUCH EXCLUSIONS.

4. Nondisclosure and Nonuse of Confidential Information: I shall not at any time, whether during or after the termination of my employment, reveal to any person or entity any Confidential Information except to employees of the Company who need to know such Confidential Information for the purposes of their employment, or as otherwise authorized by the Company in writing. The term "Confidential Information" shall include any information concerning the organization, business or finances of the Company or of any third party which the Company is under an obligation to keep confidential that is maintained by the Company as confidential. Such Confidential Information shall include, but is not limited to, trade secrets or confidential information respecting methods, scientific data or experiments, clinical data, know-how, techniques, systems, processes, specifications, blueprints, formulae, devices, models, software programs, works of authorship, customer lists, customer information, financial information, pricing or commission information, business plans, projects, plans and proposals. I shall keep confidential all matters entrusted to me and shall not use or attempt to use any Confidential Information except as may be required in the ordinary course of performing my duties as an employee of the Company, nor shall I use any Confidential Information in any manner which may injure or cause loss or may be calculated to injure or cause loss to the Company, whether directly or indirectly. I further recognize that Confidential Information may be embodied in hard-copy documents, electronic records and also the content of my memories of information that I had access to during my employment with the Company. Some of the Confidential Information may be further protected under California law as a trade secret as that term is defined in the Uniform Trade Secrets Act (Civil Code section 3426.1011)

5. Nonsolicitation of Customers and Employees: I agree that the Company has invested substantial time, effort and expense in compiling its confidential and trade secret information and in assembling its present personnel and customers. In order to protect the confidentiality of the Company's sensitive information, I agree that, during my employment and for one (1) year thereafter, I shall not do the following:

a. directly or indirectly solicit in any way any customer of the Company with the use or assistance of Confidential Information of the Company that I obtained during my employment for the purpose of engaging in or assisting in soliciting business from that customer;

b. solicit any person who is then in the employ of the Company to leave the employ of the Company; or

c. aid, assist or counsel any other person, firm or corporation to do any of the above.

6. Return of Property: I shall keep on Company's premises (except when required elsewhere in connection with the conduct of Company's business) and shall deliver to Company upon termination of my employment all writings related to the business of Company, and all documents, equipment, materials and other personal property belonging to Company. I further agree not to make or retain any copy, duplication, facsimile, reproduction or replication of any of the foregoing except as necessary to perform my duties as an employee of the Company. This provision pertains to hard copy documents and any and all electronic records.

7. No Violation Of Prior Trade Secret Or Non-Competition Agreements: I represent that the performance of all the terms of this Agreement as an employee of this Company will not conflict with, and will not breach, any other development assignment agreement, confidentiality

agreement, employment agreement or non-competition agreement to which I am or have been a party. To the extent that I have confidential information or materials of any former employer of mine, I acknowledge that the Company has directed me to not disclose such confidential information or materials to the Company or any of its employees, and that the Company prohibits me from using said confidential information or materials in any work that I may perform for the Company, and I will not bring with me to the Company, and will not use or disclose any confidential, proprietary information, or trade secrets acquired by me prior to my employment with the Company. I will not disclose to the Company or any of its employees, or induce the Company or any of its employees to use, any confidential or proprietary information or material belonging to any previous employers or others, nor will I bring to the Company or use in connection with my work for the Company copies of any software, computer files, or any other copyrighted or trademarked materials except those owned by or licensed to the Company. I am not a party to any other agreement that will interfere with my full compliance with this Agreement. I further agree not to enter into any agreement, whether written or oral, in conflict with the provisions of this Agreement.

8. Choice of Law: This Agreement shall be construed and governed by the laws of the State of California.

9. No Waiver: The waiver of any breach of this Agreement shall not constitute a waiver of subsequent similar of dissimilar breaches of this Agreement, or a waiver of any of the obligations contained herein.

10. Assignment: The Company shall have the right to assign this Agreement to its successors and assigns, and all covenants and agreements hereunder shall inure to the benefit of and be enforceable by said successors and assigns.

11. Right to Notify: I recognize the right of Company to notify any third party of the existence of this Agreement and/or its provisions and/or my agreeing to it.

12. Severability: Should a provision or part of a provision of this Agreement be found as a matter or law to be invalid, such finding shall not have the effect of invalidating the remainder of this Agreement and the provision or part thereof as to which such finding of invalidity is made shall be interpreted so as to be ineffective only to the extent of such invalidity without invalidating the remainder of such provision or part thereof or any of the other provisions of this Agreement.

13. Breach: I agree that any breach of this Agreement by me will cause irreparable damage to the Company and that in the event of such breach the Company shall have, in addition to any and all remedies of law, the right to an injunction, specific performance or other equitable relief to prevent the violation of my obligations hereunder.

EMPLOYEE:

Signed: /s/ John Northcott

Name: John Northcott

Dated: November 26, 2019

Nektar Therapeutics

By: /s/ Dorian Hirth

Title: Sr Vice President, Human Resources

Dated: 12/4/2019

APPENDIX A

Section 2870 of California Labor Code: Application of provision providing that employee shall assign or offer to assign rights in invention to employer.

a. Any provision and employment agreement which provides that an employee shall assign, or offer to assign, any of his or her rights in an invention to his or her employer shall not apply to an invention that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities or trade secret information except for those inventions that either:

1 Relate at the time of conception or reduction to practice of the invention to the employer's business, or actual or demonstrably ariticipated research or development of the employer; or

2 Result from any work performed by the employee for the employer.

b. To the extent a provision in an employment agreement purports to require an employee to assign an invention otherwise excluded from being required to be +assigned under subdivision (a), the provision is against the public policy of this state and is unenforceable.

APPENDIX B

PRIOR INVENTIONS

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

AMENDMENT NO. 1
TO STRATEGIC COLLABORATION AGREEMENT

This AMENDMENT NO. 1 (this "Amendment") to the Agreement (as defined below) is entered into as of January 9, 2020 (the "Amendment Effective Date") by and between **Nektar Therapeutics**, a Delaware corporation, headquartered at 455 Mission Bay Boulevard South, Suite 100, San Francisco, CA 94158 ("Nektar") and **Bristol-Myers Squibb Company**, a Delaware corporation, with offices at 430 E. 29th Street, 14th floor, New York, NY 10016 ("BMS"). Nektar and BMS may be referred to herein individually as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, the Parties have entered into a Strategic Collaboration Agreement dated as of February 13, 2018 and effective as of April 3, 2018 (the "Agreement");

WHEREAS, the Parties have agreed to a revised version of the Joint Development Plan that supersedes and replaces any prior versions thereof, including the initial Joint Development Plan attached to the Agreement as Schedule 3.1;

WHEREAS, as a result of their agreement on a revised Joint Development Plan, the Parties wish to amend the list of Collaboration Therapies attached to the Agreement as Schedule 1.43; and

WHEREAS, the Parties, pursuant to Section 17.9 of the Agreement, wish to formalize their agreement on the revised Joint Development Plan and agree on certain additional amendments pursuant to the terms and conditions hereof.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises and covenants contained herein, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. DEFINITIONS

The terms in this Amendment with initial letters capitalized that are not defined herein shall have the meaning set forth in the Agreement.

2. AMENDMENTS

2.1 Joint Development Plan

(a) Pursuant to Sections 3.1(b), 3.6(b) and 3.6(c) of the Agreement, the Parties, on the basis of a meeting of the JDC held on [***], and through other discussions held in accordance with the Agreement have agreed to a revised Joint Development Plan. The revised Joint Development Plan, effective as of the Amendment Effective Date, is attached hereto as Appendix A. The Parties hereby waive the requirement to have the revised Joint Development Plan attached hereto as Appendix A approved at a meeting of the JDC. This revised Joint Development Plan replaces and supersedes, as of the Amendment Effective Date, the initial Joint Development Plan attached as Schedule 3.1 to the Agreement.

(b) As a result of their agreement on this revised Joint Development Plan, the Parties are hereby released from any and all obligations or restrictions in respect of any of the Initial Trials that are

not listed in the revised Joint Development Plan attached hereto as Appendix A (including relating to the conduct thereof).

(c) Subject to Section 2.1(g), for each of the Collaboration Studies contemplated in the revised Joint Development Plan, Appendix A sets forth, for each Collaboration Study, either its Diligence Date or a confirmation that the Diligence Date has been met, provided that such Diligence Dates shall remain subject to Allowable Delays.

