UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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, 2021

or

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Commission file number: 001-36066

PARATEK PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**33-0960223**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

75 Park Plaza
Boston, MA 02116
(617) 807-6600

(Address, including zip code, and telephone number, including area code, of registrant's principal executive office)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	PRTK	The Nasdaq Global Market

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 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, a 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

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

The aggregate market value of the common stock of the registrant held by non-affiliates of the registrant on the last business day of the registrant's second fiscal quarter was: $315,534,018.

As of February 28, 2022, there were 52,366,173 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the registrant's 2022 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days of the registrant's year ended December 31, 2021 are incorporated herein by reference into Part III of this Annual Report on Form 10-K.

TABLE OF CONTENTS

Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements that are based upon current expectations within the meaning of the Private Securities Litigation Reform Act of 1995. Paratek Pharmaceuticals, Inc. intends that such statements be protected by the safe harbor created thereby. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" and similar expressions intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Examples of such forward-looking statements include, but are not limited to, statements about or relating to:

- our intention to market NUZYRA® as an empiric monotherapy that will be commercialized worldwide for the treatment of serious, community-acquired bacterial infections;
- our ability to successfully commercialize and achieve market acceptance for NUZYRA, including in the community setting, and the expected size of addressable markets;
- the therapeutic and commercial potential of NUZYRA and SEYSARA®;
- proposed new products or developments, including additional indications for NUZYRA;
- the timing and amount of actual reimbursements and NUZYRA purchases under our contract with the Biomedical Advanced Research and Development Authority, or BARDA, a division of the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response, herein referred to as the BARDA contract;
- our expectations regarding the potential benefits of the licensing, collaboration, partnership and other strategic arrangements and transactions we have entered into and may enter into in the future;
- our ability to establish and maintain potential new collaborative, partnering or other strategic arrangements for commercialization of our products and the development of our product candidates;
- our plans to pursue expansion of omadacycline to additional markets through collaboration or distribution arrangements;
- the timing, scope and anticipated initiation, enrollment, and completion of our ongoing and planned clinical trials, including for non-tuberculous mycobacteria abscessus, or NTM, and any other future clinical trials that we or our development partners may conduct;
- the anticipated progress of our clinical programs, including whether our ongoing clinical trials will achieve clinically relevant results;
- the timing of regulatory discussions and submissions involving us and our partners, and the anticipated timing, scope and outcome of related regulatory actions or guidance;
- our ability to obtain, maintain and expand United States, or U.S., Food and Drug Administration, or FDA, and non-U.S. regulatory approvals of our products and product candidates;
- our ability to timely secure supply and manufacture conforming products;
- our expectations regarding the timing of our efforts to onshore the manufacturing of NUZYRA to the United States;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others;
- availability and timing of additional potential funding and/or the NUZYRA procurement under the BARDA contract;
- the plans, strategies, and objectives of management for future operations;
- future economic conditions or performance;
- our expectations regarding the continued growth of our business operations due, in part, to the commercialization of NUZYRA, including our plans related to hire hospital-based and community-based sales representatives;
- the impact that a pandemic, epidemic or outbreak of an infectious disease, such as COVID-19, may have on our business, operations, and financial performance;
- our estimates regarding the sufficiency of our cash resources, expenses, capital requirements and needs for additional financing, and our ability to obtain additional financing; and
- our projected financial performance.

Forward-looking statements are neither historical facts nor assurances of future performance. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance, time frames or achievements to be materially different from the information set forth in these forward-looking statements. While we believe that we have a reasonable basis for each forward-looking statement, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. We discuss many of these risks in the "Risk Factors" section and elsewhere in this Annual Report on Form 10-K. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Any of the events anticipated by the forward-looking statements may not occur or, if any of them do, the impact they will have on our business, results of operations and financial condition is uncertain. We hereby qualify all of our forward-looking statements by these cautionary statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

PARATEK® and NUZYRA® are registered trademarks of Paratek Pharmaceuticals, Inc. SEYSARA® is a U.S. and China registered trademark of Almirall, LLC and a trademark of Paratek in other foreign jurisdictions. Other trademarks referred to in this Annual Report on Form 10-K are the property of their respective owners. Solely for convenience, we only use the ® or ™ symbol the first time any trademark is mentioned.

All references to "Paratek," "we," "us," "our" or the "Company" in this Annual Report on Form 10-K mean Paratek Pharmaceuticals, Inc., and its subsidiaries.

Summary of Risks

Our business is subject to numerous risks. The following summary highlights some of the risks you should consider with respect to our business, financial condition and results of operations. This summary is not complete, and the risks summarized below are not the only risks we face. You should review and consider carefully the risks and uncertainties described in more detail in Part I, Item 1A. "Risk Factors" of this report, which includes a more complete discussion of the risks summarized below as well as a discussion of other risks related to our business and an investment in our common stock.

Risks Related to Our Financial Condition

- We have incurred significant losses since inception and anticipate that we will incur losses for the foreseeable future.
- We may continue to require substantial additional funding, which may not be available to us on acceptable terms, or at all.
- Raising additional capital or entering into certain other arrangements may cause dilution to our stockholders, restrict our operations or require us to relinquish rights.
- Our level of indebtedness and debt service obligations could adversely affect our financial condition.

Risks Related to Maintaining and Expanding Regulatory Approval and Other Legal Compliance Matters

- If clinical trials for omadacycline are prolonged, delayed or stopped, we may be unable to obtain regulatory approval and commercialize omadacycline for the treatment of additional indications on a timely basis.
- The results of previous clinical trials may not be predictive of future results, and the results of any ongoing or future clinical trials may not satisfy the requirements of the FDA or non-U.S. regulatory authorities.
- The regulatory approval process is expensive, time consuming and uncertain.
- Even though NUZYRA and SEYSARA have been approved by the FDA in the U.S., they face post-approval development and regulatory requirements, which may limit how they are manufactured and marketed, and could materially impair our ability to generate revenue.
- Our products may have undesirable side effects.
- If we or our partners market products in a manner that violates fraud and abuse and other healthcare laws, or if we or our partners violate government price reporting laws, we or our partners may be subject to administrative civil and/or criminal penalties.

Risks Related to Our Business

- We are highly dependent on the commercial success of NUZYRA in the U.S. and, to a lesser extent, SEYSARA.
- A pandemic, epidemic or outbreak of an infectious disease, such as COVID-19, has and may in the future adversely affect our business, results of operations and financial condition.
- If BARDA were to eliminate, reduce, or delay funding for our contract, including with respect to expected procurements under our contract, we would experience a negative impact on our programs associated with such funding and perhaps on our ability to maintain the infrastructure necessary to maximize our NUZYRA commercial opportunity.
- The BARDA contract includes special requirements, which subject us to the risk of a reduction or loss of funding.
- Sales of NUZYRA and SEYSARA may be slow or limited for a variety of reasons including competing therapies or safety issues.
- We are continuing to build our sales and distribution infrastructure. If we are unable to develop our sales, marketing and distribution capability on our own or through collaborations with marketing partners, we will not be successful in commercializing NUZYRA or any future product candidates to their full potential.
- We face significant competition.
- We rely and will continue to rely on outsourcing arrangements for manufacturing of NUZYRA and any future product candidates.
- The success of our business may be dependent on the actions of our collaborative partners.
- If we are unable to establish and maintain our agreements with third parties to distribute NUZYRA to patients, our results of operations and business could be adversely affected.
- We will need to grow our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

Risks Related to Our Intellectual Property

- If we are unable to obtain and enforce patent protection for products, our product candidates and related technology, our business could be materially harmed.
- Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.
- If we or our partners fail to comply with our obligations under our intellectual property licenses with third parties, we could lose license rights that are important to our business.
- If we or our partners are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

Risks Related to Indebtedness

- Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.
- We may not have the ability to raise the funds necessary to repurchase of our outstanding 4.75% Convertible Senior Subordinated Notes, or the Notes, upon a fundamental change, and our existing or future debt may contain limitations on our ability to repurchase the Notes.

Risks Related to Our Common Stock

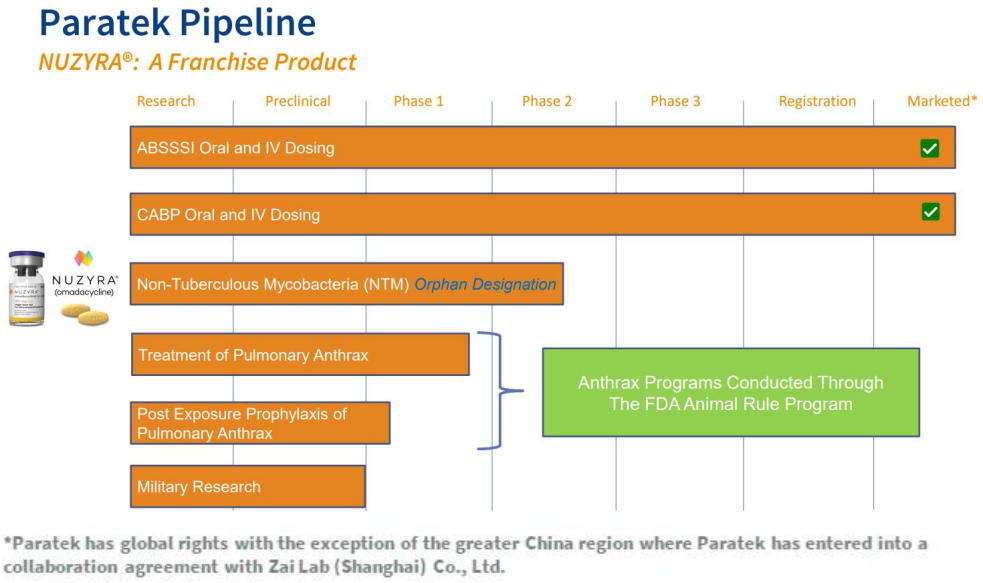
- The trading price of our common stock is volatile.
- Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.

Item 1. Business

Overview

We are a commercial-stage biopharmaceutical company focused on the development and commercialization of novel life-saving therapies for life-threatening diseases or other public health threats for civilian, government and military use. Our United States, or U.S., Food and Drug Administration, or FDA, approved commercial product, NUZYRA® (omadacycline) is a once-daily oral and intravenous antibiotic for the treatment of adult patients with community-acquired bacterial pneumonia, or CABP, and acute skin and skin structure infections, or ABSSSI, caused by susceptible pathogens. We retain worldwide commercial rights to omadacycline, with the exception in the People's Republic of China, Hong Kong, Macau and Taiwan, where we have entered into a collaboration agreement with Zai Lab (Shanghai) Co., Ltd., or Zai. The National Medical Products Administration, or NMPA, of China approved NUZYRA for the treatment of adult patients with CABP and ABSSSI in December 2021.

SEYSARA® (sarecycline) is an FDA-approved product with respect to which we have exclusively licensed in the U.S. and the People's Republic of China, Hong Kong and Macau, or the greater China region, certain rights to Almirall, LLC, or Almirall. SEYSARA is currently being marketed by Almirall in the U.S. as a once-daily oral therapy for the treatment of moderate to severe acne vulgaris. With respect to our technology as it relates to sarecycline, we retain development and commercialization rights in all countries other than the U.S. and the greater China region, and in February 2020, we exclusively licensed from Almirall certain technology owned or in-licensed by Almirall or its affiliates that is necessary or useful to develop or commercialize sarecycline outside of the U.S. Almirall plans to develop sarecycline for acne in China, with a submission to the China National Medical Products Administration, or NMPA, according to Almirall, expected in 2023.



NUZYRA

We believe that NUZYRA has the potential to become the primary choice of physicians for use as a broad-spectrum monotherapy antibiotic for ABSSSI, CABP and other serious community-acquired bacterial infections where resistance is of concern. NUZYRA is used in the emergency room, hospital, and community care settings. We have designed NUZYRA to provide potential advantages over existing antibiotics, including activity against resistant bacteria, broad-spectrum antibacterial activity, oral and IV formulations with once-daily dosing, no dosing adjustments for patients on concomitant medications and a generally safe and well-tolerated profile. NUZYRA also has the potential to be used as an oral and IV antibiotic for the treatment of NTM and pulmonary anthrax, where it could be suitable for post-exposure prophylaxis use as a priority medical countermeasure.

To date, we have conducted more than 30 Phase 1 studies of omadacycline to characterize the effects of the drug on humans, including how it is absorbed, metabolized, and excreted. These Phase 1 studies also included evaluation in special populations such as hepatic and renal failure patients. We have also conducted three successful Phase 3 clinical studies. Our first two Phase 3 clinical studies were for the treatment of ABSSSI (OASIS-1) and CABP (OPTIC). Both studies utilized initiation of IV therapy with transitions to oral-based treatment on clinical response. Our third Phase 3 clinical study (OASIS-2) was an oral-only administration of omadacycline in ABSSSI compared to oral-only linezolid. All three Phase 3 clinical studies resulted in omadacycline demonstrating positive efficacy results and a generally safe and well tolerated profile. These data formed the basis of approval for NUZYRA in the U.S. received in October 2018. The FDA subsequently approved our supplemental new drug application, or sNDA, for the oral-only loading dose regimen for patients diagnosed with CABP in May 2021. The sNDA included the results of a study to show that an oral-only loading dose regimen has a comparable pharmacokinetics, or PK, profile to the approved IV loading dose regimen in patients with CABP that was established in the OPTIC study.

In October 2018, we submitted a Market Authorization Application, or MAA, to the European Medicines Agency, or the EMA, for the treatment of adults with ABSSSI and CABP caused by susceptible bacteria. Based on the review of the data and the application, the EMA recommended approval for NUZYRA for the treatment of ABSSSI but not for CABP. The EMA stated that a second study is required for the CABP indication, which is consistent with European Union, or EU, guidance that typically requires two Phase 3 studies per indication for approval. In the EU, the ten-year market exclusivity for NUZYRA would begin with the first approval. As a result, in the fourth quarter of 2019, we withdrew our submission of the MAA to the EMA for NUZYRA to preserve exclusivity until such time as both the ABSSI and CABP indications can be approved concurrently in an effort to maximize the value of NUZYRA in the EU. The CABP study required as a post marketing commitment by the FDA is designed in a way that it could support re-submission and approval in EU. The EU currently represents a modest market opportunity compared to the U.S. Our goal to partner in the EU once both indications are approved remains unchanged.

Biomedical Advanced Research and Development Authority Contract

In December 2019, we entered into the BARDA contract, which is a five-year contract with an option to extend to ten years. The BARDA contract could result in payments to the Company of up to approximately $303.6 million and consists of a five-year base period-of-performance and a total contract period-of-performance (base period plus option exercises) of up to ten years. The BARDA contract supports the development of NUZYRA for the treatment of pulmonary anthrax, FDA post-marketing requirements, or PMRs, associated with the initial NUZYRA approval, and the ability for BARDA to procure up to 10,000 treatment courses of NUZYRA for use against potential biothreats. In September 2021, we and BARDA modified the original BARDA contract, herein referred to as the amended BARDA contract, to provide additional funding to expand the development of NUZYRA under an FDA Animal Efficacy Rule development program to support a supplemental New Drug Application, or sNDA, to the FDA to include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax, herein referred to as the amended option.

Under the terms of the original BARDA contract, approximately $59.4 million was awarded to us by BARDA in December 2019 for the development of NUZYRA for the treatment of pulmonary anthrax and the purchase of an initial 2,500 treatment courses of NUZYRA. As part of this initial $59.4 million award, the $37.9 million procurement of NUZYRA was delivered to and accepted by BARDA in June 2021, and the amount earned from this procurement was recognized in net U.S. sales of NUZYRA during the second quarter of

2021. We have been periodically drawing down the remaining $21.5 million of the initial award based on costs incurred during the development program.

Two additional contractual services under the original BARDA contract were initiated by BARDA in March 2020 that awarded us approximately $76.8 million for reimbursement of existing FDA PMRs and approximately $20.4 million for reimbursement of manufacturing-related requirements, which we have been drawing down based on costs incurred. This additional staged funding is expected to support all FDA PMRs associated with the approval of NUZYRA, including CABP and pediatric studies, as well as a five-year post-marketing bacterial surveillance study, and support the U.S. onshoring and security requirements of our manufacturing activities for NUZYRA.

BARDA initiated the amended option in September 2021 that expanded the development of NUZYRA under an FDA Animal Efficacy Rule development program to support an sNDA that will include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax for a revised total of approximately $31.6 million.

The remaining government options under the amended BARDA contract include a maximum of approximately $115.4 million to provide for three additional purchases of NUZYRA anthrax treatment courses, each of which may be exercised at BARDA's discretion upon achievement of development milestones related to the anthrax treatment development program. The timing and trigger of future procurements are linked to specific development milestones. The amended BARDA contract formalized the triggers for BARDA's option to purchase the second NUZYRA procurement upon BARDA's receipt of positive top-line data from our pilot efficacy treatment study of inhalation anthrax in rabbits, which we anticipate will be available as early as the end of 2022.