(d) For purposes of this Amendment and to the actual knowledge of BMS' [***], BMS is not aware of any circumstance that would justify to delay, on the basis of the application of the Commercially Reasonable Efforts standard of the Agreement, the commencement (and solely the commencement), by the applicable Diligence Date, of any of the Collaboration Studies referred to in the Joint Development Plan attached as Appendix A that has not started as of the Amendment Effective Date. For purposes of this Amendment and to the actual knowledge of Nektar's [***], Nektar is not aware of any circumstance that would justify to delay, on the basis of the application of the Commercially Reasonable Efforts standard of the Agreement, the commencement (and solely the commencement), by the applicable Diligence Date, of any of the Collaboration Studies referred to in the Joint Development Plan attached as Appendix A that has not started as of the Amendment Effective Date.

(e) As a result of their agreement on the revised Joint Development Plan, the Parties agree to a revised Schedule 1.43 (Collaboration Therapies) to the Agreement. Such revised Schedule 1.43, attached hereto as Appendix C, replaces and supersedes, as of the Amendment Effective Date, the initial version of Schedule 1.43 attached to the Agreement. For clarity, as of the Amendment Effective Date, the restrictions set forth in Section 7.3(d) of the Agreement will no longer apply to any Collaboration Therapy that is not listed in the revised Schedule 1.43 attached hereto as Appendix C. For additional clarity, the restrictions set forth in Section 7.3(d) of the Agreement will apply to first line non-small-cell lung cancer Collaboration Therapy even if there is, as of the Amendment Effective Date, no Collaboration Study associated with that Collaboration Therapy.

(f) BMS shall have the right, at its sole discretion, to terminate co-funding of its pro rata share of the Development Costs for the Adjuvant Melanoma Collaboration Study by notice in writing to Nektar in the event that the Metastatic Melanoma Collaboration Study fails to meet the primary endpoint of progression-free survival (the "Adjuvant Melanoma Co-Funding Termination Right"). In the event that any primary or co-primary endpoint is not reached in the Metastatic Melanoma Collaboration Study, the Parties, with the understanding that the health and welfare of patients is of foremost importance, agree to meet and confer to discuss whether there is a need to inform patients, physicians or study sites involved in the Adjuvant Melanoma Collaboration Study of such endpoints not having been reached or other relevant information in the Metastatic Melanoma Collaboration Study, and if so, the means and timeframe to do so. In the event BMS duly exercises its Adjuvant Melanoma Co-Funding Termination Right, Nektar shall have the right, in its sole discretion, to continue the Adjuvant Melanoma Study as a Combined Therapy Independent Study pursuant to the Agreement.

(g) For the avoidance of doubt, notwithstanding anything herein or in the Agreement to the contrary, nothing in this Amendment or the Agreement should be read or construed as creating any obligation on either Party to agree to conduct any Phase III Study or registrational Clinical Trial of a [***]. The gating criteria included in Appendix A in this respect are for guidance purposes only.

[***]

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

2.2 Release and Waiver. EACH PARTY HEREBY FULLY AND IRREVOCABLY RELEASES AND WAIVES ANY CLAIM, WHETHER KNOWN OR UNKNOWN, IT HAS OR MAY HAVE FROM THE BEGINNING OF TIME TO THE AMENDMENT EFFECTIVE DATE AGAINST THE OTHER PARTY ARISING OUT OF, OR RELATING TO, (A) ANY FAILURE BY SUCH OTHER PARTY TO CONDUCT ANY OF THE INITIAL TRIALS OR (B) ANY OF THE INITIAL TRIALS NOT HAVING MET THEIR DILIGENCE DATE, INCLUDING AS SET FORTH IN SECTION 3.2(A) OF THE AGREEMENT.

2.3 Additional Milestone Payments

(a) **Additional, Non-creditable Milestone Payment**. Within [***] following the achievement of the first patient, first visit in the first Phase III Study of a Combined Therapy consisting of a Product and the BMS Compound that is conducted as a Combined Therapy Collaboration Study (and not an Independent Study) in adjuvant melanoma (the "Additional Melanoma Milestone"), BMS shall pay, or cause to be paid, to Nektar an amount of twenty-five million U.S. Dollars ($25,000,000) (the "Additional Melanoma Milestone Payment"). The Additional Melanoma Milestone Payment payable pursuant to this Section 2.3(a) will be non-refundable and non-creditable and is in addition to all other payments that are, or may be due, to Nektar under the Agreement (as amended). The Additional Melanoma Milestone Payment shall be payable only one time regardless of the number of products that achieve such Additional Melanoma Milestone and regardless of the number of Indications for which such Additional Melanmoa Milestone is achieved.

(b) **Additional, Creditable Milestone Payments**.

(i) Additional MIBC Milestone Payment. Within [***] following the achievement of the first patient, first visit in the first Phase III Study of a Combined Therapy consisting of a Product and the BMS Compound that is conducted as a Combined Therapy Collaboration Study (and not an Independent Study) in Muscle Invasive Bladder Cancer (the "Additional MIBC Milestone"), BMS shall pay, or cause to be paid, to Nektar an amount of twenty-five million U.S. Dollars ($25,000,000) (the "Additional MIBC Milestone Payment"). The Additional MIBC Milestone Payment payable pursuant to this Section 2.3(b)(i) will be non-refundable, but will be fully creditable against any future Development Milestone Payment(s) payable by BMS to Nektar pursuant to Section 9.2(b) of the Agreement, until the full amount of such Additional MIBC Milestone Payment shall have been applied to Development Milestone Payments. The Additional MIBC Milestone Payment shall be payable only one time regardless of the number of Products that achieve such Additional MIBC Milestone and regardless of the number of Indications for which such Additional MIBC Milestone is achieved.

(ii) Within [***] following the achievement of the first patient, first visit in the first Phase III Study of a Combined Therapy consisting of a Product and the BMS Compound that is conducted as a Combined Therapy Collaboration Study (and not an Independent Study) in First Line Non-Small-Cell Lung Cancer (the "Additional Lung Milestone"), BMS shall pay, or cause to be paid, to Nektar an amount of seventy-five million U.S. Dollars ($75,000,000) (the "Additional Lung Milestone Payment"). The Additional Lung Milestone Payment payable pursuant to this Section 2.3(b)(ii) will be non-refundable, but will be fully creditable against any future Development Milestone Payment(s) payable by BMS to Nektar pursuant to Section 9.2(b) of the Agreement, until the full amount of such Additional Lung Milestone Payment shall have been applied to Development Milestone Payments. The Additional Lung Milestone Payment shall be payable only one time regardless of the number of Products that achieve such Additional Lung Milestone and regardless of the number of Indications for which such Additional Lung Milestone is achieved. For the avoidance of doubt, notwithstanding anything herein or in the Agreement

to the contrary, nothing in this Amendment or the Agreement should be read or construed as creating any obligation on either Party to agree to conduct any Phase III Study or registration Clinical Trial of the Combined Therapy in [***] as a Combined Therapy Collaboration Study.

2.4 Combined Therapy Collaboration Studies Expenses. Schedule 6.3 of the Agreement is replaced in its entirety by the new version attached to this Amendment as Appendix D.

2.5 Right of Cross Reference. Section 4.2(b)(v) of the Agreement is replaced in its entirety by the following:

> "(v) to the extent necessary for the conduct of any Collaboration Study or Independent Study or BMS's filing of a BLA or supplemental BLA as set forth in Section 10.1(b), providing BMS a Right of Cross-Reference to the relevant Regulatory Documentation, provided that, such Right of Cross-Reference shall terminate upon the expiration or termination of this Agreement for purposes of conducting any new Clinical Trials, except that in the case of termination for a Material Safety Issue pursuant to Section 16.4, such Right of Cross-Reference shall remain in effect solely (A) to the extent necessary to permit BMS to comply with any outstanding obligations required by a Regulatory Authority and/or Applicable Law or (B) as necessary to permit BMS to continue to dose subjects enrolled in each Collaboration Study or Independent Study through completion of the applicable Protocol if required by the applicable Regulatory Authority(ies) and/or Applicable Laws;"

2.6 Reimbursement for Opt-Out Development Costs. Section 7.4 of the Agreement is replaced in its entirety by the following:

> "**7.4 Reimbursement for Opt-Out Development Costs.** If a Monotherapy Independent Study or Combined Therapy Independent Study results in Regulatory Approval or a Label expansion of a BMS Asset or Nektar Asset (including the Nektar Compound), the non-funding Party shall reimburse the funding Party for the non-funding Party's allocated share of Opt-Out Development Costs incurred by the funding Party for the applicable Monotherapy Independent Study or Combined Therapy Independent Study (using the principles set forth in Sections 5.3(c)(i), 6.2 and 6.3) for which the non-funding Party would have been responsible had such Independent Study been a Collaboration Study, plus an amount equal to either (i) [***] of such reimbursement in the event that the applicable Combined Therapy Independent Study studies the Combined Therapy of a Product and the BMS Compound (whether or not other compounds are included in such study), or (ii) [***] of such reimbursement in all other cases. Such reimbursed Opt-Out Development Costs (and the [***] or [***], as applicable, additional reimbursement for such Independent Study) shall be subject to the reconciliation procedures set forth in Section 9.7 but shall not be subject to the Development Cost Cap."