We and BARDA also agreed under the amended contract on specific development milestones to trigger BARDA's options for the third and fourth procurements of NUZYRA anthrax treatment courses. The third procurement will be triggered by BARDA's receipt of positive top-line data in PEP and treatment of inhalation anthrax from a combination of pilot and pivotal efficacy studies in animal models, which we anticipate will be available in 2024. The option for the fourth procurement will be triggered by our receipt of sNDA approval from the FDA for treatment of inhalation anthrax, which we anticipate will follow the third procurement by approximately 18-24 months. We plan to provide further specificity on timelines as the anthrax development program progresses.

We have made significant progress in the pulmonary anthrax development program under the amended BARDA contract. Two PK studies in rabbits have been completed as well as a PK study in non-human primates. In addition, we have evaluated minimum inhibitory concentrations, or MICs, of omadacycline against over 130 anthrax strains. Omadacycline continued to demonstrate potent MICs and is considered effective against all isolates infected with anthrax that were tested. The collection of isolates included a strain resistant to doxycycline and a strain resistant to ciprofloxacin. Omadacycline activity was not impacted by either of these resistant strains.

Together with BARDA, we also continue to advance our efforts to onshore the manufacturing of NUZYRA to the U.S. We have completed the knowledge transfer and development stage of our manufacturing process for the active pharmaceutical ingredient, or API, of omadacycline to our U.S. onshoring partners and are currently in the engineering stage of the initiative. We have completed knowledge transfer and the initiation of the process development work for production of vials. Our goal is to have U.S. based commercial supply production of tablets by the end of 2022 and vials by the end of 2023.

Development of Omadacycline in Other Therapeutic Areas

Non-Tuberculous Mycobacteria Abscessus

We have discussed trial designs and potential registration pathways with the FDA to determine the efficacy and safety of omadacycline in patients afflicted with non-tuberculous mycobacteria abscessus, or NTM abscessus, which are environmental organisms that can be found in soil, dust, and water, including natural and municipal water sources. Infection occurs when a person is exposed to NTM organisms. NTM abscessus can form difficult-to-eliminate biofilms, which are collections of microorganisms that stick to each other, and adhere to surfaces in moist environments. Although severe infection can affect the lymph nodes, skin, soft tissues, bones, and joints, the vast majority of NTM abscessus infection cases are pulmonary. The diagnosis of NTM abscessus infection is often

delayed due to non-specific symptoms and a lack of disease state awareness by clinicians. NTM abscessus is a rare and orphan disease with no FDA-approved therapies, which we estimate has a potential $1.0 billion addressable market in the U.S. In August 2021, FDA granted orphan drug designation for NUZYRA for the treatment of infections caused by NTM. This orphan drug designation includes NTM pulmonary disease caused by Mycobacterium abscessus complex, as well as NTM luminary disease caused by mycobacterium avium complex.

Mycobacterium abscessus, or *M. abscessus*, complex comprises a group of rapidly growing, multidrug-resistant, nontuberculous mycobacteria that are responsible for a wide spectrum of skin and soft tissue diseases, central nervous system infections, bacteremia, and ocular and other infections. Infections caused by the *M. abscessus* complex are notoriously difficult to treat due to intrinsic resistance to many classes of antibiotics. Few oral antibiotics demonstrate in vitro activity against the *M. abscessus* complex, making long-term treatment of this infection extremely complicated. The *M. abscessus* complex is frequently resistant to antibiotics that are used in the treatment of other NTM species such as rifamycins, ethambutol, and fluoroquinolones. There is currently only one FDA-approved antibiotic for the treatment of the more common NTM species, Mycobacterium avium complex (MAC); Arikayce, an inhaled liposomal amikacin, has been approved for treatment of refractory pulmonary disease caused by Mycobacterium avium complex. There are no FDA-approved treatments for pulmonary disease caused by *M. abscessus* complex.

One of the key components of *M. abscessus* complex treatment is the use of three or more antimicrobials in most treatment regimens to increase drug efficacy and decrease the development of antibiotic resistance. Currently available treatment options for *M. abscessus* complex pulmonary infection are lengthy and require complex, multi-antibiotic regimens and are generally not tolerated and have significant safety challenges. General treatment principles that should be followed include:

- Prolonged therapy (treat for at least 12 months of culture negativity);
- An induction phase of therapy with a three- to four-drug regimen including one to two different active intravenous agents;
- A suppressive phase, which should involve at least two oral or inhaled antibiotics considered active based on drug susceptibilities since most patients cannot tolerate months of intravenous therapy; and
- The inclusion of a macrolide in the treatment regimen improves treatment outcomes and regimen tolerability against isolates without a functional erm gene, but high levels of macrolide resistance has been reported, thus, limiting effectiveness.

Omadacycline has several key characteristics that may prove beneficial to patients with *M. abscessus* complex pulmonary infection. These include:

- Favorable pharmacokinetics with both intravenous and oral formulations including high lung penetration concentrations and high intracellular pulmonary macrophage levels;
- Established safety profile in pre-clinical studies and Phase 3 clinical trials, including a class that is currently used for the treatment of NTM and chronically in many different disease states; and
- Potent in vitro activity versus *M. abscessus* complex.

Omadacycline has demonstrated potent in vitro activity against *M. abscessus* complex species in three separate studies. In the most recent report (Brown-Elliot 2020) the MIC50 and MIC90 values obtained against *M. abscessus* subspecies abscessus were 0.12 and 0.25 µg/mL. In two additional reports (Kaushik 2019 and Shoen 2019), the MIC50 and MIC90 values obtained were 1 and 2 µg/mL, respectively. Differences in the results of these studies are likely due to experimental methodology or isolate selection and is discussed further in Brown-Elliot 2020; nonetheless, in all cases omadacycline and tigecycline had similar, if not identical, MIC values. Multiple discussions have occurred with the FDA to design a program to support registration on NUZYRA for *M. abscessus* complex. General agreement has been reached on the key program and study design elements.

We initiated enrollment in a Phase 2B clinical study for treatment of pulmonary NTM abscessus with omadacycline in October 2021 and most sites are active with remaining site initiations planned for early 2022. This study is a double-blind, placebo-controlled, randomized monotherapy study of pulmonary NTM abscessus in

patients who are not receiving other treatments and enrollment is proceeding as planned. Study size will be approximately 75 subjects randomized in a 1.5 to 1 ratio. Therapy will last for 12 weeks with an efficacy endpoint assessment at that timepoint. Due to the small numbers of patients with this rare disease, we expect this study will complete enrollment within approximately two years from commencement.

Other Data Generation

In July 2021, NUZYRA was added to the Center for Disease Control and Prevention's updated report, "Antimicrobial Treatment and Prophylaxis of Plague: Recommendations for Naturally Acquired Infections and Bioterrorism Response" as an alternative agent for the treatment, pre-exposure prophylaxis, and postexposure prophylaxis of primary bubonic and pharyngeal plague infections in adults 18 years of age and over.

Data generation activities in 2021 progressed through collaborative research and medical affairs activities progressed with the initiation of eight non-clinical and two clinical studies in investigator-initiated research, or IIR, programs, and the publication of 19 omadacycline manuscripts that address the use of NUZYRA in special pathogens, populations or disease states that will further define its unique therapeutic profile. In parallel, real-world evidence from two ongoing retrospective observational studies and independent case series continue to be published in peer reviewed journals that describe the clinical features and outcomes of patients with challenging infections, particularly in NTM and osteomyelitis, that receive omadacycline as a therapeutic agent.

Data generation continues to expand in 2022 with additional evidence from our IIR programs in areas such as *Mycobacterium avium complex,* or MAC, diabetic foot and C. difficile infections. The results of an investigator-initiated study demonstrating the activity of NUZYRA in a dynamic hollow fiber model of MAC pulmonary infection entitled "Omadacycline efficacy in the hollow fibre system model of pulmonary Mycobacterium avium complex and potency at clinically attainable doses" was published in the Journal of Antimicrobial Chemotherapy on March 8, 2022. The authors determined that NUZYRA, when tested in a hollow fiber model, demonstrated potent activity against M. avium. NUZYRA's activity was shown across a range of drug exposures, including those that approximate the lung concentrations achieved with the FDA-approved dosing regimen used to treat CABP and ABSSSI in adults. Efficacy and tolerability challenges associated with existing standard of care antibiotics used to treat MAC pulmonary infections further highlight the need for the development of novel antibiotic treatments for the estimated 100,000 cases of NTM pulmonary disease caused by MAC in the U.S. As a result of these encouraging results, we plan to conduct further research evaluating the activity of omadacycline in an animal model of MAC pulmonary infection, both as a single agent and in combination with the existing standard of care antibiotics used for treatment.

Sarecycline

Sarecycline, also known as SEYSARA in the U.S., is a novel, next generation, narrow spectrum tetracycline designed specifically for dermatological use. In July 2007, we exclusively licensed the right to develop and commercialize sarecycline for the treatment of acne to Warner Chilcott Company, Inc. (which was acquired by Actavis PLC in October 2013 and became Allergan in October 2015) and, September 2018, Allergan assigned such rights to Almirall. In February 2020, we exclusively licensed to Almirall certain technology owned or in-licensed by us or our affiliates in order to research, develop and commercialize sarecycline for the treatment of acne in the greater China region. Almirall is responsible for all costs associated with developing and commercializing sarecycline for the treatment of acne in the U.S. and the greater China region. In exchange for such license rights, we have the right to receive (i) milestone payments upon the achievement of certain development- and regulatory-based events in the U.S. and (ii) a royalty on U.S.-based and greater China region-based net sales. With respect to our technology as it relates to sarecycline, we retain development and commercialization rights outside of the U.S. and the greater China region and, with respect to certain technology owned or in-licensed by Almirall or its affiliates necessary or useful to develop or commercialize sarecycline outside of the U.S. and the greater China region, we exclusively licensed such technology from Almirall in February 2020, all of which is available for licensing to other partners in key international markets, such as the EU, Japan, the rest of Asia (excluding the greater China region), Canada and Latin America. In the event we directly commercialize or sublicense a third party to commercialize sarecycline outside of the U.S. and the greater China region, we owe Almirall (i) a royalty on our or our affiliates' net sales and (ii) a percentage of the consideration (e.g., milestones, royalties) we receive from our sublicensees in connection with their development and commercialization of sarecycline.

Almirall currently holds a nonexclusive license to develop and commercialize sarecycline for the treatment of rosacea in the U.S., and in the U.S., Paratek cannot grant rights on back-up compounds, lead candidate(s), or products licensed to Almirall for rosacea.

Corporate History

We are incorporated under the laws of the State of Delaware. On October 30, 2014, Transcept Pharmaceuticals, Inc., or Transcept, completed a business combination with privately-held Paratek Pharmaceuticals, Inc., or Old Paratek, in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of June 30, 2014, by and among Transcept, Tigris Merger Sub, Inc., or Merger Sub, Tigris Acquisition Sub, LLC, or Merger LLC, and Old Paratek, or the Merger Agreement, pursuant to which Merger Sub merged with and into Old Paratek, with Old Paratek surviving as a wholly-owned subsidiary of Transcept, followed by the merger of Old Paratek with and into Merger LLC, with Merger LLC surviving as a wholly-owned subsidiary of Transcept (we refer to these mergers together as the Merger). Immediately following the Merger, Transcept changed its name to "Paratek Pharmaceuticals, Inc.", and Merger LLC changed its name to "Paratek Pharma, LLC." In connection with the closing of the Merger, our common stock began trading on The Nasdaq Global Market under the ticker symbol "PRTK" on October 31, 2014.

The Antibiotics Market and Limitations of Other Current Therapies

Physicians commonly prescribe antibiotics to treat patients with acute and chronic infectious diseases that are either known, or presumed, to be caused by bacteria. The World Health Organization has identified the development of worldwide resistance to currently available antibacterial agents as being one of the three greatest threats to human health in this decade. In a press release announcing the release of a study titled "Hospital and Societal Costs of Antimicrobial Resistant Infections in a Chicago Teaching Hospital: Implications for Antibiotic Stewardship," it was estimated that antibiotic-resistant infections cost the U.S. healthcare system in excess of $20 billion annually. In addition, these infections result in more than $35 billion in societal costs and more than 8 million additional days spent in the hospital. Historically, the majority of life-threatening infections resulting from antibiotic-resistant bacteria were acquired in the hospital setting. According to AMR data from 2015 projected to 2028, approximately 6.7 million antibiotic treated events occur annually in the two combined indications of ABSSSI and CABP in U.S. hospitals. Furthermore, research conducted by Paratek suggests that in these same indications of ABSSSI and CABP there are approximately 890 thousand patients treated in U.S hospitals who fail to respond or are intolerant to the existing generic options. In the U.S. community setting, IMS NDTI data (2014-2015) projected to 2028 suggests there are approximately 23.7 million prescriptions for ABSSSI and CABP. Additionally, research conducted by Paratek suggests that approximately 2.1 million patients fail to respond or are intolerant to the existing oral generics in the U.S. community setting. The emergence of multi-drug resistant pathogens, coupled with limitations in terms of intolerance to existing generic options, emphasizes the need for novel agents capable of overcoming antibiotic resistance.

Bacteria are often broadly classified as gram-positive bacteria, including antibiotic-resistant bacteria such as methicillin-resistant Staphylococcus aureus, or MRSA, and multi-drug resistant Streptococcus pneumoniae, or MDR-SP; gram-negative bacteria, including antibiotic-resistant bacteria such as extended-spectrum beta-lactamases, or ESBL, producing *Enterobacteriaceae*; atypical bacteria, including *Chlamydophila pneumoniae* and *Legionella pneumophila*; and anaerobic bacteria, including *Bacteroides* and *Clostridia*. Antibiotics that are active against both gram-positive and gram-negative bacteria are referred to as "broad-spectrum", while antibiotics that are active only against a select subset of gram-positive or gram-negative bacteria are referred to as "narrow spectrum". Today, because many of the currently prescribed antibiotics that have activity against resistant organisms typically are "narrow spectrum," they cannot be used as an empiric monotherapy treatment of serious infections where gram-negative, atypical or anaerobic bacteria may also be involved. Empiric monotherapy refers to the use of a single, antibacterial agent to begin treatment of an infection before the specific pathogen causing the infection has been identified. Based on published epidemiology studies, rates of infections involving organisms other than gram-positive bacteria have been found to be as much as 15% in ABSSSI and up to 55% in CAP patients with confirmed bacterial etiology.

When a patient goes to the emergency room or hospital for treatment of a serious infection, the physician's selection of which IV antibiotic to use is often based on the severity of infection, the pathogen(s) believed most likely to be involved and the probability of a resistant pathogen(s) being present. After initial IV therapy and once the infection begins to respond to treatment, hospitals and physicians face strong pressures to discharge patients from the hospital to reduce costs, limit hospital-acquired infections and improve the patient's quality of life. In order

to transition patients out of the hospital and home to complete the course of therapy, physicians typically prefer to have the option to prescribe a bioequivalent oral formulation of the same antibiotic.

Antibiotics used to treat ABSSSI, CABP and other serious, community-acquired bacterial infections must satisfy a wide range of criteria on a cost-effective basis. For example, we believe that other existing treatment options for ABSSSI, including vancomycin, linezolid, daptomycin, piperacillin tazobactam, dalbavancin, tigecycline and delafloxacin; and for CABP, including levofloxacin, moxifloxacin, azithromycin, ceftriaxone, clarithromycin, ceftaroline, delafloxacin, lefamulin and tigecycline; have one or more of the following significant limitations:

- *Limited spectrum of antibacterial activity*. Since it may take as long as 48 to 72 hours to identify the pathogen(s) causing an infection and most of the currently available options that cover resistant pathogens are narrow-spectrum treatments, physicians frequently prescribe two or more antibiotics to treat a broad-spectrum of potential pathogens. For example, vancomycin, linezolid and daptomycin, the most frequently prescribed treatments for certain serious bacterial skin infections, are narrow-spectrum treatments active only against gram-positive bacteria. The currently available treatment with a more appropriate spectrum for use as a monotherapy against serious and antibiotic-resistant bacterial infections is tigecycline, but it has other significant limitations, most notably dose limiting tolerability of nausea and vomiting.
- *Lack of both oral and IV formulations*. The most common treatments for serious bacterial infections, vancomycin, daptomycin, ceftriaxone, piperacillin tazobactam, and tigecycline are only available as injectable or IV formulations. The lack of an effective bioequivalent oral formulation of these and many other commonly prescribed antibiotics requires continued IV therapy, which is inconvenient for the patient and may result in longer hospital stays and greater cost. Alternatively, because of the absence of the same antibiotic in an oral, well-tolerated formulation, physicians may switch the patient to a different orally available antibiotic at the time of hospital discharge. This carries the risk of new side effects and possible treatment failure if the oral antibiotic does not cover the same bacteria that were being effectively treated by the IV antibiotic therapy. While linezolid is a twice-daily IV and oral therapy, it is a narrow-spectrum treatment that is associated with increasing bacterial resistance, side effects from interactions with other therapies and other serious safety concerns.
- *Safety/tolerability concerns and side effects*. Concerns about antibiotic safety and tolerability are among the leading reasons why patients stop treatment and fail therapy. The most commonly used antibiotics, such as vancomycin, linezolid, daptomycin, levofloxacin, moxifloxacin, azithromycin, piperacillin/tazobactam and tigecycline, are associated with safety and tolerability concerns. For example, vancomycin, which requires frequent therapeutic monitoring of blood levels and corresponding dose adjustments, is associated with allergic reactions and can cause kidney damage, loss of balance, loss of hearing, vomiting and nausea in certain patients. Linezolid is associated with bone marrow suppression and loss of vision and should not be taken by patients who are also on many commonly prescribed anti-depressants, such as monoamine oxidase inhibitors and serotonin reuptake inhibitors. Daptomycin has been associated with a reduction of efficacy in patients with moderate renal insufficiency and has a side effect profile that includes muscle damage. Piperacillin/tazobactam is not used in patients with beta-lactam (penicillin) allergy while tigecycline is associated with tolerability concerns because of nausea and vomiting. Levofloxacin and moxifloxacin are associated with tendon rupture and peripheral neuropathy. In July 2016, the FDA approved changes to the labels of fluoroquinolone antibacterial drugs for systemic use (i.e., taken by mouth or by injection), stating "These medicines are associated with disabling and potentially permanent side effects of the tendons, muscles, joints, nerves, and central nervous system that can occur together in the same patient." As a result, the FDA revised the Boxed Warning, FDA's strongest warning, to address these serious safety issues. They also added a new warning and updated other parts of the drug label, including the patient Medication Guide. Additionally, a May 2012 article in the New England Journal of Medicine indicated that a small number of patients treated with azithromycin and quinolones, such as levofloxacin or moxifloxacin, may experience sudden death due to cardiac arrhythmia, which is often predicted by a prolongation of the corrected QT interval, or QTc. The FDA issued a Drug Safety Communication on March 12, 2013 titled "Azithromycin (Zithromax or Zmax) and the risk of potentially fatal heart rhythms," and the azithromycin drug label warnings were strengthened to address this concern.
- *Increasing bacterial resistance*. Bacterial resistance to the most frequently prescribed antibiotics (branded or generic) has limited their potential to treat infections, which often prevents their use as an empiric monotherapy. We believe that MRSA and MDR-SP, in the community have posed treatment challenges because of resistance to penicillins (resistance rate up to 100% for both), cephalosporins (100% and 11%,

respectively, for ceftriaxone), macrolides (83% and 86%, respectively, for erythromycin/azithromycin) and quinolones (73% and 2%, respectively, for levofloxacin), particularly in ABSSSI and CABP. There have also been recent reports of resistance developing during treatment with daptomycin and concerns about an increasing frequency of strains of *Staphylococcus aureus* with reduced susceptibility to vancomycin. Additionally, linezolid use has been associated with drug resistance, including reports of outbreaks of resistance among *Staphylococcus aureus* and *Enterococcus strains*.

These limitations can ultimately lead to longer hospital stays, greater healthcare costs and increased morbidity and mortality due to lower cure rates and additional side effects. While certain antibiotics address some of these outcomes, we do not believe there is one superior treatment option that satisfies all outcomes. We believe that it is essential for the treatment of patients with serious, community-acquired bacterial infections that physicians prescribe the right antibiotic the first time, as ineffective antibiotics can quickly lead to progressively more severe and invasive infections or even death.

Attributes of NUZYRA

- *Equivalent Once-daily oral and IV formulations to support transition therapy*. As identified through our clinical development program, the equivalent exposures of the oral and IV formulations permit transition therapy, which allows patients to start treatment on the IV formulation in the hospital setting then "transition" to the oral formulation of the same bioequivalent antibacterial agent once the infection is responding enabling the patient to be released from the hospital to complete the full course of therapy at home. We believe that transition therapy has the potential to avoid the concerns that can accompany switching from an IV agent to a different class of oral antibiotic and to facilitate the continuance of curative therapy at home.
- *Broad-spectrum of antibacterial activity*. Omadacycline has demonstrated *in vitro* activity against all common pathogens found in ABSSSI, such as *Staphylococcus aureus*, including MRSA, *Streptococci* (including Group A *Streptococci*), anaerobic pathogens and many gram-negative organisms. Omadacycline is also active *in vitro* against the key pathogens found in CABP, such as Streptococcus pneumoniae, including MDR-SP, *Staphylococcus aureus, Haemophilus influenzae* and atypical bacteria, including *Legionella pneumophila*. Based on the approved label in the United States, omadacycline has the clinical and in vitro spectrum of coverage needed to become the primary antibiotic choice of physicians and serve as an empiric monotherapy option for ABSSSI and CABP where resistance is of concern. On the basis of the in vitro sprectrum of activity demonstrated against Nontuberculous Mycobacteria, we believe omadacycline has the potential to become an antibiotic of choice for the treatment of NTM. Omadacycline has also demonstrated in vitro activity against multiple biothreat pathogens such as Bacillus anthracis, Yersinia pestis, and others.
- *Generally safe and well tolerated profile*. To date, we have observed omadacycline to be generally safe and well tolerated in clinical studies and the post-marketing setting. We have conducted a thorough QTc study, as defined by FDA guidance to assess prolongation of QTc, an indicator of cardiac arrhythmia. This study suggests no prolongation of QTc by omadacycline. Further, omadacycline is not metabolized in the liver or anywhere else in the body, thus reducing the likelihood of causing drug-to-drug interactions. Additionally, omadacycline has resulted in low rates of diarrhea, and we have not observed confirmed cases of *Clostridium difficile* infection, which can frequently occur from the use of other classes of broad-spectrum antibiotics such as beta-lactams and quinolones.
- *Designed to overcome bacterial resistance*. We designed omadacycline to overcome the two major mechanisms of tetracycline resistance, known as pump efflux and ribosome protection. This approach was via structure-activity relationship chemistry-based modifications of the seven and nine positions of minocycline. Our attempts to generate resistance to omadacycline in the laboratory suggest a low potential for developing resistance. In addition, our testing of thousands of bacterial samples in the laboratory suggests that omadacycline has not been affected to date by clinically relevant mechanisms of resistance to tetracyclines or to any other class of antibiotics.
- *Tissue penetration*. Omadacycline penetrates tissues broadly, including lung, muscle, and kidney, thereby achieving high concentrations at the sites of infection. Because omadacycline is eliminated from the body (as unchanged parent compound) via the kidneys and intestine in an expected manner, it can be used in patients with diminished kidney and liver function, without dose adjustment, and may have benefit in patients receiving poly-pharmacy, where drug-drug interactions are of concern.

Omadacycline Post-Approval Requirements in the U.S.

Under the Pediatric Research Equity Act (21 U.S.C. 355c), or PREA, all applications for new active ingredients are required to contain an assessment of the safety and effectiveness of the product for the claimed indication in pediatric patients unless this requirement is waived, deferred, or inapplicable. As part of the approval for NUZYRA, the FDA has waived the pediatric study requirement for ages 0 to < 8 years and deferred submission of pediatric studies for ages 8 to < 18 years. Specifically, the FDA has requested that we complete three pediatric studies in children ages 8 to <18 years, including a pediatric PK study followed by safety and efficacy studies in pediatric patients with both CABP and ABSSSI. We anticipate that the pediatric PK study will be initiated in 2022.

In addition to pediatric requirements, as is often required for antibiotic approvals, the FDA also required a U.S. surveillance study for five years from the date of marketing to monitor for the development of resistance to NUZYRA (omadacycline) in those organisms specific to the indications in the label. Year three of the five-year surveillance recently concluded with no observed development of resistance to date in the indicated pathogens.

Lastly, the FDA required a second study be conducted in adult patients with CABP. This study has been enrolling since February 2021, including at investigator sites in Ukraine and Russia. Enrollment in Ukraine and Russia has been placed on hold in response to the Ukraine-Russia crisis that began in February 2022. We are collaborating closely with our study Contract Research Organization, or CRO, to evaluate when the study may be able to continue in these countries.

NUZYRA Commercialization Strategy

We currently market NUZYRA in the U.S. as an empiric monotherapy and plan for NUZYRA to be commercialized worldwide for the treatment of serious, community-acquired bacterial infections. We retain worldwide commercial rights to omadacycline, with the exception in the People's Republic of China, Hong Kong, Macau and Taiwan, where we have entered into a collaboration agreement with Zai Lab (Shanghai) Co., Ltd., or Zai. In the U.S. and Europe, we continue to reserve the right to either commercialize omadacycline alone, through one or more pharmaceutical companies that have established commercial capabilities, or some combination thereof.

NUZYRA was launched into the hospital and adjacent sites of care settings in February 2019 with 40 customer-facing representatives sourced through a contract sales organization, or CSO. This number increased to approximately 60 customer-facing representatives by the end of 2020. Consistent with our original commercial launch plan, we terminated the agreement with our CSO on December 31, 2020 and began hiring customer-facing representatives as employees on January 1, 2021. As of December 31, 2021, we had 96 customer-facing representatives and 38 customer-facing employees.

During the first quarter of 2021, we completed the initial phase of our plan to expand our U.S. launch of NUZYRA into the community setting based on NUZYRA's product attributes, including its once-daily oral formulation, broad reimbursement coverage and infectious disease physician support. Our expansion of commercial promotion into the community setting focused initially on ABSSSI and broadened in the fall of 2021 to include the treatment of CABP as we received FDA approval of the oral-only loading dose regimen in the second quarter of 2021. We plan to add additional territories and customer-facing representatives into the community setting throughout 2022. By the fourth quarter of 2022, when we have completed the community expansion, we anticipate having a sales force to address both the community and hospital settings of approximately 120 to 130 customer-facing representatives. We believe that there is a similar rapidly growing need in other markets throughout the world, including Europe, established Asian markets such as Japan and Korea, and emerging markets, such as Russia, South America and India. We plan to pursue expansion of omadacycline to these markets through collaboration or distribution arrangements.

Business Update Regarding COVID-19

The COVID-19 pandemic continues to present a substantial public health and economic challenge around the world and is continuing to affect our employees, health care institutions, patients, communities and business operations, as well as the U.S. economy and financial markets. The COVID-19 related restrictions on in-person

promotional access to health care institutions and the overall impact of COVID-19 restrictions on the health care and hospital environments could restrict the full potential of NUZYRA's growth. The length of time and full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including the duration, spread and severity of the outbreak, new information that may emerge concerning COVID-19, any resurgence of COVID-19 cases, including as a result of variant strains of the underlying virus, the actions taken to contain the virus or treat its impact, the availability and efficacy of vaccines against COVID-19 and the economic impact on local, regional, national and international markets.

To date, we and our partners have been able to continue to supply our products to our patients worldwide and currently do not anticipate any interruptions in supply for the foreseeable future. We continue to assess the potential impact of the COVID-19 pandemic on our three clinical studies that have begun or will soon begin, our BARDA anthrax development program, as well as on our business and operations, including our sales, expenses, supply chain and other clinical studies. Our office-based employees have been permitted to work from home since early March 2020. Our customer-facing personnel are operating through a hybrid model of both virtual and in-person engagement in a manner compliant with guidance issued by the Centers for Disease Control and Prevention and other state and local mandates.

Our third-party contract manufacturing partners continue to operate their manufacturing facilities at or near normal levels. While we currently do not anticipate any interruptions in our supply chain, it is possible that the COVID-19 pandemic and response efforts may have an impact in the future on our and/or our third-party suppliers' and contract manufacturing partners' ability to manufacture our products or the products of our partners. The COVID-19 pandemic has largely prevented technical service, quality assurance and supply operations personnel from traveling to our third-party contract manufacturing partners in Europe.

For additional information on the various risks posed by the COVID-19 pandemic, refer to and Item 1A. *Risk Factors* and Item 3. *Quantitative and Qualitative Disclosures About Market Risk* included in this report.

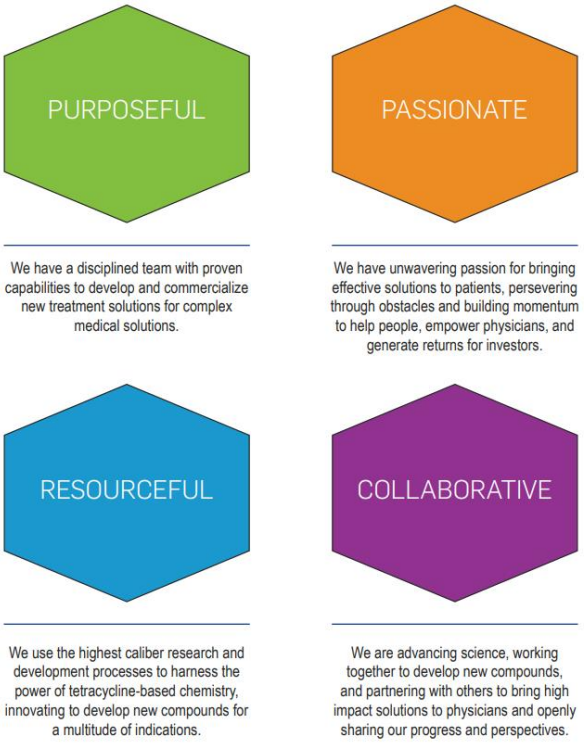
Human Capital Management

Employees

As of February 28, 2022, we had 208 total employees, 207 of whom are full-time employees and 30 of whom were primarily engaged in research and development activities. A total of 15 employees have an M.D., Pharm.D, or Ph.D. degree. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Our Corporate Culture

We are driven by our mission to develop transformative medicines for patients with life-threatening diseases and solutions that lead to positive patient stories. Our vision is to be a leading independent biopharmaceutical company providing novel life-saving products for life-threatening diseases or other public health threats for civilian, government and military use. We were founded and continue to be built on our four core values: purposeful, passionate, resourceful, and collaborative.



The foundation of our company culture requires us to always maintain our commitment to these core values. We have a shared commitment to act with integrity and take responsibly for our actions. All employees are responsible for upholding our reputation and conducting business to the highest legal and ethical standards. Ethical decision making is the foundation for how we do business. Our Code of Business Conduct and Ethics, or the Code, describes fundamental principles to guide our actions and is designed to help employees make the right decisions. Consistent with our commitment to conducting our business ethically and compliantly, we have implemented a comprehensive compliance program governing our business operations which implements the principles set forth in the Code. To facilitate compliance with the Code, we have implemented a program of code awareness, training and annual review.

Fostering and maintaining a strong, healthy culture is a key strategic focus. Our core values reflect who we are and the way our employees interact with one another, our customers, partners and shareholders. Our Board of Directors, or Board, also provides oversight and guidance to support the continued focus on and importance of culture to our Company. We are an equal opportunity employer. We do not tolerate discrimination against applicants or employees based on race, color, religion, national origin, sex, pregnancy, age, marital status, sexual orientation, genetic information, citizenship status, disability, veteran status or any other characteristic protected by law. We prohibit discrimination in decisions concerning recruitment, hiring, compensation, benefits, training, termination, promotions or any other terms and conditions of employment or career development. We are committed to providing a work environment that is free from discrimination and harassment of any type. Each person, at every level of the organization, must act with respect and civility toward customers, coworkers, and outside firms.

Corporate Sustainability

We understand that delivering on our mission over the long term requires a focus on corporate sustainability, including environmental, social, and governance considerations. Specifically, we focus on the following:

- *Patient Support*: We are committed to ensuring our innovations reach as many patients as possible, as quickly as possible. We provide patient support and education programs.
- *Diversity and Inclusion*: We strive to promote diversity, inclusion, equal opportunity and personal development. As of February 2022, women make up more than half of our workforce and ethnic or racial minorities make up more than twenty six percent of our total employee population.
- *Dedication to Employees:* We believe in the importance of investing in our employees' health, safety, wellness, and ongoing professional development.
- *Community Involvement:* Supporting and giving back to the communities in which we live and work are at the core of our values. Through both corporate initiatives and individual contributions of our employees, we seek to make a difference.

Our Board sets high standards for our employees, officers and directors. Implicit in this philosophy is the importance of sound corporate governance. It is the duty of the Board to serve as a prudent fiduciary for shareholders and to oversee the management of our business. To fulfill its responsibilities and to discharge its duty, our Board follows the procedures and standards that are set forth in our Code of Business Conduct and Ethics, which are subject to modification from time to time as the Board deems appropriate in our best interests or as required by applicable laws and regulations.

Our industry is highly regulated, and is governed by many international, federal, state, and local laws. It is our policy to conduct activities in compliance with all applicable laws, regulations, and industry standards as well as scientific research standards and guidelines.

Patient safety is our highest priority, and we are committed to providing safe and effective products to our patients. We work closely with government entities, like the FDA, to ensure the safety and efficacy of products and follow all requirements regarding manufacturing, registration, and promotion of prescription drugs.