2.7 Independent Studies. Appendix B hereto includes a list of Independent Studies currently being conducted or planned to be initiated by a Party.

2.8 [***]

2.9 [***]

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

2.10 Governance. The Parties agree that Allowable Delays shall include the time between the expiration of any contractually agreed timeframefor the provision by one Party to the other Party of information, comments or Study Data and the actual provision thereof.

3. PUBLICITY

Upon execution of this Amendment, the Parties will issue a press release the contents of which is as attached hereto as Appendix E. The aforementioned press release will be issued within [***] before the opening of U.S. based stock market trading on [***].

4. MISCELLANEOUS

4.1 This Amendment shall become effective on the Amendment Effective Date.

4.2 Unless and to the extent expressly amended by this Amendment, all the terms and conditions of the Agreement shall remain in full force and effect.

4.3 In the event of a conflict between the terms of this Amendment (or any attachments thereto) and the terms of the Agreement, the terms of this Amendment (including its attachments) shall prevail.

4.4 The headings used in this Amendment have been inserted for convenience of reference only and do not define or limit the provisions hereof.

4.5 This Amendment may be signed in any number of counterparts (facsimile and electronic transmission included), each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

4.6 This Amendment and all claims relating to or arising out of this Amendment or the breach thereof shall be governed and construed in accordance with the internal laws of the State of New York, USA, excluding any choice of law rules that may direct the application of the laws of another jurisdiction. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement. Further, Disputes arising out of this Amendment, other than a JDC Dispute, JCC Dispute, JFC Dispute or JMC Dispute or a Publication Dispute or a dispute as to whether a Material Safety Issue exists, shall be resolved in accordance with Section 15.1 of the Agreement. No part of this Amendment changes the rights and obligations of the Parties under Article 15 of the Agreement.

4.7 This Amendment and the Agreement (as amended by the Amendment) constitute the entire understanding between the Parties with respect to the subject matter hereof, and supersede all prior agreements whether oral or written. No amendment, modification, waiver, release or discharge to this Amendment or the Agreement shall be binding upon the Parties unless in writing and duly executed by authorized representatives of both Parties.

4.8 This Amendment has been prepared jointly and shall not be strictly construed against either Party. No presumption as to construction of this Amendment shall apply against either Party with respect to any ambiguity in the wording of any provision(s) of this Amendment irrespective of which Party may be deemed to have authored the ambiguous provision(s).

(signature page follows)

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

IN WITNESS WHEREOF, the Parties, intending to be legally bound hereby, have caused this Amendment to be executed by their duly authorized representatives as of the Amendment Effective Date.

For and on behalf of **Nektar Therapeutics**:

Signature:	/s/ Howard W. Robin
Title:	President and CEO
Date:	01/09/20

For and on behalf of **Bristol-Myers Squibb Company**:

Signature:	/s/ Charles Bancroft
Title:	Executive VP, Strategy and Business Development
Date:	01/09/20

APPENDIX A

JOINT DEVELOPMENT PLAN

(Effective as of January 9, 2020)

Tumor	Phase	Patient Population	Study Design	Number Patients	Diligence Date	Lead Party
Melanoma	3	1L metastatic melanoma	Bempeg + Nivo vs. Nivo	764	Achieved	BMS
	3	Adjuvant melanoma	Bempeg + Nivo vs. Nivo	1100	[***]	NKTR
RCC	3	1L metastatic RCC doublet	Bempeg + Nivo vs. TKI	600	Achieved	NKTR
	1/2/3	RCC triplet	Phase 1. Dose escalation cohort: Nivo + Bempeg + axitinib	6-20	[***]	BMS
			Phase 2, gated study. Expansion cohort: Nivo + Bempeg + Axitinib vs Nivo + Axitinib (gated upon acceptable safety profile from dose escalation (1) prior to initiation)	80	[***]	BMS
			Phase 3, gated study. [***]	960	[***]	BMS
Bladder	2	1L metastatic UC	Bempeg + Nivo	190	Achieved	NKTR
	3	Muscle-invasive bladder cancer	Bempeg + Nivo vs Nivo	540	[***]	BMS
Other	1/2A	Pediatric study	Bempeg + Nivo	[***]	[***]	BMS
	1	Safety study - Japan Phase 1	Bempeg + Nivo	20	Achieved	BMS
	1	Safety study - [***]	Bempeg + Nivo	[***]	[***]	BMS
Bempeg = Bempegaldesleukin; Nivo = Nivolumab						
PIVOT-02 – Parties have agreed to stop additional enrollment, continue to provide patient follow up and conclude the study.						

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

APPENDIX B

INDEPENDENT STUDIES

(as of January 9, 2020)

Tumor	Study	Lead Party	Trial Design	End Point(s)	FPFV	Number of Patients
Non-small cell lung cancer (NSCLC)	PROPEL - NSCLC Phase 1/2	Nektar	Bempeg + Pembrolizumab	Safety, ORR	Achieved	Approximately 135
Non-small cell lung cancer (NSCLC)	NSCLC Dose Optimization Phase 1/2[1]	BMS	Nivo + Bempeg 0.009 mg/kg vs. Nivo + Bempeg 0.006 mg/kg vs. Nivo + Ipi	ORR	[***]	180
Multiple Solid Tumor Indications	Reveal Phase 1/2	Nektar	NKTR-262 + bempeg and in combination with Bempeg + Nivo	Safety, ORR	Achieved	Phase 1: Approximately Phase 2: Approximately
Squamous Cell Head and Neck Cancer Metastatic Colorectal and Prostate Cancer	Phase 1/2	Pfizer	Avelumab in combination with bempeg with or without talazoparib or enzalutamide	Safety, ORR, PSA response rate	Achieved	20-40 for each combinati
Unresectable or Metastatic Pancreatic Adenocarcinoma	Phase 2	Bioxcel	BXCL701 in combination with avelumab and bempeg	Safety, ORR	[***]	Approximately 52
Locally advanced or metastatic solid tumors including melanoma, NSCLC, clear RCC, urothelial cancer or SCCHN	Phase 2	Vaccibody	VB10.NEO or VB10.NEO plus bempeg	Safety, ORR	[***]	Approximately 50
Sarcoma	IST	IST by MSKCC	Bempeg + Nivo	ORR	Achieved	Approximately 85
[***]						
Bempeg = Bempegaldesleukin Ipi = Ipilimumab Nivo = Nivolumab						

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

APPENDIX C

SCHEDULE 1.43

COLLABORATION THERAPIES

No.	Lines and Indications	MOAs / Targets*
1	1L or later non-small-cell lung cancer	IL-2 + PD(L)-1 [***]
2	1L melanoma	IL-2 + PD(L)-1
3	Adjuvant melanoma	IL-2 + PD(L)-1
4	1L renal cell carcinoma	IL-2 + PD(L)-1 [***]
5	1L bladder cancer	IL-2 + PD(L)-1
6	Muscle invasive bladder cancer	IL-2 + PD(L)-1

* For purposes of this Schedule:

- PD-1 and PD-L1 are considered as the same mechanism of action ("MOA") for purposes of this Agreement; and
- IL-2 refers to any IL-2 Agonist

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

APPENDIX D

SCHEDULE 6.3

COMBINED THERAPY COLLABORATION STUDY DEVELOPMENT COST ALLOCATION

Combined Therapy Collaboration Study Development Cost Allocation:

Combinations with Products	Nektar	BMS	Third Party
Doublet with the BMS Compound or any other single BMS Asset or Third Party Asset sourced by BMS	32.5%	67.5%	-
Doublet with any other Nektar Asset or Third Party Asset sourced by Nektar	82.5%	17.5%	-
Triplet with 2 BMS Assets (which may include the BMS Compound)	22%	78%	-
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]

[***]

In the event that a Collaboration Study includes multi-arm comparative studies that draw on more than one combination described in the above table (e.g., a doublet with a BMS Compound plus a triplet with 1 BMS Asset plus 1 Nektar Asset) the Development Cost allocations between Nektar and BMS shall be a blended rate based [***]. Using the example from the prior sentence, [***]

[***] Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit in accordance with the rules of the Securities and Exchange Commission.