Compensation and Benefits

Our compensation program is designed to align the compensation of our employees with performance and provides the proper incentives to attract, retain and motivate employees to achieve superior results. To achieve our objectives, we evaluate our compensation program with the goal of setting total compensation at levels that align with our mission, industry, company size, and life stage. While we do not have a formal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, we generally strive to provide our employees with a balance of short-term and long-term incentives to encourage consistently strong performance. To incentivize strong performance, two key elements of our employee compensation are variable—annual cash incentive compensation, which is earned based on our Compensation Committee's assessment of our Company's annual performance, and performance-based restricted shares, restricted shares, and stock options, which deliver value only to the extent the value of our stock increases.

We believe that the most effective compensation program will promote company performance, encourage progress toward achieving our mission, and reward value creation for our stockholders. Our compensation program is designed to:

- attract and retain superior employees with the skills and values to contribute to our long-term success;
- provide incentives that motivate and reward the achievement of performance goals and that encourage retention; and

- align employees' interests with those of stockholders by rewarding the achievement of short- and long-term strategic and financial goals, including those tied to short- and long-term value creation for our stockholders.

We offer comprehensive benefit programs to our employees that provide flexibility of choice through a framework of pay and recognition, health and wellness, financial well-being, work/life happiness, culture and community, and learning and development. We recognize and support the growth and development of our employees and offer opportunities to participate in internal as well as external learning programs.

We continually monitor employee turnover rates, as our success depends upon retaining our highly trained personnel. We believe the combination of competitive compensation and career growth and development opportunities have helped increase employee tenure and reduce voluntary turnover.

Our recruiting practices and decisions on whom to hire are among our most important activities. We utilize social media, local job fairs and educational organizations across the U.S. to find diverse, motivated and responsible employees.

Paratek PROUD

The Paratek PROUD Program, or the Program, is an employee recognition program that acknowledges an employee's behavior, contribution, and impact in the workplace. The Program is multi-faceted with the goal to encourage employee engagement, build a supportive and active work environment and culture, drive operational excellence to enhance business outcomes, and retain top talent and increase company loyalty. The Program recognizes service anniversaries through a certificate of recognition, crystal plaque, and monetary gift.

Competition

NUZYRA 100 mg for injection and 150 mg tablets are distributed in the U.S. exclusively through a limited network of specialty pharmacy providers and distributors. This distribution process is designed to provide the best possible provider and patient experience and improve patient adherence to the indicated dosing.

We have contracted with the Lash Group, a third- party organization with extensive experience in delivering patient support services to help healthcare providers and patients access our network of specialty pharmacies and navigate the insurance process.

Paratek also employs Market Access Account Directors who educate payors and hospital formulary committee members about NUZYRA and a Trade Team that works with our network of specialty pharmacies and distributors to assist in the execution of our distribution plan.

Three of the nation's largest Pharmacy Benefit Managers, CVS Caremark, Express Scripts and OptumRx, have listed NUZYRA 150 mg tablets on their commercial formulary. Approximately 83% of insured commercial lives in the U.S. have coverage for NUZYRA 150 mg tablets with limited or no restrictions. Among those commercially insured covered lives, approximately 19% require a prior authorization.

On October 1, 2019, NUZYRA 100 mg for injection was issued a permanent J-code under the Healthcare Common Procedure Coding System, which is a standardized code system necessary for medical providers to submit healthcare claims to Medicare and other health insurances in a consistent and orderly manner. NUZYRA 100 mg for injection, has also received transitional pass-through status from the Centers for Medicare and Medicaid Services, or the CMS, which is intended to encourage the use of newly FDA-approved medical devices, drugs, and biologics to increase Medicare patients' access to these innovative therapies by paying hospital outpatient departments more than the established facility fees. Pass-through status is temporary lasting at least two but not more than three years. NUZYRA 100 mg for injection was granted a New Technology Add-On Payment, or NTAP, by CMS, on October 1, 2020. NTAP provides an additional payment to hospitals for the costs of new medical services and technologies under the Inpatient Prospective Payment System, or IPPS, for Medicare patients treated in a hospital inpatient setting. NTAP status is temporary and lasts at least two but not more than three years. The NTAP reimbursement

policy has been in effect since 2001 and offers some financial support for hospitals that understand how to utilize the NTAP billing mechanism and choose to use newer drugs rather than rely on older generics due to cost. The transitional pass-through status and NTAP for NUZYRA are due to expire by the end of 2022.

Our potential competitors include large pharmaceutical and biotechnology companies, specialty pharmaceutical companies and generic drug companies. We believe that our product candidates offer key potential advantages over competitive products that could enable our product candidates to capture meaningful market share from our competitors.

NUZYRA competes with other antibiotics in the serious bacterial skin infection market. These include, but are not limited to, vancomycin, marketed as a generic by Abbott Laboratories and others; linezolid, marketed as Zyvox by Pfizer Inc. and available as a generic; daptomycin, marketed as Cubicin by Merck Pharmaceuticals, Inc. and available as a generic; dalbavancin, marketed as Dalvance by Abbvie; tedizolid, marketed as Sivextro by Nabriva Therapeutics.; oritavancin, marketed as Orbactiv and delafloxacin marketed as Baxdela by Melinta Therapeutics, Inc.; quinupristin/dalfopristin, marketed as Synercid by Pfizer, Inc.; tigecycline, marketed as Tygacil by Pfizer Inc. and available as a generic; telavancin, marketed as Vibativ by Cumberland Therapeutics Inc.; ceftaroline, marketed as Teflaro by Abbvie; and generic trimethoprim/sulfamethoxazole and clindamycin.

Further, we expect that product candidates currently in review with the FDA, in Phase 3 clinical development, or that could enter Phase 3 clinical development in the near future, may represent significant competition if approved. These include, but are not limited to, CG-400549, under development by Crystal Genomics; GSK2140944, under development by GSK; nemonoxacin, under development by TaiGen Biotechnology and brilacidin, under development by Cellceutix.

NUZYRA also competes with other antibiotics in the community-acquired pneumonia market. These include azithromycin, marketed as Zithromax and Z-PAK by Pfizer Inc. and available as a generic; clarithromycin, marketed as Biaxin by Abbott Laboratories and available as a generic; moxifloxacin, marketed as Avelox by Bayer AG and available as a generic; levofloxacin, marketed as Levaquin by Johnson & Johnson and available as a generic; tigecycline, marketed as Tygacil by Pfizer Inc. and available as a generic; linezolid, marketed as Zyvox by Pfizer Inc. and available as a generic; ceftriaxone, marketed as Rocephin by F. Hoffman-La Roche Ltd and available as a generic; and ceftaroline, marketed as Teflaro by Abbvie, delafloxacin marketed as Baxdela by Melinta Therapeutics Inc; lefamulin marketed as Xenleta by Nabriva Therapeutics. We are also aware of various drugs that are or may eventually be under development for the treatment of CABP, including, but not limited to, GSK2140944, under development by GSK and nemanoxacin, under development by TaiGen Biotechnology.

Many of our potential competitors have substantially greater financial, technical and human resources than we do, as well as greater experience in marketing products, discovering and developing product candidates, obtaining FDA and other regulatory approvals of products and the commercialization of those products. Our competitors' drugs may be more effective, or more effectively marketed and sold, than our products or any other product candidate we may commercialize and may render our products or product candidates obsolete or non-competitive before we can recover the expenses of our development and commercialization. We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available. Finally, the development of new treatment methods for the diseases we are targeting could render our products or product candidates non-competitive or obsolete.

Manufacturing

We do not own or operate manufacturing facilities for the production of any of our products, nor do we have plans to develop our own manufacturing facilities in the foreseeable future. Our products are manufactured in synthetic processes from starting materials that have to date been generally available.

The manufacturing process of omadacycline tosylate has been validated at commercial scale. The active pharmaceutical ingredient manufacturing process is a three-step synthesis followed by purification and salt formation. The starting material is minocycline, which is well characterized and readily available. We have entered into commercial supply agreements with commercial manufacturing organizations as described below, to manufacture and supply the drug substance, drug product and finished packaged product.

CIPAN

In November 2016, we entered into a manufacturing and services agreement with CIPAN – Companhia Industrial Produtora de Antibióticos, or CIPAN, and subsequently amended and restated such manufacturing and services agreement in April 2018 to include, among other things, an investment by the Company in a new facility area to increase the manufacturing capacity for production of crude omadacycline. The agreement, as subsequently amended, provides the terms and conditions under which CIPAN will manufacture and supply to us increased quantities of minocycline starting material and crude omadacycline, or the CIPAN Products, for purification into omadacycline and, subsequently, for use in our products that contain omadacycline tosylate as the active pharmaceutical ingredient. Under this agreement, we are obligated to pay a CIPAN Product price in the four-digit U.S. dollar range per kilogram for minocycline starting material and in the four-digit or five-digit U.S. dollar range per kilogram for crude omadacycline, based on the annual volume of crude omadacycline that we order, subject to adjustments as set forth in the agreement. CIPAN will also perform certain services related to development, technology transfer and manufacturing of the CIPAN Products as provided in one or more statements of work, which shall set forth the fees payable by us to CIPAN for such services.

Our agreement with CIPAN will remain in effect for an initial term, as extended, after which the agreement will continue, with respect to each CIPAN Product, for successive renewal terms unless either we or CIPAN have given written notice of termination within a certain period prior to the expiration of either the initial or then-current renewal term. The agreement may also be terminated under certain other circumstances, including by either party due to a material uncured breach by the other party or the other party's insolvency.

Carbogen

On July 14, 2021, we entered into a supply agreement with CARBOGEN AMCIS AG, or Carbogen. The agreement provides for the terms and conditions under which Carbogen will manufacture and supply to us the active pharmaceutical ingredient for our omadacycline product in bulk quantities, or the Carbogen Product. Under the agreement, we are responsible for the cost and supply of crude omadacycline that Carbogen requires to manufacture Carbogen Product and perform related services. We are obligated to initially pay Carbogen an amount in the high six-digit U.S. dollar range per batch of Carbogen Product that we order, and the price may be adjusted in accordance with the terms of the agreement. We may also request that Carbogen perform certain services related to the Carbogen Product, for which we will pay reasonable compensation to Carbogen.

Our agreement with Carbogen will remain in effect for a fixed initial term and subsequent renewal terms (unless either party provides notice of its intent to terminate prior to the end of the then-current term). The agreement may also be terminated under certain other circumstances, including by either party delivering notice of termination following the initial term, or by either party due to a material uncured breach by the other party or the other party's insolvency.

Almac

In December 2016, we entered into a manufacturing and services agreement with Almac Pharma Services Limited, or Almac. The manufacturing agreement, as subsequently amended, provides for the terms and conditions under which Almac will manufacture, package and supply to us omadacycline oral solid dosage tablets in bulk form, or the Almac Products. Under this manufacturing agreement, we are required to use commercially reasonable efforts to timely provide Almac with the active pharmaceutical ingredient needed to manufacture the Almac Products and perform related services. We are obligated to pay a supply price in the five-digit range in Great Britain Pounds, or GBP, per batch of the Almac Products, subject to adjustments as provided in the manufacturing agreement. We are also subject to an annual minimum revenue commitment in the six-digit GBP range. We will also negotiate with Almac, as part of each individual scope of work, the reasonable costs for the services to be performed for us by Almac.

The agreement with Almac will remain in effect for a fixed initial term, after which the agreement will continue for successive renewal terms unless either us or Almac have given written notice of termination within a certain period prior to the expiration of the initial or then-current renewal term. The agreement may also be terminated under certain other circumstances, including by either party due to a material uncured breach of the other party or the other party's insolvency.

Patheon

In July 2017, we entered into a master manufacturing services agreement and corresponding product agreement with Patheon UK Limited, or Patheon. The agreements, as subsequently amended, provide for the terms and conditions under which Patheon will manufacture, package and supply to us, omadacycline in injectable form, or the Patheon Products. Under these agreements, we are required to deliver to Patheon the active pharmaceutical ingredient needed to manufacture the Patheon Products. We are obligated to pay a supply price in the six-digit dollar range per batch of the Patheon Products, subject to adjustments as provided in the agreements. Now that our omadacycline product has been approved, we are also subject to an annual minimum purchase requirement in the six-digit U.S. dollar range. If we desire for Patheon to conduct additional services other than those expressly set forth in the agreements, those would be subject to additional fees.

Our agreements with Patheon will remain in effect for a fixed initial term, after which they will continue for successive renewal terms unless either we or Patheon have given written notice of termination within a certain period prior to the expiration of the applicable initial or then-current renewal term. The agreements may also be terminated under certain other circumstances, including by either party due to a material uncured breach of the other party or the other party's insolvency.

Research and Development

We have and will continue to make substantial investments in research and development. Our research and development expenses totaled $30.4 million and $23.9 million in 2021 and 2020, respectively.

In the ordinary course of business, we enter into agreements with third parties, such as contract research organizations, medical institutions, government agencies, clinical investigators and contract laboratories, to conduct our clinical studies and aspects of our research and preclinical testing. These third parties provide project management and monitoring services and regulatory consulting and investigative services.

Intellectual Property

The proprietary nature of, and protection for, our proprietary drug development platform, our product candidates and our discovery programs, processes and know-how are important to our business. We seek patent protection in the U.S. and internationally for areas such as composition of matter and the chemistries that allow for the synthesis of novel, substituted tetracycline compounds that exhibit significant antibacterial and/or anti-inflammatory activity, and any other technology to which we have rights, where available and when appropriate. Our policy is to pursue, maintain and defend patent rights, whether developed internally or licensed from third parties, and to protect the technology, inventions and improvements that are commercially important to the development of our business. We also rely on trade secrets that may be important to the development of our business.

Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of our proprietary technologies and compounds, our current product and future product candidates and the methods used to develop and manufacture them, as well as successfully defending these patents against third-party challenges. Our ability to prevent third parties from making, using, selling, offering to sell or importing our products and technology depends on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our technology.

As of December 31, 2021, our patent portfolio of owned or exclusively licensed patents and applications includes 54 issued U.S. patents, 17 pending U.S. patent applications and corresponding foreign national or regional

counterpart patents or applications. We expect that the patents and patent applications in this portfolio, if issued, and if the appropriate maintenance, renewal, annuity or other government fees are paid, would expire between 2022 and 2041, excluding any additional terms from patent term adjustments or patent term extensions under the Hatch-Waxman Amendments.

NUZYRA (omadacycline)

The patent portfolio for omadacycline is directed to cover compositions of matter, formulations, salts and polymorphs, manufacturing methods, methods of use, dosing regimens, and modes of administration. The patents and patent applications covering omadacycline include patents and patent applications owned by us. The issued composition of matter patent in the U.S. (U.S. Patent No. 7,553,828), if the appropriate maintenance, renewal, annuity, or other governmental fees are paid, was expected to expire in 2023, however, we believe that additional term for certain omadacycline patents may result from the patent term extension provision of the Hatch-Waxman Amendments of 1984, including the composition of matter patent which is anticipated to be extended until May 2028 and a method of use patent (U.S. 9,265,740) is expected to be extended until October 2030. Filings for both patent term extensions have been made with the U.S. Patent & Trademark Office. Omadacycline has received Qualified Infectious Disease Product, or QIDP, designation under the Generating Antibiotic Incentives Now Act, or the GAIN Act. This may provide up to an additional five years of market exclusivity layered with protection provided by the Hatch-Waxman Amendments, which GAIN also enables exclusivity to 2028. We expect that the other patents and patent applications in this portfolio, if issued, and if the appropriate maintenance, renewal, annuity or other governmental fees are paid, would expire between 2022 and 2041, excluding any additional terms from patent term adjustments or patent term extensions under the Hatch-Waxman Amendments.

SEYSARA (sarecycline)

The patent portfolio for our acne and rosacea program is directed to cover compositions of matter, methods of use, methods of manufacturing, as well as salts and polymorphs of sarecycline. Amongst other patent filings and granted patents, our patent portfolio includes issued U.S. Patent No. 8,318,706, or the '706 Patent, which covers composition of matter of sarecycline and issued U.S. Patent No. 8,513,223, or the '223 Patent, which covers methods of use for sarecycline, and corresponding foreign national or regional counterpart applications. The '706 Patent is expected to expire in 2032 (this expiry taking into account the expected patent term extension as provided by the Hatch-Waxman Amendments) and the '223 Patent is expected to expire in 2029, if the appropriate maintenance, renewal, annuity or other governmental fees are paid. Filing for the patent term extension has been made with the U.S. Patent & Trademark Office. In February 2020, we finalized a license agreement with Almirall granting us exclusive rights to certain technology owned or in-licensed by Almirall or its affiliates that is necessary or useful to develop or commercialize sarecycline outside of the U.S., including exclusive rights in joint intellectual property and certain Almirall solely owned intellectual property.

Intermezzo

As of December 31, 2021, our patent portfolio of owned or exclusively licensed patents and applications includes four issued U.S. patents directed to formulations and methods of use. The issued U.S. patents expire between 2025 and 2029.

Trade Secrets

In addition to patents, we rely on trade secrets and know-how to develop and maintain our competitive position. Trade secrets and know-how can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors and commercial partners. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third-party. We also seek to preserve the integrity and confidentiality of our data, trade secrets and know-how by maintaining physical security of our premises and physical and electronic security of our information technology systems.

Trademarks

We have registered trademarks and service marks or pending trademark and services mark applications in a number of countries for PARATEK, PARATEK & HEXAGON DESIGN, NUZYRA and its design logo, and other marks which we presently use or may use in connection with our pharmaceutical research and development as well as with our product candidates. SEYSARA is a trademark for which Almirall has registered in the U.S. and China and for which Paratek has applied for in a number of foreign countries. In connection with the ongoing development and advancement of our products and services in the U.S. and in various international jurisdictions, we routinely seek to create protection for our marks and enhance their value by pursuing trademarks and service marks where available and when appropriate.

Collaborations and License Agreements

Our commercial strategy is to partner with established pharmaceutical companies to develop and market products for the larger community markets, while retaining certain rights to products aimed at concentrated markets, such as hospital-based products, where we may seek to participate in development and commercialization.

Biomedical Advanced Research and Development Authority

In December 2019, we entered into the BARDA contract, which is a five-year contract with an option to extend to ten years. The BARDA contract could result in payments to the Company of up to approximately $303.6 million and consists of a five-year base period-of-performance and a total contract period-of-performance (base period plus option exercises) of up to ten years. The BARDA contract supports the development of NUZYRA for the treatment of pulmonary anthrax, FDA post-marketing requirements, or PMRs, associated with the initial NUZYRA approval, and an option for BARDA to procure up to 10,000 treatment courses of NUZYRA for use against potential biothreats. In September 2021, we and BARDA modified the original BARDA contract, herein referred to as the amended BARDA contract, to provide additional funding to expand the development of NUZYRA under an FDA Animal Efficacy Rule development program to support a supplemental New Drug Application, or sNDA, to the FDA to include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax, herein referred to as the amended option.

Under the terms of the original BARDA contract, approximately $59.4 million was awarded to us by BARDA in December 2019 for the development of NUZYRA for the treatment of pulmonary anthrax and the purchase of an initial 2,500 treatment courses of NUZYRA. As part of this initial $59.4 million award, the $37.9 million procurement of NUZYRA was delivered to and accepted by BARDA in June 2021, and the amount earned from this procurement was recognized in net U.S. sales of NUZYRA during the second quarter of 2021. We have been periodically drawing down the remaining $21.5 million of the initial award based on costs incurred during the development program.

Two additional contractual services under the original BARDA contract were initiated by BARDA in March 2020 that awarded us approximately $76.8 million for reimbursement of existing FDA PMRs and approximately $20.4 million for reimbursement of manufacturing-related requirements, which we have been drawing down based on costs incurred. This additional staged funding is expected to support all FDA PMRs associated with the approval of NUZYRA, including CABP and pediatric studies, as well as a five-year post-marketing bacterial surveillance study, and support the U.S. onshoring and security requirements of our manufacturing activities for NUZYRA.

BARDA initiated the amended option in September 2021 that expanded the development of NUZYRA under an FDA Animal Efficacy Rule development program to support an sNDA that will include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax for a revised total of approximately $31.6 million.

The remaining government options under the amended BARDA contract include a maximum of approximately $115.4 million to provide for three additional purchases of NUZYRA anthrax treatment courses, each of which may be exercised at BARDA's discretion upon achievement of development milestones related to the anthrax treatment development program. The timing and trigger of future procurements are be linked to specific development milestones. The amended BARDA contract formalized the triggers for BARDA's option to purchase the second NUZYRA procurement upon BARDA's receipt of positive top-line data from our pilot efficacy treatment study of inhalation anthrax in rabbits, which we anticipate will be available as early as the end of 2022.

We and BARDA also agreed under the amended contract on specific development milestones to trigger BARDA's options for the third and fourth procurements of NUZYRA anthrax treatment courses. The option for the third procurement will be triggered by BARDA's receipt of positive top-line data in PEP and treatment of inhalation anthrax from a combination of pilot and pivotal efficacy studies in animal models, which we anticipate will be available in 2024. The option for the fourth procurement will be triggered by our receipt of sNDA approval from the FDA for treatment of inhalation anthrax, which we anticipate will follow the third procurement by approximately 18-24 months. We plan to provide further specificity on timelines as the anthrax development program progresses.

The BARDA contract contains a number of terms and conditions that are customary for government contracts of this nature, including provisions giving the government the right to terminate the contract at any time for its convenience.

Tetraphase Pharmaceuticals, Inc.

On March 18, 2019, Paratek and Tetraphase Pharmaceuticals, Inc., or Tetraphase, which is now a subsidiary of La Jolla Pharmaceutical Company, entered into a License Agreement, or the Tetraphase License Agreement. Under the terms of the Tetraphase License Agreement, we granted to Tetraphase a non-exclusive, worldwide, royalty-bearing license, with the right to grant sublicenses, under certain Paratek patents, to develop, make, have, use, import, offer for sale and sell the licensed product, or XERAVA™, which is a drug for the treatment of complicated, intra-abdominal infections caused by bacteria, which was approved by the FDA in August 2018.

The terms of the Tetraphase License Agreement provide for Tetraphase to pay royalties at a low single digit percent on net product revenues of the licensed product sold in the U.S. Tetraphase's obligation to pay royalties with respect to the licensed product shall be retroactive to the date of the first commercial sale of the licensed product in the U.S., which occurred in February 2019. Tetraphase is currently selling XERAVA™ (Eravacycline) in the U.S.

The Tetraphase License Agreement will continue until the expiration of and payment by Tetraphase of all Tetraphase's payment obligations, which is when there are no longer any valid claims of the licensed Paratek patents that would be infringed, in the absence of a license, by a manufacture, use, or sales of the licensed product. The principal licensed patent under the Tetraphase License Agreement is expected to expire in October 2023.

Zai Lab (Shanghai) Co., Ltd.

On April 21, 2017, Paratek Bermuda Ltd., a former wholly owned subsidiary of Paratek Pharmaceuticals, Inc., and Zai entered into a License and Collaboration Agreement, or the Zai Collaboration Agreement. On December 18, 2019, Paratek Bermuda Ltd. assigned its rights under the Zai Collaboration Agreement to Paratek Pharmaceuticals, Inc. Under the terms of the Zai Collaboration Agreement, Paratek granted Zai an exclusive license to develop, manufacture and commercialize omadacycline, or the licensed product, in the People's Republic of China, Hong Kong, Macau and Taiwan, or the Zai territory, for all human therapeutic and preventative uses other than biodefense. Zai will be responsible for the development, manufacturing and commercialization of the licensed product in the Zai territory, at its sole cost with certain assistance from Paratek.

Under the terms of the Zai Collaboration Agreement, we earned an upfront cash payment of $7.5 million in April 2017, $5.0 million upon approval by the FDA of a New Drug Application, or NDA, submission in October 2018, $3.0 million upon submission of the first regulatory approval application for a licensed product in the People's Republic of China in December 2019, and $6.0 million upon regulatory approval of omadacycline for the treatment of adults with ABSSSI and CABP in the People's Republic of China in December 2021.We are also eligible to receive $40.5 million in potential future commercial milestone payments. The terms of the Zai Collaboration Agreement also provide for Zai to pay us tiered royalties at a low double digit to mid-teen percent on net sales of the licensed product in the Zai territory.

The Zai Collaboration Agreement will continue, on a region-by-region basis, until the expiration of and payment by Zai of all Zai's payment obligations, which is until the later of: (i) the abandonment, expiry or final determination of invalidity of the last valid claim within the Paratek patents that covers the licensed product in the region in the Zai territory in the manner that Zai or its affiliates or sublicensees exploit the licensed product or intend for the licensed product to be exploited; or (ii) 2032, the eleventh anniversary of the first commercial sale of such licensed product in such region.

Almirall, LLC

In July 2007, we and Warner Chilcott Company, Inc. (which became a part of Allergan), entered into a collaborative research and license agreement, under which we granted Allergan an exclusive license to research, develop, manufacture and commercialize tetracycline products for use in the U.S. for the treatment of acne and rosacea. In September 2018, Allergan assigned to Almirall, its rights under the collaboration agreement, or the Almirall Collaboration Agreement. Since Allergan did not exercise its development option with respect to the treatment of rosacea prior to initiation of a Phase 3 trial for the product, the license grant to Allergan, which was assigned to Almirall, converted to a non-exclusive license for the treatment of rosacea as of December 2014. Under the terms of the Almirall Collaboration Agreement, we and Almirall are responsible for, and are obligated to use, commercially reasonable efforts to conduct specified development activities for the treatment of acne and, if requested by Almirall, we may conduct certain additional development activities to the extent we determine in good faith that we have the necessary resources available for such activities.

Under the terms of the Almirall Collaboration Agreement, Almirall is responsible for and is obligated to use commercially reasonable efforts to develop and commercialize tetracycline compounds that are specified in the agreement for the treatment of acne. We have agreed during the term of the Almirall Collaboration Agreement not to directly or indirectly develop or commercialize any tetracycline compounds in the U.S. for the treatment of acne, and Almirall has agreed during the term of the Almirall Collaboration Agreement not to directly or indirectly develop or commercialize any tetracycline compound included as part of the agreement for any use other than as provided in the Almirall Collaboration Agreement.

The Almirall Collaboration Agreement contains two performance obligations: (i) an exclusive license to research, develop and commercialize tetracycline products for use in the U.S. for the treatment of acne and non-exclusive rights to rosacea and (ii) research and development services. The performance obligation to deliver the license was satisfied upon execution of the Almirall Collaboration Agreement in July 2007. All research and development services were completed by December 2010.

We received an upfront fee in the amount of $4.0 million upon the execution of the Almirall Collaboration Agreement, $1.0 million upon filing of an Investigational NDA in 2010, $2.5 million upon initiation of Phase 2 trials in 2012 and $4.0 million upon initiation of Phase 3 trials in December 2014, $5.0 million upon the FDA's acceptance of the NDA for sarecycline and $12.0 million upon FDA approval of SEYSARA. No additional milestones are available under the Almirall Collaboration Agreement. Almirall is also obligated to pay us tiered royalties, ranging from the mid-single digits to the low double digits, based on net sales of tetracycline compounds developed under the Almirall Collaboration Agreement, with a standard royalty reduction post patent expiration for such product for the remainder of the royalty term. Almirall's obligation to pay us royalties for each tetracycline compound it commercializes under the Almirall Collaboration Agreement expires on the later of the expiration of the last to expire patent that covers the tetracycline compound in the U.S. and the date on which generic drugs that compete with the tetracycline compound reach a certain threshold market share in the U.S.

Either we or Almirall may terminate the Almirall Collaboration Agreement for certain specified reasons at any time after Almirall has commenced development of any tetracycline compound, including if Almirall determines that it would not be commercially viable to continue to develop or commercialize the tetracycline compound and/or that it is unlikely to obtain regulatory approval of the tetracycline compound, and, in any case, no backup tetracycline compound is in development or ready to be developed and the parties are unable to agree on an extension of the development program or an alternative course of action. Either we or Almirall may terminate the Almirall Collaboration Agreement for the other party's uncured breach of a material term of the agreement on 60 days' notice (unless the breach relates to a payment term, which requires a 30-day notice) or upon the bankruptcy of the other party that is not discharged within 60 days. Upon the termination of the Almirall Collaboration Agreement by Almirall for our breach, Almirall's license will continue following the effective date of termination, subject to the payment by Almirall of the applicable milestone and royalty payments specified in the agreement unless our breach was with respect to certain specified obligations, in which event the obligation of Almirall to pay us any further royalty or milestone payments will terminate. Upon the termination of the Almirall Collaboration Agreement by us for Almirall's breach or the voluntary termination of the agreement by Almirall, Almirall's license under the agreement will terminate.

In February 2020, we entered into (i) the Ex-U.S. License, under which Almirall, or the Ex-U.S. License, granted to us an exclusive license in and to certain technology owned or in-licensed by Almirall or its affiliates in order to research, develop, manufacture and commercialize sarecycline in all countries other than the U.S. and (ii) a license agreement with Almirall that is specific to the greater China region, or the China License, under which we granted to Almirall an exclusive license in and to certain technology owned or in-licensed by us or our affiliates in order to research, develop and commercialize sarecycline for the treatment of acne in the greater China region.

Under the terms of the Ex-U.S. License, at our request, and subject to certain limitations, Almirall will provide us, our affiliates and our sublicensees with reasonable assistance in connection with our efforts to (i) source commercial supplies of sarecycline products, (ii) implement the then-current process for manufacturing sarecycline products at our facilities or at the facilities of our contract manufacturers, including any updates to such manufacturing process, and (iii) qualify commercial suppliers of sarecycline products.

Under the terms of the China License, Almirall is responsible for and is obligated to use commercially reasonable efforts to develop and commercialize sarecycline for the treatment of acne and has certain time-based diligence requirements.

We and Almirall have each agreed during the term of the Ex-U.S. License and the term of the China License to use commercially reasonable efforts to not, directly or indirectly, make sarecycline products commercialized by us, our respective affiliates or our respective sublicensees available for resale in the other's respective territory or territories.

No upfront fees or milestones are owed in connection with either the Ex-U.S. License or the China License.

In connection with the Ex-U.S. License, we pay Almirall, on a country-by-country and product-by-product basis, (i) for fifteen years following the first commercial sale of a sarecycline product in a country, a percentage of the consideration (e.g., milestones, royalties) we receive from third-party sublicensees in connection with developing and commercializing sarecycline outside of the U.S., which ranges from one-half of such consideration for sarecycline products for the treatment of acne to one-fifth of such consideration for sarecycline products for the treatment of other indications, in each case subject to a 50% reduction for any sarecycline product not in a solid oral tablet formulation for which Paratek or its affiliates have incurred significant development costs and (ii) for eight years following the first commercial sale of a sarecycline product in a country, a royalty in the middle-single digits on our or our affiliates' net sales of sarecycline products outside of the U.S., subject to certain standard reductions. In connection with the China License, for fifteen years following the first commercial sale of a sarecycline product in China, Almirall pays us a royalty in the high-single digits on their, their affiliates' or their sublicensees' net sales of sarecycline products in the greater China region, subject to certain standard reductions.

Both the Ex-U.S. License and the China License terminate upon full satisfaction and expiration of a party's payment obligations under the relevant agreement. We may terminate the Ex-U.S. License for convenience upon sixty days' notice. Almirall may terminate the China License for convenience upon sixty days' notice. Either we or Almirall may terminate the Ex-U.S. License or the China License for the other party's uncured breach of a material term of the agreement on sixty days' notice (unless the breach relates to a payment term, which requires thirty days' notice) or upon the bankruptcy of the other party that is not discharged within sixty days. Upon the termination of the Ex-U.S. License by us for Almirall's breach or insolvency, our license will continue following the effective date of termination, subject to the payment by us of the applicable royalty payments specified in the Ex-U.S. License (unless Almirall's breach relates to a certain specific obligation, in which case, our license survives royalty-free). Upon the termination of the Ex-U.S. License by Almirall for our breach or insolvency or upon our voluntary termination of the Ex-U.S. License, our license under the Ex-U.S. License will terminate. Upon the termination of the China License by Almirall for our breach or insolvency, Almirall's license will continue following the effective date of termination, subject to the payment by Almirall of the applicable royalty payments specified in the China License (unless our breach relates to a certain specific obligation, in which case, Almirall's license survives royalty-free). Upon the termination of the China License by us for Almirall's breach or insolvency or upon Almirall's voluntary termination of the China License, Almirall's license under the China License will terminate.

Tufts University

In February 1997, we and Tufts entered into a license agreement under which we acquired an exclusive license to certain patent applications and other intellectual property of Tufts related to the drug resistance field to develop and commercialize products for the treatment or prevention of bacterial or microbial diseases or medical conditions in humans or animals or for agriculture. We subsequently entered into eleven amendments to that agreement, or collectively the Tufts License Agreement, to include patent applications filed after the effective date of the original license agreement, to exclusively license additional technology from Tufts, to expand the field of the agreement to include disinfectant applications, and to change the royalty rate and percentage of sublicense income paid by us to Tufts under sublicense agreements with specified sublicensees. We are obligated under the Tufts License Agreement to provide Tufts with annual diligence reports and a business plan and to meet certain other diligence milestones. We have the right to grant sublicenses of the licensed rights to third parties, which will be subject to the prior approval of Tufts unless the proposed sublicensee meets a certain net worth or market capitalization threshold. We are primarily responsible for the preparation, filing, prosecution and maintenance of all patent applications and patents covering the intellectual property licensed under the Tufts License Agreement at our sole expense. We have the first right, but not the obligation, to enforce the licensed intellectual property against infringement by third parties.