APPENDIX E

Press Release

(See attached)

Jan 10, 2020

Nektar Therapeutics and Bristol-Myers Squibb Amend Strategic Collaboration Agreement for bempegaldesleukin Plus Opdivo (nivolumab)

SAN FRANCISCO & NEW YORK--(BUSINESS WIRE)--Jan. 10, 2020-- Nektar Therapeutics (Nasdaq:NKTR) and Bristol-Myers Squibb Company (NYSE:BMY) announced today the companies have agreed to a new joint development plan to advance bempegaldesleukin (bempeg) plus Opdivo (nivolumab) into multiple new registrational trials.

The revision to the strategic collaboration agreement includes a new joint development plan under which Nektar and Bristol-Myers Squibb will expand the active clinical development program for bempeg plus nivolumab from three ongoing registrational trials in first-line metastatic melanoma, first-line cisplatin-ineligible metastatic urothelial cancer and first-line metastatic renal cell carcinoma (RCC) to include two additional registrational trials in adjuvant melanoma and in muscle-invasive bladder cancer. In addition, a Phase 1/2 dose escalation and expansion study will be initiated to evaluate bempeg plus nivolumab in combination with axitinib in first-line RCC in order to support a future registrational trial. The costs for these studies will be shared based upon the cost-sharing outlined in the terms of the original collaboration agreement. Also as part of the new strategic collaboration agreement, Bristol-Myers Squibb will independently conduct and fund a Phase 1/2 dose optimization and expansion study in first-line non-small-cell lung cancer with bempeg and nivolumab.

“Bristol-Myers Squibb and Nektar view bempeg as an important asset and IL-2 as an important target,” said Fouad Namouni, M.D., head of oncology development, Bristol-Myers Squibb. “We look forward to expanding the registrational program currently underway for bempeg and are committed to the development of potential new combination therapies to address the unmet needs of patients living with cancer.”

“We are pleased to move forward with this new set of registrational trials for bempeg, including the addition of an important Phase 3 study in adjuvant melanoma which builds on the existing metastatic melanoma study and our Breakthrough Therapy Designation,” said Nektar President & CEO Howard W. Robin. “We now have a comprehensive plan to target multiple indications and have the opportunity to continue to collaborate on development with other companies in indications outside of those in the BMS and Nektar joint development program.”

About Opdivo

Opdivo is a programmed death-1 (PD-1) immune checkpoint inhibitor that is designed to uniquely harness the body’s own immune system to help restore anti-tumor immune response. By harnessing the body’s own immune system to fight cancer, Opdivo has become an important treatment option across multiple cancers.

Opdivo’s leading global development program is based on Bristol-Myers Squibb’s scientific expertise in the field of Immuno-Oncology, and includes a broad range of clinical trials across all phases, including Phase 3, in a variety of tumor types. To date, the Opdivo clinical

development program has treated more than 35,000 patients. The Opdivo trials have contributed to gaining a deeper understanding of the potential role of biomarkers in patient care, particularly regarding how patients may benefit from Opdivo across the continuum of PD-L1 expression.

In July 2014, Opdivo was the first PD-1 immune checkpoint inhibitor to receive regulatory approval anywhere in the world. Opdivo is currently approved in more than 65 countries, including the United States, the European Union, Japan and China. In October 2015, the Company's Opdivo and Yervoy combination regimen was the first Immuno-Oncology combination to receive regulatory approval for the treatment of metastatic melanoma and is currently approved in more than 50 countries, including the United States and the European Union.

About Yervoy
Yervoy is a recombinant, human monoclonal antibody that binds to the cytotoxic T-lymphocyte-associated antigen-4 (CTLA-4). CTLA-4 is a negative regulator of T-cell activity. Yervoy binds to CTLA-4 and blocks the interaction of CTLA-4 with its ligands, CD80/CD86. Blockade of CTLA-4 has been shown to augment T-cell activation and proliferation, including the activation and proliferation of tumor infiltrating T-effector cells. Inhibition of CTLA-4 signaling can also reduce T-regulatory cell function, which may contribute to a general increase in T-cell responsiveness, including the anti-tumor immune response. On March 25, 2011, the U.S. Food and Drug Administration (FDA) approved Yervoy 3 mg/kg monotherapy for patients with unresectable or metastatic melanoma. Yervoy is approved for unresectable or metastatic melanoma in more than 50 countries. There is a broad, ongoing development program in place for Yervoy spanning multiple tumor types.

U.S. FDA-APPROVED INDICATIONS FOR OPDIVO®
OPDIVO® (nivolumab) as a single agent is indicated for the treatment of patients with unresectable or metastatic melanoma.

OPDIVO® (nivolumab), in combination with YERVOY® (ipilimumab), is indicated for the treatment of patients with unresectable or metastatic melanoma.

OPDIVO® (nivolumab) is indicated for the treatment of patients with metastatic non-small cell lung cancer (NSCLC) with progression on or after platinum-based chemotherapy. Patients with EGFR or ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving OPDIVO.

OPDIVO® (nivolumab) is indicated for the treatment of patients with metastatic small cell lung cancer (SCLC) with progression after platinum-based chemotherapy and at least one other line of therapy. This indication is approved under accelerated approval based on overall response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

OPDIVO® (nivolumab) is indicated for the treatment of patients with advanced renal cell carcinoma (RCC) who have received prior anti-angiogenic therapy.

OPDIVO® (nivolumab), in combination with YERVOY® (ipilimumab), is indicated for the treatment of patients with intermediate or poor risk, previously untreated advanced renal cell carcinoma (RCC).

OPDIVO® (nivolumab) is indicated for the treatment of adult patients with classical Hodgkin lymphoma (cHL) that has relapsed or progressed after autologous hematopoietic stem cell transplantation (HSCT) and brentuximab vedotin or after 3 or more lines of systemic therapy that includes autologous HSCT. This indication is approved under accelerated approval based on overall response rate. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

OPDIVO® (nivolumab) is indicated for the treatment of patients with recurrent or metastatic squamous cell carcinoma of the head and neck (SCCHN) with disease progression on or after platinum-based therapy.

OPDIVO® (nivolumab) is indicated for the treatment of patients with locally advanced or metastatic urothelial carcinoma who have disease progression during or following platinum-containing chemotherapy or have disease progression within 12 months of neoadjuvant or adjuvant treatment with platinum-containing chemotherapy. This indication is approved under accelerated approval based on tumor response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

OPDIVO®(nivolumab), as a single agent, is indicated for the treatment of adult and pediatric (12 years and older) patients with microsatellite instability-high (MSI-H) or mismatch repair deficient (dMMR) metastatic colorectal cancer (CRC) that has progressed following treatment with a fluoropyrimidine, oxaliplatin, and irinotecan. This indication is approved under accelerated approval based on overall response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

OPDIVO® (nivolumab), in combination with YERVOY® (ipilimumab), is indicated for the treatment of adults and pediatric patients 12 years and older with microsatellite instability-high (MSI-H) or mismatch repair deficient (dMMR) metastatic colorectal cancer (CRC) that has progressed following treatment with a fluoropyrimidine, oxaliplatin, and irinotecan. This indication is approved under accelerated approval based on overall response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

OPDIVO®(nivolumab) is indicated for the treatment of patients with hepatocellular carcinoma (HCC) who have been previously treated with sorafenib. This indication is approved under accelerated approval based on tumor response rate and durability of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in the confirmatory trials.

OPDIVO® (nivolumab) is indicated for the adjuvant treatment of patients with melanoma with involvement of lymph nodes or metastatic disease who have undergone complete resection.

U.S. FDA-APPROVED INDICATIONS FOR YERVOY® (ipilimumab)
YERVOY® (ipilimumab) is indicated for the treatment of unresectable or metastatic melanoma in adults and pediatric patients (12 years and older).

YERVOY® (ipilimumab) is indicated for the adjuvant treatment of patients with cutaneous melanoma with pathologic involvement of regional lymph nodes of more than 1 mm who have undergone complete resection, including total lymphadenectomy.

IMPORTANT SAFETY INFORMATION

WARNING: IMMUNE-MEDIATED ADVERSE REACTIONS

YERVOY can result in severe and fatal immune-mediated adverse reactions. These immune-mediated reactions may involve any organ system; however, the most common severe immune-mediated adverse reactions are enterocolitis, hepatitis, dermatitis (including toxic epidermal necrolysis), neuropathy, and endocrinopathy. The majority of these immune-mediated reactions initially manifested during treatment; however, a minority occurred weeks to months after discontinuation of YERVOY.

Assess patients for signs and symptoms of enterocolitis, dermatitis, neuropathy, and endocrinopathy, and evaluate clinical chemistries including liver function tests (LFTs), adrenocorticotropic hormone (ACTH) level, and thyroid function tests, at baseline and before each dose.

Permanently discontinue YERVOY and initiate systemic high-dose corticosteroid therapy for severe immune-mediated reactions.

Immune-Mediated Pneumonitis

OPDIVO can cause immune-mediated pneumonitis. Fatal cases have been reported. Monitor patients for signs with radiographic imaging and for symptoms of pneumonitis. Administer corticosteroids for Grade 2 or more severe pneumonitis. Permanently discontinue for Grade 3 or 4 and withhold until resolution for Grade 2. In patients receiving OPDIVO monotherapy, fatal cases of immune-mediated pneumonitis have occurred. Immune-mediated pneumonitis occurred in 3.1% (61/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, immune-mediated pneumonitis occurred in 6% (25/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated pneumonitis occurred in 4.4% (24/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated pneumonitis occurred in 1.7% (2/119) of patients.

In Checkmate 205 and 039, pneumonitis, including interstitial lung disease, occurred in 6.0% (16/266) of patients receiving OPDIVO. Immune-mediated pneumonitis occurred in 4.9% (13/266) of patients receiving OPDIVO: Grade 3 (n=1) and Grade 2 (n=12).

Immune-Mediated Colitis

OPDIVO can cause immune-mediated colitis. Monitor patients for signs and symptoms of colitis. Administer corticosteroids for Grade 2 (of more than 5 days duration), 3, or 4 colitis. Withhold OPDIVO monotherapy for Grade 2 or 3 and permanently discontinue for Grade 4 or recurrent colitis upon re-initiation of OPDIVO. When administered with YERVOY, withhold OPDIVO and YERVOY for Grade 2 and permanently discontinue for Grade 3 or 4 or recurrent colitis. In patients receiving OPDIVO monotherapy, immune-mediated colitis occurred in 2.9% (58/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, immune-mediated colitis occurred in 26% (107/407) of patients including three fatal cases. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated colitis occurred in 10% (52/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated colitis occurred in 7% (8/119) of patients.

In a separate Phase 3 study of YERVOY 3 mg/kg, severe, life-threatening, or fatal (diarrhea of ≥7 stools above baseline, fever, ileus, peritoneal signs; Grade 3-5) immune-mediated enterocolitis occurred in 34 (7%) patients. Across all YERVOY-treated patients in that study (n=511), 5 (1%) developed intestinal perforation, 4 (0.8%) died as a result of complications, and 26 (5%) were hospitalized for severe enterocolitis.

Immune-Mediated Hepatitis

OPDIVO can cause immune-mediated hepatitis. Monitor patients for abnormal liver tests prior to and periodically during treatment. Administer corticosteroids for Grade 2 or greater transaminase elevations. For patients without HCC, withhold OPDIVO for Grade 2 and permanently discontinue OPDIVO for Grade 3 or 4. For patients with HCC, withhold OPDIVO and administer corticosteroids if AST/ALT is within normal limits at baseline and increases to >3 and up to 5 times the upper limit of normal (ULN), if AST/ALT is >1 and up to 3 times ULN at baseline and increases to >5 and up to 10 times the ULN, and if AST/ALT is >3 and up to 5 times ULN at baseline and increases to >8 and up to 10 times the ULN. Permanently discontinue OPDIVO and administer corticosteroids if AST or ALT increases to >10 times the ULN or total bilirubin increases >3 times the ULN. In patients receiving OPDIVO monotherapy,

immune-mediated hepatitis occurred in 1.8% (35/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, immune-mediated hepatitis occurred in 13% (51/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated hepatitis occurred in 7% (38/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated hepatitis occurred in 8% (10/119) of patients.

In Checkmate 040, immune-mediated hepatitis requiring systemic corticosteroids occurred in 5% (8/154) of patients receiving OPDIVO.

In a separate Phase 3 study of YERVOY 3 mg/kg, severe, life-threatening, or fatal hepatotoxicity (AST or ALT elevations >5x the ULN or total bilirubin elevations >3x the ULN; Grade 3-5) occurred in 8 (2%) patients, with fatal hepatic failure in 0.2% and hospitalization in 0.4%.

Immune-Mediated Neuropathies

In a separate Phase 3 study of YERVOY 3 mg/kg, 1 case of fatal Guillain-Barré syndrome and 1 case of severe (Grade 3) peripheral motor neuropathy were reported.

Immune-Mediated Endocrinopathies

OPDIVO can cause immune-mediated hypophysitis, immune-mediated adrenal insufficiency, autoimmune thyroid disorders, and Type 1 diabetes mellitus. Monitor patients for signs and symptoms of hypophysitis, signs and symptoms of adrenal insufficiency, thyroid function prior to and periodically during treatment, and hyperglycemia. Administer hormone replacement as clinically indicated and corticosteroids for Grade 2 or greater hypophysitis. Withhold for Grade 2 or 3 and permanently discontinue for Grade 4 hypophysitis. Administer corticosteroids for Grade 3 or 4 adrenal insufficiency. Withhold for Grade 2 and permanently discontinue for Grade 3 or 4 adrenal insufficiency. Administer hormone-replacement therapy for hypothyroidism. Initiate medical management for control of hyperthyroidism. Withhold OPDIVO for Grade 3 and permanently discontinue for Grade 4 hyperglycemia.

In patients receiving OPDIVO monotherapy, hypophysitis occurred in 0.6% (12/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, hypophysitis occurred in 9% (36/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, hypophysitis occurred in 4.6% (25/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated hypophysitis occurred in 3.4% (4/119) of patients. In patients receiving OPDIVO monotherapy, adrenal insufficiency occurred in 1% (20/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, adrenal insufficiency occurred in 5% (21/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, adrenal insufficiency occurred in 7% (41/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, adrenal insufficiency occurred in 5.9% (7/119) of patients. In patients receiving OPDIVO monotherapy, hypothyroidism or thyroiditis resulting in hypothyroidism occurred in 9% (171/1994) of patients. Hyperthyroidism occurred in 2.7% (54/1994) of patients receiving OPDIVO monotherapy. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, hypothyroidism or thyroiditis resulting in hypothyroidism occurred in 22% (89/407) of patients. Hyperthyroidism occurred in 8% (34/407) of patients receiving this dose of OPDIVO with YERVOY. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, hypothyroidism or thyroiditis resulting in hypothyroidism occurred in 22% (119/547) of patients. Hyperthyroidism occurred in 12% (66/547) of patients receiving this dose of OPDIVO with YERVOY. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, hypothyroidism or thyroiditis resulting in hypothyroidism occurred in 15% (18/119) of patients. Hyperthyroidism occurred in 12% (14/119) of patients. In patients receiving OPDIVO monotherapy, diabetes occurred in 0.9% (17/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg,

diabetes occurred in 1.5% (6/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, diabetes occurred in 2.7% (15/547) of patients.

In a separate Phase 3 study of YERVOY 3 mg/kg, severe to life-threatening immune-mediated endocrinopathies (requiring hospitalization, urgent medical intervention, or interfering with activities of daily living; Grade 3-4) occurred in 9 (1.8%) patients. All 9 patients had hypopituitarism, and some had additional concomitant endocrinopathies such as adrenal insufficiency, hypogonadism, and hypothyroidism. Six of the 9 patients were hospitalized for severe endocrinopathies.

Immune-Mediated Nephritis and Renal Dysfunction

OPDIVO can cause immune-mediated nephritis. Monitor patients for elevated serum creatinine prior to and periodically during treatment. Administer corticosteroids for Grades 2-4 increased serum creatinine. Withhold OPDIVO for Grade 2 or 3 and permanently discontinue for Grade 4 increased serum creatinine. In patients receiving OPDIVO monotherapy, immune-mediated nephritis and renal dysfunction occurred in 1.2% (23/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, immune-mediated nephritis and renal dysfunction occurred in 2.2% (9/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated nephritis and renal dysfunction occurred in 4.6% (25/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated nephritis and renal dysfunction occurred in 1.7% (2/119) of patients.