We issued Tufts 1,024 shares of our common stock on the date of execution of the original license agreement, and we may be required to make certain payments of up to $0.3 million to Tufts upon the achievement by products developed under the agreement of specified development and regulatory approval milestones. We have already made a payment of $50,000 to Tufts for achieving the first milestone following commencement of the Phase 3 clinical trial for omadacycline and a payment of $100,000 to Tufts for achieving the second milestone following our first marketing application (NDA) submitted in the U.S. We are also obligated to pay Tufts a minimum royalty payment in the amount of $25,000 per year. We are obligated to pay Tufts royalties based on gross sales of products, as defined in the agreement, ranging in the low single digits depending on the applicable field of use for such product sale. If we enter into a sublicense under the Tufts License Agreement, based on the applicable field of use for such product, we will be obligated to pay Tufts (i) a percentage, ranging from 10% to 14% (ten percent to fourteen percent) for compounds other than omadacycline, and a percentage in the single digits for the compound omadacycline, of that portion of any sublicense issue fees or maintenance fees received by us that are reasonably attributable to the sublicense of the rights granted to us under the Tufts License Agreement and (ii) the lesser of (a) a percentage, ranging from the low tens to the high twenties based on the applicable field of use for such product, of the royalty payments made to us by the sublicensee or (b) the amount of royalty payments that would have been paid by us to Tufts if we had sold the products.

Unless terminated earlier, the Tufts License Agreement will expire at the same time as the last-to-expire patent in the patent rights licensed to us under the agreement and after any such expiration we will continue to have an exclusive, fully-paid-up license to such intellectual property licensed from Tufts. Tufts has the right to terminate the agreement upon 30 days' notice should we fail to make a material payment under the Tufts License Agreement or commit a material breach of the agreement and not cure such failure or breach within such 30-day period, or if, after we have started to commercialize a product under the Tufts License Agreement, we cease to carry on its business for a period of 90 consecutive days. We have the right to terminate the Tufts License Agreement at any time upon 180 days' notice. Tufts has the right to convert our exclusive license to a non-exclusive license if we do not commercialize a product licensed under the agreement within a specified time period.

Past Collaborations

Novartis Pharma AG

In September 2009, we and Novartis International Pharmaceutical Ltd., or Novartis, which merged into Novartis Pharma AG, a wholly owned subsidiary of Novartis AG, entered into a Collaborative Development, Manufacture and Commercialization License Agreement, or the Novartis Agreement, which provided Novartis with a global, exclusive patent and technology license for the development, manufacturing and marketing of omadacycline. The Novartis Agreement was terminated by Novartis without cause in June 2011 and the termination was effective 60 days later. We and Novartis subsequently entered into a letter agreement in January 2012, or the Novartis Letter Agreement, as amended, pursuant to which we reconciled shared development costs and expenses and granted Novartis a right of first negotiation with respect to commercialization rights of omadacycline following approval of omadacycline from the FDA, EMA, or any regulatory agency, but only to the extent we had not

previously granted such commercialization rights related to omadacycline to another third party as of any such approval. We also agreed to pay Novartis a 0.25% royalty, to be paid from net sales received by us in any country following the launch of omadacycline in that country and continuing until the later of expiration of the last active valid patent claim covering such product in the country of sale and 10 years from the date of first commercial sale in such country. The amended Novartis Letter Agreement resulted in a long-term liability in the amount of $2.8 million as of December 31, 2021 and $3.1 million as of December 31, 2020 included within "Other Liabilities" on our consolidated balance sheet. In addition, short-term liabilities included within "Other Current Liabilities" on our consolidated balance sheet as of December 31, 2020 and December 31, 2019 represent the portion of royalty payments due to Novartis within twelve months of each balance sheet date. There are no other payment obligations to Novartis under the Novartis Agreement or the amended Novartis Letter Agreement.

Government Regulation

Government authorities in the U.S., at the federal, state and local level, as well as those of other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, packaging, advertising, promotion, storage, distribution, and export and import of our products. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulation require the expenditure of substantial time and financial resources.

U.S. Government Regulation

NDA Approval Processes

In the U.S., the FDA regulates drugs under the Federal Food, Drug and Cosmetic Act, or the FDCA, and implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulation require the expenditure of substantial time and financial resources. Failure to comply with the FDCA and other applicable U.S. requirements at any time during the product development process, approval process or after approval may subject us to a variety of administrative or judicial sanctions, any of which could have a material adverse effect on us. These sanctions could include:

- refusal to approve pending applications;
- withdrawal of an approval;
- imposition of a clinical hold;
- warning letters, untitled letters and similar communications;
- product seizures or recalls;
- total or partial suspension of production or distribution; or
- injunctions, fines, restitution, disgorgement of profits or civil or criminal investigations and penalties brought by the FDA and the Department of Justice, or DOJ, or other governmental entities.

The process required by the FDA before a drug may be marketed in the U.S. generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies conducted according to Good Laboratory Practices or other applicable regulations;
- submission to the FDA of an Investigational New Drug, or IND, application, which must become effective before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, representing each clinical site before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug for its intended use, conducted in accordance with current Good Clinical Practices, or cGCP, which are ethical and scientific quality standards and FDA requirements for conducting, recording and reporting clinical trials to assure that the rights, safety and well-being of trial participants are protected;
- preparation and submission to the FDA of an NDA;

- satisfactory completion of one or more FDA inspections of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP, requirements to assure that the facilities, methods and controls are adequate to preserve the drug's safety, identity, strength, quality and purity; and
- FDA review and approval of the NDA.

Once a pharmaceutical candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. Some preclinical or nonclinical testing may continue even after the IND is submitted. In addition to including the results of the preclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the IND on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. A clinical hold may occur at any time during the life of an IND and may affect one or more specific studies or all studies conducted under the IND.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with cGCP. They must be conducted under protocols detailing the objectives of the trial, dosing procedures, subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol and any amendments must be submitted to the FDA as part of the IND, and progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently in other situations, including the occurrence of serious adverse events. An IRB at each institution participating in the clinical trial must review and approve the protocol and any amendments before a clinical trial commences or continues at that institution, approve the information regarding the clinical trial and the informed consent form that must be provided to each trial subject or his or her legal representative, monitor the study until completed and otherwise comply with IRB regulations. Information about certain clinical trials must be submitted within specific timeframes to the NIH for public dissemination on their ClinicalTrials.gov website.

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

- *Phase 1.* The drug is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and elimination. In the case of some products for severe or life-threatening diseases, such as cancer, especially when the product may be inherently too toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients with the target disease or condition.
- *Phase 2.* Clinical trials are initiated in a limited patient population intended to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.
- *Phase 3.* Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical study sites. These studies are intended to establish the overall risk-benefit ratio of the product and provide an adequate basis for regulatory approval and product labeling.

Phase 1, Phase 2 and Phase 3 testing may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time for a variety of reasons, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients.

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points, including prior to submission of an IND, at the end of Phase 2 and before an NDA is submitted. Meetings at other times may also be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice and for the sponsor and the FDA to reach agreement on the next phase of development. Sponsors typically use the End-of-Phase 2 meeting to discuss their Phase 2 clinical results and present their plans for the pivotal Phase 3 clinical trial or trials that they believe will support approval of the new drug. If this type of discussion occurred, a sponsor may be able to request a special protocol assessment, or SPA, agreement, a voluntary process the purpose of which is to reach agreement with the FDA on the design of a Phase 3 clinical trial protocol and analysis that will form the primary basis of an efficacy claim.

According to FDA guidance for industry on the SPA agreement process, a sponsor that meets the prerequisites may make a specific request for a SPA and must provide information necessary for discussion and agreement on the design and size of the proposed clinical trial. The FDA has a goal of evaluating the protocol within 45 days of the request to assess whether the proposed trial is adequate, and that evaluation may result in discussions and/or requests for additional information. A SPA agreement request must be made before the proposed clinical trial begins. If an agreement is reached, it will be documented in writing and made part of the record. The agreement may not be changed by the sponsor or the FDA after the trial begins, except with the written agreement of the sponsor and the FDA or if the FDA determines that a substantial scientific issue essential to determining the safety or efficacy of the drug was identified after the testing began. Also, if the sponsor makes any unilateral changes to the approved protocol, the agreement will be invalidated. A SPA agreement is intended to provide greater assurance that if the agreed upon clinical trial protocols are followed, the clinical trial endpoints are achieved, and there is a favorable risk-benefit profile, the data may serve as the primary basis for an efficacy claim in support of NDA approval. However, SPA agreements are not a guarantee of an approval of a product candidate or any permissible claims about the product candidate, and final determinations of approvability will not be made until the FDA completes its review of the entire NDA.

The Pediatric Research Equity Act, or PREA, requires a sponsor to conduct pediatric studies for certain drugs and biologics. Specifically, PREA requires original NDAs, biologic license applications, or BLAs, and supplements thereto for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration to contain a pediatric assessment unless the sponsor has received a deferral or waiver. The FDA has waived the pediatric study requirement for ages 0 to < 8 years because there is nonclinical evidence strongly suggesting that omadacycline would be unsafe in this pediatric group due to the risk of tetracycline-associated tooth discoloration and enamel hypoplasia, and the risk of tetracycline-associated inhibition of bone growth. The FDA has deferred submission of pediatric studies for ages 8 to < 18 (ABSSSI until 2024 and CABP until 2026) years because the product was ready for approval for use in adults.

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

The results of product development, preclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of a NDA requesting approval to market the product for one or more indications. The submission of an NDA is subject to the payment of user fees, but a waiver of such fees may be obtained under specified circumstances. The FDA reviews all NDAs submitted to ensure that they are sufficiently complete for substantive review before it accepts them for filing. It may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing.

Once the submission is accepted for filing, the FDA begins an in-depth review. NDAs receive either standard or priority review. A drug representing a significant improvement in the safety or effectiveness of the treatment, prevention or diagnosis of a serious disease or condition may receive priority review. The FDA has agreed to specified performance goals in the review process of NDAs. Under that agreement, 90% of applications seeking approval of New Molecular Entities, or NMEs, are meant to be reviewed within ten months from the date on which FDA accepts the NDA for filing, and 90% of applications for NMEs that have been designated for "priority review"

are meant to be reviewed within six months of the filing date. For applications seeking approval of drugs that are not NMEs, the ten-month and six-month review periods run from the date that FDA receives the application. The review process may be extended by the FDA for three additional months to consider a major amendment to the application following the original submission.

The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing complies with cGMP requirements to assure and preserve the product's safety, identity, strength, quality and purity. The FDA may refer the NDA to an advisory committee for review and recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendation.

Before approving an NDA, the FDA will typically inspect the facility or facilities where the product is manufactured and tested. These pre-approval inspections may cover all facilities associated with NDA submission, including drug component manufacturing (such as active pharmaceutical ingredients), finished drug product manufacturing, and control testing laboratories. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with cGCP. In addition, the FDA may require, as a condition of approval, Risk Evaluation and Mitigation Strategies, or REMS, restricted distribution and use, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, pre-approval of promotional materials, restrictions on direct-to-consumer advertising or commitments to conduct additional research post-approval.

On the basis of the FDA's evaluation of the NDA and accompanying information, the FDA may issue an approval letter or a complete response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. If the FDA ultimately decides that the NDA does not satisfy the criteria for approval, the FDA will issue a complete response letter to indicate that the agency will not approve the NDA in its present form. The complete response letter usually describes all of the specific deficiencies in the NDA identified by the FDA. If a complete response letter is issued, the applicant may either resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application.

Expedited Review and Approval

The FDA has various programs, including Fast Track and priority review, which are intended to expedite or simplify the process for reviewing drugs. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will not be shortened. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development and expedite the review of drugs to treat serious diseases with the potential, based on nonclinical or clinical data, to fill an unmet medical need. Priority review is designed to give drugs that offer a significant improvement in safety or effectiveness of treatment for a serious condition an expedited review within eight months from the completed submission (six months from filing) as compared to a standard review time of twelve months from the completed submission (10 months from filing) for a standard new molecular entity NDA. Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track-designated drug and expedite review of the application for a drug designated for priority review.

The GAIN Act is intended to provide incentives for the development of new QIDPs. A new drug that is designated as a QIDP after a request by the sponsor that is made before an NDA is submitted will be eligible, if approved, for an additional five years of exclusivity beyond any period of exclusivity to which it would have previously been eligible. In addition, a QIDP will receive priority review and qualify for a Fast Track designation. QIDPs are defined as antibacterial or antifungal drugs intended to treat serious or life-threatening infections, including those caused by an antibacterial or antifungal resistant pathogen or qualifying pathogens identified by the FDA. Examples of pathogens that may be designated as a qualifying pathogen include MRSA, vancomycin-resistant *Enterococcus* and multi-drug resistant gram-negative bacteria. Omadacycline (both IV and oral formulations) has been designated as a QIDP for complicated UTI, ABSSSI and CABP.

Beyond GAIN Act

In addition to the GAIN Act, the 21st Century Cures Act, signed into law in December 2016, established a new FDA limited population pathway for antimicrobial drugs that treat serious or life-threatening infections for which there are unmet medical needs. The U.S. Congress has initiated a significant number of other legislative proposals in recent years to provide further incentives in anti-infective development. For example, in December 2018, the Developing an Innovative Strategy for Antimicrobial Resistant Microorganisms Act of 2018, or DISARM Act, was introduced in the Senate to incentivize the research and development of advanced antibiotics through certain reimbursement-related incentives. It is possible that these or other proposals related to anti-infective development may be enacted into law in the future. We cannot predict whether or what legislative changes will be enacted or how they may impact our business and our products.

Patent Term Restoration and Data Exclusivity

Depending upon the timing, duration and specifics of FDA approval of the use of our drugs, some of our U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years for a single patent for an approved product as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. We have applied for restoration of patent term for NUZYRA and SEYSARA, as detailed in the Intellectual Property Section.

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

In addition, as described above, under the GAIN Act a new drug that is designated as a QIDP is eligible for an additional five years of exclusivity to be added to certain other exclusivity periods that the application may qualify for upon approval, specifically five-year exclusivity, three-year exclusivity, and orphan exclusivity.

Pediatric Exclusivity

The Best Pharmaceuticals for Children Act provides for an additional six months of exclusivity, which is added on to patent and exclusivity periods in effect at the time the pediatric exclusivity award is granted, if a sponsor conducts clinical trials in children in response to a written request from the FDA, or a Written Request. The FDA may request studies on approved indications in separate Written Requests. The issuance of a Written Request does not require the sponsor to undertake the described studies. To date, we have not received any Written Requests.

Post-approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems, including safety issues, with a product may result in restrictions on the product or even complete withdrawal of the product from the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs. The FDA and other authorities also strictly regulate the promotional claims that may be made about prescription products. Under the FDCA the sponsor of an approved drug in the U.S. may not promote that drug for unapproved, or off-label, uses, although a physician may prescribe a drug for an off-label use in accordance with the practice of medicine. If we are found to have promoted off-label uses, we may be subject to significant liability, including sanctions, civil and criminal fines, and injunctions prohibiting us from engaging in specified promotional conduct.

Moreover, any drug products manufactured or distributed pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things:

- record-keeping requirements;
- reporting of adverse experiences with the drug;
- providing the FDA with updated safety and efficacy information;
- drug sampling and distribution requirements;
- notifying the FDA and gaining its approval of specified manufacturing or labeling changes;
- complying with certain electronic records and signature requirements; and
- complying with FDA promotion and advertising requirements.

Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and some state agencies for compliance with cGMP requirements and other laws.

Failure to comply with the FDCA and other applicable U.S. requirements at any time during the product development process, approval process or after approval may subject us to a variety of administrative or judicial sanctions, any of which could have a material adverse effect on us. These sanctions could include:

- refusal to approve pending applications;
- withdrawal of an approval;
- imposition of a clinical hold;
- warning letters, untitled letters and similar communications;

- product seizures or recalls;
- total or partial suspension of production or distribution; or
- injunctions, fines, restitution, disgorgement of profits or civil or criminal investigations and penalties brought by the FDA and the Department of Justice, or DOJ, or other governmental entities.

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA. In addition, FDA regulations and guidance are often revised or reinterpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted, or FDA regulations, guidance or interpretations changed or what the impact of such changes, if any, may be.

Further, the global regulatory landscape is also subject to change as the COVID-19 pandemic continues to affect the U.S. and global economies. The U.S. FDA and other health authorities have shifted resources and priorities to meet the many challenges presented by the COVID-19 pandemic. The COVID-19 pandemic has also directly impacted the FDA and global regulatory agencies' daily operations. For example, FDA temporarily suspended non-critical foreign and domestic inspections in March 2020 and announced plans to resume prioritized domestic inspections in July 2020. Pandemic-related disruptions could negatively impact the processing of regulatory submissions and slow agency review times necessary for the approval or clearance of new drug products. The duration and severity of the COVID-19 pandemic is unpredictable and difficult to assess.