Immune-Mediated Skin Adverse Reactions and Dermatitis

OPDIVO can cause immune-mediated rash, including Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), some cases with fatal outcome. Administer corticosteroids for Grade 3 or 4 rash. Withhold for Grade 3 and permanently discontinue for Grade 4 rash. For symptoms or signs of SJS or TEN, withhold OPDIVO and refer the patient for specialized care for assessment and treatment; if confirmed, permanently discontinue. In patients receiving OPDIVO monotherapy, immune-mediated rash occurred in 9% (171/1994) of patients. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg, immune-mediated rash occurred in 22.6% (92/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated rash occurred in 16% (90/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, immune-mediated rash occurred in 14% (17/119) of patients.

In a separate Phase 3 study of YERVOY 3 mg/kg, severe, life-threatening, or fatal immune-mediated dermatitis (eg, Stevens-Johnson syndrome, toxic epidermal necrolysis, or rash complicated by full thickness dermal ulceration, or necrotic, bullous, or hemorrhagic manifestations; Grade 3-5) occurred in 13 (2.5%) patients. 1 (0.2%) patient died as a result of toxic epidermal necrolysis. 1 additional patient required hospitalization for severe dermatitis.

Immune-Mediated Encephalitis

OPDIVO can cause immune-mediated encephalitis. Evaluation of patients with neurologic symptoms may include, but not be limited to, consultation with a neurologist, brain MRI, and lumbar puncture. Withhold OPDIVO in patients with new-onset moderate to severe neurologic signs or symptoms and evaluate to rule out other causes. If other etiologies are ruled out, administer corticosteroids and permanently discontinue OPDIVO for immune-mediated encephalitis. In patients receiving OPDIVO monotherapy, encephalitis occurred in 0.2% (3/1994) of patients. Fatal limbic encephalitis occurred in one patient after 7.2 months of exposure despite discontinuation of OPDIVO and administration of corticosteroids. Encephalitis occurred in one patient receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg (0.2%) after 1.7 months of exposure. Encephalitis occurred in one RCC patient receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg (0.2%) after approximately 4 months of exposure. Encephalitis occurred in

one MSI-H/dMMR mCRC patient (0.8%) receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg after 15 days of exposure.

Other Immune-Mediated Adverse Reactions

Based on the severity of the adverse reaction, permanently discontinue or withhold OPDIVO, administer high-dose corticosteroids, and, if appropriate, initiate hormone-replacement therapy. Across clinical trials of OPDIVO monotherapy or in combination with YERVOY, the following clinically significant immune-mediated adverse reactions, some with fatal outcome, occurred in <1.0% of patients receiving OPDIVO: myocarditis, rhabdomyolysis, myositis, uveitis, iritis, pancreatitis, facial and abducens nerve paresis, demyelination, polymyalgia rheumatica, autoimmune neuropathy, Guillain-Barré syndrome, hypopituitarism, systemic inflammatory response syndrome, gastritis, duodenitis, sarcoidosis, histiocytic necrotizing lymphadenitis (Kikuchi lymphadenitis), motor dysfunction, vasculitis, aplastic anemia, pericarditis, and myasthenic syndrome.

If uveitis occurs in combination with other immune-mediated adverse reactions, consider a Vogt-Koyanagi-Harada-like syndrome, which has been observed in patients receiving OPDIVO and may require treatment with systemic steroids to reduce the risk of permanent vision loss.

Infusion Reactions

OPDIVO can cause severe infusion reactions, which have been reported in <1.0% of patients in clinical trials. Discontinue OPDIVO in patients with Grade 3 or 4 infusion reactions. Interrupt or slow the rate of infusion in patients with Grade 1 or 2. In patients receiving OPDIVO monotherapy as a 60-minute infusion, infusion-related reactions occurred in 6.4% (127/1994) of patients. In a separate study in which patients received OPDIVO monotherapy as a 60-minute infusion or a 30-minute infusion, infusion-related reactions occurred in 2.2% (8/368) and 2.7% (10/369) of patients, respectively. Additionally, 0.5% (2/368) and 1.4% (5/369) of patients, respectively, experienced adverse reactions within 48 hours of infusion that led to dose delay, permanent discontinuation or withholding of OPDIVO. In patients receiving OPDIVO 1 mg/kg with YERVOY 3 mg/kg every 3 weeks, infusion-related reactions occurred in 2.5% (10/407) of patients. In RCC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, infusion-related reactions occurred in 5.1% (28/547) of patients. In MSI-H/dMMR mCRC patients receiving OPDIVO 3 mg/kg with YERVOY 1 mg/kg, infusion-related reactions occurred in 4.2% (5/119) of patients.

Complications of Allogeneic Hematopoietic Stem Cell Transplantation

Fatal and other serious complications can occur in patients who receive allogeneic hematopoietic stem cell transplantation (HSCT) before or after being treated with a PD-1 receptor blocking antibody. Transplant-related complications include hyperacute graft-versus-host-disease (GVHD), acute GVHD, chronic GVHD, hepatic veno-occlusive disease (VOD) after reduced intensity conditioning, and steroid-requiring febrile syndrome (without an identified infectious cause). These complications may occur despite intervening therapy between PD-1 blockade and allogeneic HSCT.

Follow patients closely for evidence of transplant-related complications and intervene promptly. Consider the benefit versus risks of treatment with a PD-1 receptor blocking antibody prior to or after an allogeneic HSCT.

Embryo-Fetal Toxicity

Based on their mechanisms of action, OPDIVO and YERVOY can cause fetal harm when administered to a pregnant woman. Advise pregnant women of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with an

OPDIVO- or YERVOY- containing regimen and for at least 5 months after the last dose of OPDIVO.

Increased Mortality in Patients with Multiple Myeloma when OPDIVO is Added to a Thalidomide Analogue and Dexamethasone

In clinical trials in patients with multiple myeloma, the addition of OPDIVO to a thalidomide analogue plus dexamethasone resulted in increased mortality. Treatment of patients with multiple myeloma with a PD-1 or PD-L1 blocking antibody in combination with a thalidomide analogue plus dexamethasone is not recommended outside of controlled clinical trials.

Lactation

It is not known whether OPDIVO or YERVOY is present in human milk. Because many drugs, including antibodies, are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from an OPDIVO-containing regimen, advise women to discontinue breastfeeding during treatment. Advise women to discontinue breastfeeding during treatment with YERVOY and for 3 months following the final dose.

Serious Adverse Reactions

In Checkmate 037, serious adverse reactions occurred in 41% of patients receiving OPDIVO (n=268). Grade 3 and 4 adverse reactions occurred in 42% of patients receiving OPDIVO. The most frequent Grade 3 and 4 adverse drug reactions reported in 2% to <5% of patients receiving OPDIVO were abdominal pain, hyponatremia, increased aspartate aminotransferase, and increased lipase. In Checkmate 066, serious adverse reactions occurred in 36% of patients receiving OPDIVO (n=206). Grade 3 and 4 adverse reactions occurred in 41% of patients receiving OPDIVO. The most frequent Grade 3 and 4 adverse reactions reported in ≥2% of patients receiving OPDIVO were gamma-glutamyltransferase increase (3.9%) and diarrhea (3.4%). In Checkmate 067, serious adverse reactions (74% and 44%), adverse reactions leading to permanent discontinuation (47% and 18%) or to dosing delays (58% and 36%), and Grade 3 or 4 adverse reactions (72% and 51%) all occurred more frequently in the OPDIVO plus YERVOY arm (n=313) relative to the OPDIVO arm (n=313). The most frequent (≥10%) serious adverse reactions in the OPDIVO plus YERVOY arm and the OPDIVO arm, respectively, were diarrhea (13% and 2.2%), colitis (10% and 1.9%), and pyrexia (10% and 1.0%). In Checkmate 017 and 057, serious adverse reactions occurred in 46% of patients receiving OPDIVO (n=418). The most frequent serious adverse reactions reported in ≥2% of patients receiving OPDIVO were pneumonia, pulmonary embolism, dyspnea, pyrexia, pleural effusion, pneumonitis, and respiratory failure. In Checkmate 032, serious adverse reactions occurred in 45% of patients receiving OPDIVO (n=245). The most frequent serious adverse reactions reported in at least 2% of patients receiving OPDIVO were pneumonia, dyspnea, pneumonitis, pleural effusions, and dehydration. In Checkmate 025, serious adverse reactions occurred in 47% of patients receiving OPDIVO (n=406). The most frequent serious adverse reactions reported in ≥2% of patients were acute kidney injury, pleural effusion, pneumonia, diarrhea, and hypercalcemia. In Checkmate 214, serious adverse reactions occurred in 59% of patients receiving OPDIVO plus YERVOY and in 43% of patients receiving sunitinib. The most frequent serious adverse reactions reported in ≥2% of patients were diarrhea, pyrexia, pneumonia, pneumonitis, hypophysitis, acute kidney injury, dyspnea, adrenal insufficiency, and colitis; in patients treated with sunitinib, they were pneumonia, pleural effusion, and dyspnea. In Checkmate 205 and 039, adverse reactions leading to discontinuation occurred in 7% and dose delays due to adverse reactions occurred in 34% of patients (n=266). Serious adverse reactions occurred in 26% of patients. The most frequent serious adverse reactions reported in ≥1% of patients were pneumonia, infusion-related reaction, pyrexia, colitis or diarrhea, pleural effusion, pneumonitis, and rash. Eleven patients died from causes other than disease progression: 3 from adverse reactions within 30 days of the last OPDIVO dose, 2 from infection