Other Healthcare Laws

We may be subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. Within the U.S., we are subject to various federal and state laws that seek to prevent "fraud and abuse" in the healthcare industry, including anti-kickback laws and false claims laws. There is therefore a possibility that our practices might be challenged under such laws. Anti-kickback laws generally prohibit a prescription drug manufacturer from soliciting, offering, receiving, or paying any remuneration to generate business, including the purchase or prescription of a particular drug. False claims laws generally prohibit anyone from knowingly and willingly presenting, or causing to be presented, any claims for payment for reimbursed drugs or services to third-party payors (including Medicare and Medicaid) that are false or fraudulent. Although the specific provisions of these laws vary, their scope is generally broad and there may not be regulations, guidance or court decisions that apply the laws to particular industry practices. Violations of "fraud and abuse" laws may be punishable by criminal or civil sanctions, including fines and civil monetary penalties, and/or exclusion from federal health care programs (including Medicare and Medicaid).

Laws and regulations have also been enacted by the federal government and various states to regulate the sales and marketing practices of pharmaceutical manufacturers. The laws and regulations generally limit financial interactions between manufacturers and health care providers; require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government; and/or require disclosure to the government and/or public of financial interactions (so-called "sunshine laws"). State laws may also require disclosure of pharmaceutical pricing information and marketing expenditures. Manufacturers must also submit information to the FDA on the identity and quantity of drug samples requested and distributed by a manufacturer during each year. Many of these laws and regulations contain ambiguous requirements or require administrative guidance for implementation. Given the lack of clarity in laws and their implementation, our activities could be subject to the penalty provisions of the pertinent federal and state laws and regulations.

Federal and state laws also protect the privacy and security of health information specifically or other personally identifiable information generally. The laws may apply to us or to healthcare providers and other third parties with which we interact.

Foreign Regulation

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

Under EU regulatory systems, a company may submit marketing authorization applications under the centralized, decentralized or mutual recognition procedures, or under the purely national route of approval. The centralized procedure is compulsory for medicinal products produced by biotechnology or those medicinal products containing new active substances for specific indications such as the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, viral diseases, and designated orphan medicines, and is optional for other medicines that are highly innovative. Under the centralized procedure, a marketing application is submitted to the EMA, where it will be evaluated by the relevant scientific committee, in most cases the Committee for Medicinal Products for Human Use, and a favorable opinion typically results in the grant by the European Commission of a single marketing authorization that is valid for all EU member states and, by extension (after national implementing measures), in Norway, Iceland and Liechtenstein. In general, an initial marketing authorization is valid for five years, but once renewed is usually valid for an unlimited period. The decentralized procedure allows marketing authorization applications to be submitted simultaneously in two or more EU member states, whereas the mutual recognition procedure must be used if the product has already been authorized in at least one other EU member state. Both the decentralized and mutual recognition procedures provide for approval by one or more "concerned" member states based on an assessment of an application performed by one-member state, known as the "reference" member state. Under the decentralized approval procedure, an applicant submits an application, or dossier, and related materials to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must approve the assessment report and related materials, unless they identify a serious risk to public health. Under the mutual recognition procedure, the concerned member states have the same 90-day period to recognize the marketing authorization in the reference member state. In either case, concerns about serious risks to public health escalate through the relevant EMA scientific committees, and the disputed points may eventually result in a consensus opinion from the Committee for Medicinal Products for Human Use that is referred to the European Commission, whose decision is binding on all member states. The purely national procedure results in a marketing authorization in a single EU member state.

In light of the United Kingdom's vote in 2016 to leave the EU, the so-called Brexit vote, there may be changes forthcoming in the scope of the EU marketing authorization approval procedure, as well as changes to the United Kingdom's national medicines laws, as the terms of that exit are negotiated between the United Kingdom and the EU. Since the regulatory framework for pharmaceutical products in the United Kingdom relating to quality, safety and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales and distribution of pharmaceutical products is derived from European Union directives and regulations, Brexit will materially impact the future regulatory regime which applies to products and the approval of product candidates in the United Kingdom. In the first instance, a separate United Kingdom authorization from any centralized authorization for the EU would need to be applied for in advance of a hard Brexit or before the end of any agreed transitional period. In the immediately foreseeable future, the process is likely to remain very similar to that applicable in the EU, albeit that the processes for applications will be separate. Longer term, the United Kingdom is likely to develop its own legislation that diverges from that in the EU.

Reimbursement

Significant uncertainty exists regarding the coverage and reimbursement status of products approved by the FDA and other government authorities. Sales of our products will depend, in part, on the availability of coverage and the adequacy of reimbursement from third-party payors. Third-party payors include government authorities or government healthcare programs, such as Medicare and Medicaid, and private entities, such as managed care organizations, private health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the reimbursement rate that the payor will pay for the drug product. Third-party payors 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. Some third-party payors may manage utilization of a particular product by requiring pre-approval (known as "prior authorization") for coverage of particular prescriptions (to allow the payor to assess medical necessity). If the prior authorization (medical necessity) is denied by the payor, the patient may not be able to afford the full cost of the medication without the coverage from the third-party payor. A third-party payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain net price levels sufficient to realize an appropriate return on our investment in product development. Additionally, coverage and reimbursement for drug products can differ significantly from payor to payor. One third-party payor's decision to cover a particular drug product or service does not ensure that other payors will also provide coverage for the medical product or service or will provide coverage at an adequate reimbursement rate.

Third-party payors are increasingly challenging the price and examining the cost-effectiveness of new products and services in addition to their safety and efficacy. To obtain or maintain coverage and reimbursement for any current or future product, we may need to conduct real world evidence and pharmacoeconomic studies to demonstrate the medical necessity and cost-effectiveness of our product. These studies will be in addition to the studies required to obtain or maintain regulatory approvals. If third-party payors do not consider a product to be cost-effective compared to other available therapies, they may not cover the product after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow a company to sell its products at a profit. We may also need to offer discounts or rebates to third-party payors. Thus, obtaining and maintaining reimbursement status is complex and costly.

Additionally, the containment of healthcare costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of new price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results. Decreases in third-party reimbursement for our or our partners' products or a decision by a third-party payor to not cover our or our partners' products could reduce physician usage of the product and have a material adverse effect on our sales, results of operations and financial condition. We expect that the pharmaceutical industry will continue to experience pricing pressures due to the increasing influence of managed care (and related implementation of managed care strategies to control utilization), additional federal and state legislative and regulatory proposals to regulate pricing of drugs, limit coverage of drugs or reduce reimbursement for drugs, and public scrutiny. While we cannot predict what executive, legislative and regulatory proposals will be adopted or other actions will occur, such events could have a material adverse effect on our business, financial condition and profitability.

Within the U.S., we may be required to provide discounts or rebates under government healthcare programs or to certain government and private purchasers in order to obtain coverage under federal healthcare programs such as Medicaid. Participation in such programs may require us to track and report certain drug prices. We may be subject to fines and other penalties if we fail to report such prices accurately.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the EU provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the EU do not follow price structures of the U.S. and generally tend to be significantly lower.

Health Care and Other Reform

In the U.S., there have been and continue to be a number of significant legislative initiatives to contain healthcare costs. Federal and state governments continue to propose and pass legislation designed to reform delivery

of, or payment for, health care, which include initiatives to reduce the cost of healthcare. For example, in March 2010, the U.S. Congress enacted the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act, or the Healthcare Reform Act, which expanded health care coverage through Medicaid expansion and the implementation of the individual mandate for health insurance coverage and which included changes to the coverage and reimbursement of drug products under government healthcare programs. Under the Trump administration, there were ongoing efforts to modify or repeal all or certain provisions of the Healthcare Reform Act. For example, tax reform legislation was enacted at the end of 2017 that eliminated the tax penalty established under Healthcare Reform Act for individuals who do not maintain mandated health insurance coverage beginning in 2019. The Healthcare Reform Act has also been subject to judicial challenge. On June 17, 2021, the U.S. Supreme Court dismissed the latest judicial challenge to the Healthcare Reform Act brought by several states without specifically ruling on s the constitutionality of the Healthcare Reform Act.

Beyond the Healthcare Reform Act, there have been ongoing health care reform efforts, including a number of recent actions. Some recent healthcare reform efforts have sought to address certain issues related to the COVID-19 pandemic, including an expansion of telehealth coverage under Medicare and accelerated or advanced Medicare payments to healthcare providers. Other reform efforts affect pricing or payment for drug products. For example, the Medicaid Drug Rebate Program has been subject to statutory and regulatory changes and the discount that manufacturers of Medicare Part D brand name drugs must provide to Medicare Part D beneficiaries during the coverage gap increased from 50% to 70%. Additional reform efforts are likely. The Biden administration has focused on reforms that would address the high cost of drugs. In response to an Executive Order from President Biden, the Secretary of HHS issued a comprehensive plan for addressing high drug prices that describes a number of legislative approaches and identifies administrative tools to address the high cost of drugs. And Democrats included drug pricing reform provisions reflecting elements of the plan in a broader proposed spending package in late 2021 - such as capping Medicare Part D patients' out-of-pocket costs; establishing penalties for drug prices that increase faster than inflation in Medicare; and authorizing the federal government to negotiate prices on certain, select high-cost drugs under Medicare Parts B and D.

Healthcare reform efforts have been and may continue to be subject to scrutiny and legal challenge. For example, revisions to regulations under the federal anti-kickback statute would remove protection for traditional Medicare Part D discounts offered by pharmaceutical manufacturers to pharmacy benefit managers and health plans. Pursuant to court order, the removal was delayed, and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026.

There have also been efforts by federal and state government officials or legislators to implement measures to regulate prices or payment for pharmaceutical products, including legislation on drug importation. Recently, there has been considerable public and government scrutiny of pharmaceutical pricing and proposals to address the perceived high cost of pharmaceuticals. There have also been recent state legislative efforts to address drug costs, which generally have focused on increasing transparency around drug costs or limiting drug prices.

General legislative cost control measures may also affect reimbursement for our product candidates. The Budget Control Act, as amended, resulted in the imposition of 2% reductions in Medicare (but not Medicaid) payments to providers in 2013 and will remain in effect through 2031 (except May 1, 2020 to March 31, 2022) unless additional Congressional action is taken. Under current legislation, the actual reduction in Medicare payments will vary from 1% in 2022 to up 3% in the final fiscal year of this sequester. Any significant spending reductions affecting Medicare, Medicaid or other publicly funded or subsidized health programs that may be implemented and/or any significant taxes or fees that may be imposed on us could have an adverse impact on our results of operations.

Adoption of new legislation at the federal or state level could affect demand for, or pricing of, our current or future products if approved for sale. We cannot, however, predict the ultimate content, timing or effect of any changes to the Healthcare Reform Act or other federal and state reform efforts. There is no assurance that federal or state health care reform will not adversely affect our future business and financial results.

Government Contracts and Regulation

We currently contract with the federal government. The BARDA contract could result in payments to us of up to approximately $303.6 million and consists of a five-year base period-of-performance and a total contract period-of-performance (base period plus option exercises) of up to ten years for us to complete the studies and manufacturing activities necessary for the FDA to consider emergency use authorization NUZYRA to treat people exposed to anthrax. As a government contractor, we are subject to complex and wide-ranging federal and agency-specific regulations and contractual requirements that not only govern how we perform under the contract but also impose other requirements that affect our operations, including socio-economic obligations such as obligations related to affirmative action or maintaining a drug-free workplace. While many of our employees have been involved in government contracts previously, many of these government contracting requirements are new to Paratek as a company. Failure to comply with government contracting requirements could result in termination of our contract and the imposition of penalties.

Financial and Segment Information

We operate our business as a single segment, as defined by generally accepted accounting principles. Our financial information is included in the consolidated financial statements and the related notes.

Available Information

We are a reporting company under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and file reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. You may access this information at the SEC's Internet site: www.sec.gov. This site contains reports, proxies and information statements and other information regarding issuers that file electronically with the SEC.

Our internet web site address is *www.paratekpharma.com*. We make available, free of charge at the "Investors" portion of our web site, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Reports of beneficial ownership filed pursuant to Section 16(a) of the Exchange Act are also available on our web site. Information in, or that can be accessed through, this web site is not part of this Annual Report on Form 10-K.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below and all information contained in this report before you decide to purchase our common stock. If any of the possible adverse events described below actually occurs, we may be unable to conduct our business as currently planned and our financial condition and operating results could be harmed. In addition, the trading price of our common stock could decline due to the occurrence of any of the events described below, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business.

Risk Related to Financial Condition

We have incurred significant losses since inception and anticipate that we will incur losses for the foreseeable future. To date we have not generated sufficient revenue from product sales to cover corresponding expenses and we may never achieve or sustain profitability.

We received FDA approval for NUZYRA in October 2018 and launched NUZYRA in the U.S. in February 2019. Additionally, FDA approval was granted in October 2018 for SEYSARA and Almirall launched SEYSARA in the U.S. in January 2019. We have exclusively licensed U.S. commercial rights for SEYSARA to Almirall for which we are entitled to tiered royalties on net sales in the U.S. We have also licensed SEYSARA to Almirall in the People's Republic of China, Hong Kong and Macau, or the greater China region, and are entitled to a flat royalty on net sales in the greater China region. Although NUZYRA and SEYSARA are now being sold by us and Almirall, respectively, it will take some time to attain profitability and we may never do so. Our net loss for the year ended December 31, 2021 was $59.1 million. As of December 31, 2021, our accumulated deficit was $866.9 million. We expect to continue to incur losses for the foreseeable future as we seek to maintain and expand regulatory approvals for our products, continue to commercialize NUZYRA, including expansion into the community setting, expand our sales, marketing and distribution infrastructure, and add personnel to support our product development and commercialization efforts and operations. The net losses and negative operating cash flows incurred to date, together with expected future losses, have had, and likely will continue to have, an adverse effect on our stockholders' equity (deficit) and working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate future revenue.

To become and remain profitable, we must succeed in developing, obtaining regulatory approval for and commercializing products with significant market potential. Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to generate any sufficient product revenues to achieve profitability. For example, our expenses could increase if we are required by regulatory agencies outside of the U.S. to perform studies in addition to those that we have already performed or currently expect to perform.

Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress the market value of our common stock, could impair our ability to raise capital, expand our business, develop other product candidates or continue our operations and could cause investors to lose all or part of their investments.

We may continue to require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back or cease our product development programs or commercialization efforts for NUZYRA.

As of December 31, 2021, our cash, cash equivalents and marketable securities were $95.5 million. We will require substantial additional funding to meet FDA post-marketing approval requirements for NUZYRA, which we expect to be materially funded through the BARDA contract. Additional funding may also be needed to support and accelerate the commercialization of NUZYRA, especially in the community setting, to fund the development of omadacycline in other indications, including NTM, and to advance the development of, or license or acquisition of, potential other product candidates, and such funding may not be available on favorable terms or at all. Although it is difficult to predict our liquidity requirements, based upon our current operating plan, we anticipate that our cash, cash equivalents and marketable securities will enable us to fund our operating expenses and capital expenditure requirements through at least the next 12 months from the filing date of this Annual Report on Form 10-K. Because

the profitability of NUZYRA and SEYSARA, and the successful development of any other future product candidates, is uncertain, we are unable to estimate the actual funds we will require to fund our continuing operations, including for our clinical development programs and commercialization efforts for NUZYRA.

Our future funding requirements will depend on many factors, including but not limited to:

- the progress of clinical development of omadacycline in additional indications, including NTM;
- the costs and timing of commercialization activities for NUZYRA, including expansion into the community setting;
- product revenue received from commercial sales of NUZYRA;
- timing and amount of actual reimbursements and NUZYRA purchases under the BARDA contract;
- the ability of Zai to develop, manufacture and commercialize omadacycline in the Zai territory;
- royalty revenue received from commercial sales of SEYSARA by Almirall;
- the ability of Almirall to develop, manufacture and commercialize sarecycline in the greater China region;
- the scope, progress, timing, cost and results of research, preclinical development and clinical trials, including for NTM;
- the costs, timing and outcome of seeking, obtaining, maintaining and expanding FDA and non-U.S. regulatory approvals;
- the costs associated with establishing and expanding our manufacturing, sales, marketing and distribution capabilities;
- the cost, number and characteristics of other product candidates that we may pursue;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make in connection with the licensing, filing, defense and enforcement of any patents or other intellectual property rights;
- our need and ability to hire additional management, scientific, commercial, operations and medical personnel;
- the effect of competing products, including generic products, that may limit market penetration of our products;
- our need to implement additional internal systems and infrastructure, including financial and reporting systems;
- resources required to develop and implement policies and processes to promote ongoing compliance with applicable healthcare laws and regulations;
- costs required to ensure that our and our partners' business arrangements with third parties comply with applicable healthcare laws and regulations; and
- the economic and other terms, timing and success of our existing and future collaboration and licensing arrangements, including the timing of receipt of any milestone or royalty payments under such arrangements.