8 to 9 months after completing OPDIVO, and 6 from complications of allogeneic HSCT. In Checkmate 141, serious adverse reactions occurred in 49% of patients receiving OPDIVO (n=236). The most frequent serious adverse reactions reported in ≥2% of patients receiving OPDIVO were pneumonia, dyspnea, respiratory failure, respiratory tract infection, and sepsis. In Checkmate 275, serious adverse reactions occurred in 54% of patients receiving OPDIVO (n=270). The most frequent serious adverse reactions reported in ≥2% of patients receiving OPDIVO were urinary tract infection, sepsis, diarrhea, small intestine obstruction, and general physical health deterioration. In Checkmate 142 in MSI-H/dMMR mCRC patients receiving OPDIVO with YERVOY, serious adverse reactions occurred in 47% of patients. The most frequent serious adverse reactions reported in ≥2% of patients were colitis/diarrhea, hepatic events, abdominal pain, acute kidney injury, pyrexia, and dehydration. In Checkmate 040, serious adverse reactions occurred in 49% of patients (n=154). The most frequent serious adverse reactions reported in ≥2% of patients were pyrexia, ascites, back pain, general physical health deterioration, abdominal pain, and pneumonia. In Checkmate 238, Grade 3 or 4 adverse reactions occurred in 25% of OPDIVO-treated patients (n=452). The most frequent Grade 3 and 4 adverse reactions reported in ≥2% of OPDIVO-treated patients were diarrhea and increased lipase and amylase. Serious adverse reactions occurred in 18% of OPDIVO-treated patients.

Common Adverse Reactions

In Checkmate 037, the most common adverse reaction (≥20%) reported with OPDIVO (n=268) was rash (21%). In Checkmate 066, the most common adverse reactions (≥20%) reported with OPDIVO (n=206) vs dacarbazine (n=205) were fatigue (49% vs 39%), musculoskeletal pain (32% vs 25%), rash (28% vs 12%), and pruritus (23% vs 12%). In Checkmate 067, the most common (≥20%) adverse reactions in the OPDIVO plus YERVOY arm (n=313) were fatigue (62%), diarrhea (54%), rash (53%), nausea (44%), pyrexia (40%), pruritus (39%), musculoskeletal pain (32%), vomiting (31%), decreased appetite (29%), cough (27%), headache (26%), dyspnea (24%), upper respiratory tract infection (23%), arthralgia (21%), and increased transaminases (25%). In Checkmate 067, the most common (≥20%) adverse reactions in the OPDIVO arm (n=313) were fatigue (59%), rash (40%), musculoskeletal pain (42%), diarrhea (36%), nausea (30%), cough (28%), pruritus (27%), upper respiratory tract infection (22%), decreased appetite (22%), headache (22%), constipation (21%), arthralgia (21%), and vomiting (20%). In Checkmate 017 and 057, the most common adverse reactions (≥20%) in patients receiving OPDIVO (n=418) were fatigue, musculoskeletal pain, cough, dyspnea, and decreased appetite. In Checkmate 032, the most common adverse reactions (≥20%) in patients receiving OPDIVO (n=245) were fatigue (45%), decreased appetite (27%), musculoskeletal pain (25%), dyspnea (22%), nausea (22%), diarrhea (21%), constipation (20%), and cough (20%). In Checkmate 025, the most common adverse reactions (≥20%) reported in patients receiving OPDIVO (n=406) vs everolimus (n=397) were fatigue (56% vs 57%), cough (34% vs 38%), nausea (28% vs 29%), rash (28% vs 36%), dyspnea (27% vs 31%), diarrhea (25% vs 32%), constipation (23% vs 18%), decreased appetite (23% vs 30%), back pain (21% vs 16%), and arthralgia (20% vs 14%). In Checkmate 214, the most common adverse reactions (≥20%) reported in patients treated with OPDIVO plus YERVOY (n=547) vs sunitinib (n=535) were fatigue (58% vs 69%), rash (39% vs 25%), diarrhea (38% vs 58%), musculoskeletal pain (37% vs 40%), pruritus (33% vs 11%), nausea (30% vs 43%), cough (28% vs 25%), pyrexia (25% vs 17%), arthralgia (23% vs 16%), decreased appetite (21% vs 29%), dyspnea (20% vs 21%), and vomiting (20% vs 28%). In Checkmate 205 and 039, the most common adverse reactions (≥20%) reported in patients receiving OPDIVO (n=266) were upper respiratory tract infection (44%), fatigue (39%), cough (36%), diarrhea (33%), pyrexia (29%), musculoskeletal pain (26%), rash (24%), nausea (20%) and pruritus (20%). In Checkmate 141, the most common adverse reactions (≥10%) in patients receiving OPDIVO (n=236) were cough and dyspnea at a higher incidence than investigator's choice. In Checkmate 275, the most common adverse reactions (≥20%) reported in patients receiving OPDIVO (n=270) were fatigue

(46%), musculoskeletal pain (30%), nausea (22%), and decreased appetite (22%). In Checkmate 142 in MSI-H/dMMR mCRC patients receiving OPDIVO as a single agent, the most common adverse reactions (≥20%) were fatigue (54%), diarrhea (43%), abdominal pain (34%), nausea (34%), vomiting (28%), musculoskeletal pain (28%), cough (26%), pyrexia (24%), rash (23%), constipation (20%), and upper respiratory tract infection (20%). In Checkmate 142 in MSI-H/dMMR mCRC patients receiving OPDIVO with YERVOY, the most common adverse reactions (≥20%) were fatigue (49%), diarrhea (45%), pyrexia (36%), musculoskeletal pain (36%), abdominal pain (30%), pruritus (28%), nausea (26%), rash (25%), decreased appetite (20%), and vomiting (20%). In Checkmate 040, the most common adverse reactions (≥20%) in patients receiving OPDIVO (n=154) were fatigue (38%), musculoskeletal pain (36%), abdominal pain (34%), pruritus (27%), diarrhea (27%), rash (26%), cough (23%), and decreased appetite (22%). In Checkmate 238, the most common adverse reactions (≥20%) reported in OPDIVO-treated patients (n=452) vs ipilimumab-treated patients (n=453) were fatigue (57% vs 55%), diarrhea (37% vs 55%), rash (35% vs 47%), musculoskeletal pain (32% vs 27%), pruritus (28% vs 37%), headache (23% vs 31%), nausea (23% vs 28%), upper respiratory infection (22% vs 15%), and abdominal pain (21% vs 23%). The most common immune-mediated adverse reactions were rash (16%), diarrhea/colitis (6%), and hepatitis (3%).

In a separate Phase 3 study of YERVOY 3 mg/kg, the most common adverse reactions (≥5%) in patients who received YERVOY at 3 mg/kg were fatigue (41%), diarrhea (32%), pruritus (31%), rash (29%), and colitis (8%).

Please see U.S. Full Prescribing Information for OPDIVO and YERVOY, including **Boxed WARNING regarding immune-mediated adverse reactions** for YERVOY.

Checkmate Trials and Patient Populations
Checkmate 037–previously treated metastatic melanoma; **Checkmate 066**–previously untreated metastatic melanoma; **Checkmate 067**–previously untreated metastatic melanoma, as a single agent or in combination with YERVOY; **Checkmate 017**–second-line treatment of metastatic squamous non-small cell lung cancer; **Checkmate 057**–second-line treatment of metastatic non-squamous non-small cell lung cancer; **Checkmate 032**–small cell lung cancer; **Checkmate 025**–previously treated renal cell carcinoma; **Checkmate 214**–previously untreated renal cell carcinoma, in combination with YERVOY; **Checkmate 205/039**–classical Hodgkin lymphoma; **Checkmate 141**–recurrent or metastatic squamous cell carcinoma of the head and neck; **Checkmate 275**–urothelial carcinoma; **Checkmate 142**–MSI-H or dMMR metastatic colorectal cancer, as a single agent or in combination with YERVOY; **Checkmate 040**–hepatocellular carcinoma; **Checkmate 238**–adjuvant treatment of melanoma.

About Bristol-Myers Squibb

Bristol-Myers Squibb is a global biopharmaceutical company whose mission is to discover, develop and deliver innovative medicines that help patients prevail over serious diseases. For more information about Bristol-Myers Squibb, visit us at BMS.com or follow us on LinkedIn, Twitter, YouTube, Facebook, and Instagram.

Celgene and Juno Therapeutics are wholly owned subsidiaries of Bristol-Myers Squibb Company. In certain countries outside the U.S., due to local laws, Celgene and Juno Therapeutics are referred to as, Celgene, a Bristol-Myers Squibb company and Juno Therapeutics, a Bristol-Myers Squibb company.

About the Bristol-Myers Squibb and Ono Pharmaceutical Collaboration

In 2011, through a collaboration agreement with Ono Pharmaceutical Co., Bristol-Myers Squibb expanded its territorial rights to develop and commercialize Opdivo globally, except in Japan, South Korea and Taiwan, where Ono had retained all rights to the compound at the time. On July 23, 2014, Ono and Bristol-Myers Squibb further expanded the companies'

strategic collaboration agreement to jointly develop and commercialize multiple immunotherapies – as single agents and combination regimens – for patients with cancer in Japan, South Korea and Taiwan.

About Nektar Therapeutics

Nektar Therapeutics is a biopharmaceutical company with a robust, wholly-owned R&D pipeline of investigational medicines in oncology, immunology and pain as well as a portfolio of approved partnered medicines. Nektar is headquartered in San Francisco, California, with additional operations in Huntsville, Alabama and Hyderabad, India. Further information about the company and its drug development programs and capabilities may be found online at http://www.nektar.com.

About Bempegaldesleukin (BEMPEG, NKTR-214)

Bempeg is an investigational, first-in-class, CD122-preferential IL-2 pathway agonist designed to provide rapid activation and proliferation of cancer-killing immune cells, known as CD8+ effector T cells and natural killer (NK) cells, without over activating the immune system. The agent is designed to stimulate these cancer-killing immune cells in the body by targeting CD122-specific receptors found on the surface of these immune cells. CD122, which is also known as the Interleukin-2 receptor beta subunit, is a key signaling receptor that is known to increase proliferation of these effector T cells.[1] In clinical and preclinical studies, treatment with bempegaldesleukin resulted in expansion of these cells and mobilization into the tumor micro-environment.[2,3] Bempegaldesleukin has an antibody-like dosing regimen similar to the existing checkpoint inhibitor class of approved medicines.

Bristol-Myers Squibb Forward Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 regarding, among other things, the research, development and commercialization of pharmaceutical products and the collaboration with Nektar Therapeutics. All statements that are not statements of historical facts are, or may be deemed to be, forward-looking statements. Such forward-looking statements are based on historical performance and current expectations and projections about our future financial results, goals, plans and objectives and involve inherent risks, assumptions and uncertainties, including internal or external factors that could delay, divert or change any of them in the next several years, that are difficult to predict, may be beyond our control and could cause our future financial results, goals, plans and objectives to differ materially from those expressed in, or implied by, the statements. These risks, assumptions, uncertainties and other factors include, among others, that the expected benefits of, and opportunities related to, the collaboration with Nektar Therapeutics may not be realized by Bristol-Myers Squibb or may take longer to realize than anticipated and that Opdivo, in combination with bempegaldesleukin, may not achieve their primary study endpoints or receive regulatory approval for the indications described in this release in the currently anticipated timeline or at all and, if approved, whether such combination treatment for such indications described in this release will be commercially successful. No forward-looking statement can be guaranteed. Forward-looking statements in this press release should be evaluated together with the many risks and uncertainties that affect Bristol-Myers Squibb's business and market, particularly those identified in the cautionary statement and risk factors discussion in Bristol-Myers Squibb's Annual Report on Form 10-K for the year ended December 31, 2018, as updated by our subsequent Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings with the Securities and Exchange Commission. The forward-looking statements included in this document are made only as of the date of this document and except as otherwise required by applicable law, Bristol-Myers Squibb undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise.

Nektar Therapeutics Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements which can be identified by words such as: "will," "move forward," "plan" and similar references to future periods. Examples of forward-looking statements include, among others, statements we make regarding the therapeutic potential of bempegaldesleukin ("bempeg") in combination with nivolumab, and the availability of results and outcomes from studies of the therapies based on bempeg combinations. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, anticipated events and trends, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results to differ materially from those indicated in the forward-looking statements include, among others: (i) our statements regarding the therapeutic potential of bempeg are based on preclinical and clinical findings and observations; (ii) bempeg is currently in clinical development and the risk of failure remains high and failure can unexpectedly occur at any stage for one or more of the cancer indications being studied prior to regulatory approval due to lack of sufficient efficacy, safety considerations or other factors that impact drug development; (iii) data reported from ongoing preclinical and clinical trials are necessarily interim data only and the final results will change based on continuing observations; (iv) scientific discovery of new medical breakthroughs is an inherently uncertain process and the future success of potential of bempeg is therefore very uncertain and unpredictable; (v) the timing of the commencement or end of clinical studies and the availability of clinical data may be delayed or unsuccessful due to regulatory delays, slower than anticipated patient enrollment, manufacturing challenges, changing standards of care, evolving regulatory requirements, clinical trial design, clinical outcomes, delays caused by our collaboration partners, and enrollment competition; (vi) patents may not issue from our patent applications for our drug candidates, patents that have issued may not be enforceable, or additional intellectual property licenses from third parties may be required; and (vii) certain other important risks and uncertainties set forth in Nektar's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 7, 2019. Any forward-looking statement made by us in this press release is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

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Exhibit 21.1

Subsidiaries of Nektar Therapeutics*

Name	Jurisdiction of Incorporation or Organization
Nektar Therapeutics UK, Ltd.	United Kingdom
Nektar Therapeutics (India) Pvt. Ltd	India
Inheris Biopharma, Inc.	United States

* Includes subsidiaries that do not fall under the definition of "Significant Subsidiary" as defined under Rule 1-02(w) of Regulation S-X.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statements (Form S-8 Nos. 333-103040, 333-145259, 333-153106, 333-197781, 333-206136 and 333-226004), pertaining to the amended and restated 2000 Non-Officer Equity Incentive Plan, the 401(k) Retirement Plan, the 2008 Equity Incentive Plan, as amended, the Employee Stock Purchase Plan, the 2012 Performance Incentive Plan, as amended, and the amended and restated 2017 Performance Incentive Plan of Nektar Therapeutics, of our reports dated February 27, 2020, with respect to the consolidated financial statements of Nektar Therapeutics and the effectiveness of internal control over financial reporting of Nektar Therapeutics included in this Annual Report (Form 10-K) of Nektar Therapeutics for the year ended December 31, 2019.

/s/ ERNST & YOUNG LLP

Redwood City, California
February 27, 2020

Exhibit 31.1

CERTIFICATIONS

I, Howard W. Robin, certify that:

1. I have reviewed this Annual Report on Form 10-K of Nektar Therapeutics for the year ended December 31, 2019;

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(s) 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 my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my 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.

5. The registrant's other certifying officer(s) 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: February 27, 2020

/s/ HOWARD W. ROBIN

Howard W. Robin

Chief Executive Officer, President and Director

Exhibit 31.2

CERTIFICATIONS

I, Gil M. Labrucherie, certify that:

1. I have reviewed this Annual Report on Form 10-K of Nektar Therapeutics for the year ended December 31, 2019;

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(s) 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 my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my 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.

5. The registrant's other certifying officer(s) 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: February 27, 2020

/s/ GIL M. LABRUCHERIE

Gil M. Labrucherie

Senior Vice President, Chief Operating Officer, and Chief Financial Officer

Exhibit 32.1

SECTION 1350 CERTIFICATIONS*

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), Howard W. Robin, Chief Executive Officer, President and Director of Nektar Therapeutics (the "Company"), and Gil M. Labrucherie, Senior Vice President, Chief Operating Officer, and Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K, for the year ended December 31, 2019, to which this Certification is attached as Exhibit 32.1 (the "Annual Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the period covered by the Annual Report.

Dated: February 27, 2020

/s/ HOWARD W. ROBIN

Howard W. Robin

Chief Executive Officer, President and Director

/s/ GIL M. LABRUCHERIE

Gil M. Labrucherie

Senior Vice President, Chief Operating Officer, and Chief Financial Officer

* This certification accompanies the Annual Report on Form 10-K, to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.