Until we generate a sufficient amount of product and royalty revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs primarily through a combination of public or private equity offerings, debt or other structured financings, strategic collaborations and grant funding. There can be no assurance that we would be successful in securing additional funds on acceptable terms. If additional funds are not available, we may be forced to cease operations, significantly reduce operating expenses or delay, curtail, or eliminate one or more of our development programs or our business operations.

Raising additional capital or entering into certain debt financings or other arrangements may cause dilution to our stockholders, restrict our operations or require us to relinquish rights.

Until such time, if ever, as we can generate substantial product revenue, we may finance our cash needs through the sale of additional equity or convertible debt securities, which would dilute shareholder ownership interest. The terms of these new securities may include liquidation or other preferences that adversely affect shareholders' rights as common stockholders. Future debt financing, if available at all, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, NUZYRA, sarecycline, any future product candidates or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to grant rights to develop and market NUZYRA, sarecycline or any future product candidates that we may otherwise prefer to develop and market ourselves.

Risks Related to Maintaining and Expanding Regulatory Approval and Other Legal Compliance Matters

If clinical trials for omadacycline are prolonged, delayed or stopped, we may be unable to obtain regulatory approval and commercialize omadacycline for the treatment of additional indications on a timely basis.

In October 2018, the FDA approved NUZYRA in the U.S. for the treatment of adults with CABP and ABSSSI that are proven or strongly suspected to be caused by susceptible bacteria. The completion of any future clinical trials, including for NTM and FDA PMRs, could be substantially delayed or prevented by several factors, including:

- severe restrictions on the clinical and healthcare system resulting from global pandemics, including the COVID-19 pandemic;
- delay or failure to obtain sufficient supplies of the product candidate or of the comparator product for our clinical trials;
- the limited number of, and competition for, suitable sites to conduct our clinical trials, many of which may already be engaged in other clinical trial programs, including some that may be for the same indication as our product candidates;
- any delay or failure to obtain regulatory approval or agreement to commence a clinical trial in any of the countries where enrollment is planned;
- clinical holds on, or other regulatory objections to, a new or ongoing clinical trial;
- delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or clinical research organizations, or CROs, or local regulatory authorities, the terms of which can be subject to extensive negotiation and may vary significantly among different sites or CROs; and
- delay or failure to obtain Institutional Review Board/ethics committee approval to conduct a clinical trial at a prospective site or within a specific region or country.

The completion of our clinical trials could also be substantially delayed or prevented by several factors, including:

- slower than expected rates of patient recruitment and enrollment, especially in an environment impacted by COVID-19;
- feasibility of continuous trial execution in countries impacted by war, political conflict, and other humanitarian crises;
- failure of patients to complete the clinical trial;unforeseen safety issues, including severe or unexpected drug-related adverse effects experienced by patients;
- lack of omadacycline efficacy, or efficacy of other product candidates, evidenced during clinical trials;
- termination of our clinical trials by one or more clinical trial sites;
- inability or unwillingness of patients or clinical investigators to follow our clinical trial protocols;
- inability to monitor patients adequately during or after treatment by us and/or our CROs;

- delay or failure to obtain sufficient supplies of omadacycline or of the relevant comparator product; and
- the need to repeat or terminate clinical trials as a result of inconclusive or negative results or unforeseen complications during clinical trial testing.

For example, in February 2022, Russia commenced a military invasion of Ukraine. Russia's invasion and the ensuing response by Ukraine have caused us to pause enrollment in one of our current clinical trials in such jurisdictions and could increase our costs and disrupt future planned clinical development activities. Although the route, length and impact of Russia's military action is highly unpredictable, in the future, clinical trial sites in Ukraine could terminate trials, and patients could be forced to evacuate or voluntarily choose to relocate far from clinical trial sites, making them unavailable for initial or further participation in our clinical trials. In addition, data collected from trial participants in Ukraine may not be captured in the clinical database or it may not be possible to adequately monitor it. As a result, the data may need to be excluded from analyses and additional patients may need to be enrolled. Alternative sites to fully and timely compensate for our clinical trial activities in Ukraine and Russia may not be available and we may need to find other countries to conduct our clinical trials. While the cost of this trial is currently reimbursed under our BARDA contract, if our clinical trials are further interrupted, our costs and ability to generate revenues could be materially adversely impacted.

In particular, our ability to enroll patients in our clinical trials in sufficient numbers and on a timely basis will be subject to a number of factors, including the size of the patient population needed, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant indication and the eligibility criteria for the clinical trial.

Changes in regulatory requirements and guidance may also occur, and we may need to amend clinical trial protocols to reflect these changes with appropriate regulatory authorities, which could impact the costs, timing, or successful completion of a clinical trial. Our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, or the overseeing Institutional Review Board due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- unforeseen safety issues or any determination that a clinical trial presents unacceptable health risks;
- lack of adequate funding to continue the clinical trial due to unforeseen costs or other business decisions; and
- upon a breach or pursuant to the terms of any agreement with, or for any other reason by, current or future collaborators that have responsibility for the clinical development of any of our product candidates.

In addition, clinical practices vary globally, and there is a lack of harmonization among the guidance provided by various regulatory bodies of different regions and countries with respect to the data that is required to receive marketing approval, which makes designing global trials increasingly complex. Differing regulatory approval requirements in different countries also make it more difficult for us to conduct unified global trials, which can lead to increased development costs and marketing delays or non-viability of our clinical trials. The approval procedure and the time required to obtain approval also varies among countries. Furthermore, regulatory agencies may have varying interpretations of the same data, and approval by one regulatory authority does not ensure approval by regulatory authorities in other jurisdictions.

The results of previous clinical trials may not be predictive of future results, and the results of any ongoing or future clinical trials may not satisfy the requirements of the FDA or non-U.S. regulatory authorities.

Clinical failure can occur at any stage of clinical development. Clinical trials may produce negative or inconclusive results, and we or our partners may decide, or regulators may require us, to conduct additional clinical or preclinical testing which could delay submission of a supplemental NDA and regulatory approval. We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale or additional indicated use. Success in early-stage clinical trials does not mean that future larger registration clinical trials will be successful, because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and non-U.S. regulatory authorities despite having progressed through early-stage clinical trials. Product candidates that have shown promising results in early-stage (pre-Phase 3) clinical trials may still suffer significant setbacks in subsequent registration clinical trials.

In addition, the design of a clinical trial can determine whether its results will support approval of a product and/or new indications, and flaws in the design of a clinical trial may not become apparent until the clinical trial is underway, well advanced or completed. Further, if future product candidates are found to be unsafe or lack efficacy, we will not be able to obtain regulatory approval for them and our business would be harmed. A number of companies in the pharmaceutical industry, including those with greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier stage clinical trials.

Positive results in our randomized Phase 2 and Phase 3 clinical studies of omadacycline in complicated skin and skin structure infections, ABSSSI and CABP, may not be predictive of the results in any other indications, such as omadacycline for the treatment of NTM. In some instances, there can be significant variability in safety and/or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in clinical trial protocols, differences in size, type and geographic distribution of the patient populations, adherence to the dosing regimen and other clinical trial protocols and the rate of dropout among clinical trial participants. We do not know whether any Phase 2, Phase 3 or other clinical trials we or any of our collaborators may conduct, or have conducted in the past, will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our future product candidates.

Further, our and our partners' product candidates may not be approved even if they achieve their primary endpoints in Phase 3 clinical trials or registration trials. The FDA or other non-U.S. regulatory authorities may disagree with our clinical trial design and our interpretation of data from preclinical studies and clinical trials even when we have Special Protocol Assessment agreements. In addition, any of these regulatory authorities may change requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a pivotal Phase 3 clinical trial that has the potential to result in FDA or other agencies' approval. In addition, any of these regulatory authorities may also approve a product candidate for fewer or more limited indications than we request or may grant approval contingent on the performance of costly post-marketing clinical trials. In addition, the FDA or other non-U.S. regulatory authorities may not approve the labeling claims that we believe would be supported by the clinical data or be necessary or desirable for the successful commercialization of our products. If an unforeseen safety issue arises, the FDA always has the option to initiate a REMS or add additional warnings to a product label upon approval.

The regulatory approval process is expensive, time consuming and uncertain and may prevent us or our partners from obtaining approvals for the commercialization of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, marketing and distribution of drug products are subject to extensive regulation by the FDA and other U.S. and non-U.S. regulatory authorities. Regulations differ from country to country, which will require us to expend additional resources in each market for which a separate regulatory approval is required. We are not permitted to market our product candidates outside of the U.S. until we receive marketing approval from applicable regulatory authorities outside of the U.S. Although omadacycline and sarecycline received FDA approval, approval of other indications, including treatment of NTM with omadacycline, is subject to the risks of failure inherent in drug development.

Failure to comply with FDA and non-U.S. regulatory requirements may, either before or after product approval, if any, subject us to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers or manufacturing process;
- warning letters or untitled letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- suspension of any ongoing clinical trials;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;

- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve pending NDAs or supplements to approved NDAs.

The FDA and foreign regulatory authorities also have substantial discretion in the drug approval process. The number of preclinical studies and clinical trials that will be required for regulatory approval varies depending on the product candidate, the disease or condition that the product candidate is designed to address, and the regulations applicable to any particular drug candidate. Regulatory agencies can delay, limit or deny approval of a product candidate for many reasons, including:

- a product candidate may not be deemed safe or effective;
- the results may not confirm the positive results from earlier preclinical studies or earlier stage clinical trials;
- regulatory agencies may not find the data from preclinical studies and clinical trials sufficient;
- regulatory agencies may not approve our third-party manufacturer's processes or facilities;
- regulatory agencies may require significant warning or restrictions on use to the product label; or
- regulatory agencies may change their approval policies or adopt new regulations.

Any delay in obtaining or failure to obtain required approvals could materially adversely affect our ability to generate revenue from omadacycline or any other particular product candidate, which likely would result in significant harm to our financial position. Furthermore, any regulatory approval to market a product may be subject to limitations on the indicated uses for which we may market the product. These limitations may limit the size of the market opportunity for the product.

Even though NUZYRA and SEYSARA have been approved by the FDA in the U.S., they face post-approval development and regulatory requirements, which may limit how they are manufactured and marketed, and could materially impair our ability to generate revenue.

In October 2018, the FDA approved NUZYRA in the U.S. for the treatment of adults with CABP and ABSSSI that are proven or strongly suspected to be caused by susceptible bacteria, as well as SEYSARA for the treatment of inflammatory lesions of non-nodular moderate to severe acne vulgaris in patients nine years of age and older. NUZYRA and SEYSARA are subject to, among other things, ongoing FDA requirements governing the manufacturing, labeling, packaging, storage, advertising, promotion, recordkeeping and submission of safety, efficacy, and other post-market information. For example, as part of the FDA approval for NUZYRA, we are required to conduct post-marketing pediatric studies, including a single dose pharmacokinetic and safety study in children ages eight to seventeen who are receiving antibacterial drug therapy for an infectious disease, an active-controlled safety study in children ages eight to seventeen who have acute bacterial skin and skin structure infections, and an active-controlled safety study in children ages eight to seventeen who have CABP. In addition, we are also required to conduct an active-controlled safety and efficacy study in adults with CABP and a U.S. surveillance study for five years from the date of marketing to determine if resistance to NUZYRA has developed in those organisms specific to the indications in the label. In addition, approved products, manufacturers and manufacturers' facilities are required to comply with extensive FDA and other regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to current GMP regulations, which include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation and reporting requirements. As such, we and our partners and any of our and their respective contract manufacturers are subject to ongoing review and periodic inspections to assess compliance with current GMPs. Additionally, to the extent we want to make certain changes to the approved products, product labeling, or manufacturing processes or manufacturing sites, we will need to submit new applications or supplements to FDA and obtain the agency's approval.

Accordingly, we and others with whom we work will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control. We and our partners are also

required to report adverse reactions and production problems, if any, to the FDA and to comply with requirements concerning, among other things, advertising and promotion for our products. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. Although the FDA and other regulatory agencies do not regulate a physician's choice of drug treatment made in the physician's independent medical judgment, they do restrict promotional communications from pharmaceutical companies or their sales force with respect to off-label uses of products for which marketing clearance has not been issued. Accordingly, we and our partners will not be able to promote our products for indications or uses for which they are not approved. A company that is found to have promoted off-label use of its product may be subject to significant liability, including civil and criminal sanctions. We intend to comply with the requirements and restrictions of the FDA and other regulatory agencies with respect to off-label promotion, but we cannot be sure that the FDA or other regulatory agencies will agree that we have not violated their restrictions. As a result, we may be subject to criminal and civil liability. If the FDA or any other governmental agency initiates an enforcement action against us or if we are the subject of a qui tam suit and it is determined that we violated prohibitions relating to the promotion of products for unapproved uses, we could be subject to substantial civil or criminal fines or damage awards and other sanctions such as consent decrees and corporate integrity agreements pursuant to which our activities would be subject to ongoing scrutiny and monitoring to ensure compliance with applicable laws and regulations. Even if it is later determined that we were not in violation of these laws, we may be faced with negative publicity, incur significant expenses defending our actions and have to divert significant management resources from other matters.

Notwithstanding the regulatory restrictions on off-label promotion, the FDA and other regulatory authorities allow companies to engage in truthful, non-misleading, and non-promotional scientific exchange concerning their products. We intend to engage in medical education activities and communicate with healthcare providers in compliance with all applicable laws, regulatory guidance and industry best practices. Although we believe we have put in place a compliance program, which is designed to ensure that all such activities are performed in a legal and compliant manner, we cannot be certain that our program will address all areas of potential exposure and the risks in this area cannot be entirely eliminated.

Additionally, if a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, it may impose restrictions on that product, us or our partners, including requiring withdrawal of the product from the market. If we or our partners fail to comply with the regulatory requirements of the FDA and other U.S. and non-U.S. regulatory authorities, or if previously unknown problems with our products, manufacturers or manufacturing processes are discovered, the FDA or other regulatory authorities could impose significant penalties, such as:

- issuance of warning letters or untitled letters;
- imposition of injunctions or civil or criminal penalties, fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of regulatory approval;
- restrictions on product labeling, marketing, distribution or use;
- imposition of total or partial suspension of production;
- suspension of any ongoing clinical trials;
- requirements to conduct post-marketing clinical trials;
- refusal to approve pending applications or supplements to applications;
- imposition of restrictions on operations, including costly new manufacturing requirements; or
- seizure or detainment of products or requirements for us or our partners to initiate a product recall.

If we and our partners are not able to maintain regulatory compliance, we may not achieve or sustain profitability. Further, the cost of compliance with post-approval regulations may negatively affect our operating results and financial condition.

Our products may have undesirable side effects that may require them to be taken off the market or otherwise limit their sales.

Although NUZYRA and SEYSARA have undergone safety testing in humans and in laboratory animals, not all adverse effects of drugs can be predicted or anticipated from these clinical studies and preclinical safety and toxicology studies. Unforeseen side effects from either NUZYRA or SEYSARA could arise after the approved product has been marketed. Many of the most widely used antibiotics are associated with treatment-limiting adverse events, including in some instances, kidney damage, allergic reactions or sudden cardiovascular death due to cardiac arrhythmia. The results of future clinical trials or from marketing experience may show that NUZYRA or SEYSARA, or any other product candidate, cause undesirable or unacceptable side effects. Furthermore, even though both NUZYRA and SEYSARA have received marketing approval, if we or others later identify undesirable or unacceptable side effects caused by NUZYRA or SEYSARA:

- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;
- we or our partners may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we or our partners may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- regulatory authorities may withdraw approvals of an approved product, or otherwise require us or our partners to take our approved product off the market, or impose restrictions on its distribution;
- we or our partners may be subject to litigation or product liability claims and be held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us, our current partners or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of our products. Furthermore, NUZYRA and SEYSARA are commercially available and each may be used in a wider population and in a less rigorously controlled environment than in clinical studies. As a result, regulatory authorities, healthcare practitioners, third-party payors or patients may perceive or conclude that the use of the product is associated with previously unknown serious adverse effects, undermining commercialization efforts.

Coverage and reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance. If there is not sufficient coverage and reimbursement for our products, it is less likely that our products will be widely used.

Market acceptance and sales of NUZYRA, SEYSARA and any of our or our partners' other products will depend on coverage and reimbursement policies. Government authorities and third-party payors, such as private health plans, decide which drugs they will cover and establish reimbursement levels. Coverage and reimbursement may vary among third-party payors. Coverage may not be available, and reimbursement may not be adequate, for NUZYRA, SEYSARA or any other products that we or our partners develop and commercialize. Also, coverage and reimbursement policies may reduce the demand for, or the price paid for, our or our partners' products. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use our or our partners' products unless coverage is provided, and reimbursement is adequate to cover a significant portion of the cost of such products. Therefore, if coverage is not available or reimbursement is limited, we and our partners may not be able to successfully commercialize NUZYRA, SEYSARA or future approved products, if any.

Third-party payors may limit coverage or impose conditions on coverage. For example, third-party payors may limit coverage to specific drug products on an approved list, also known as a formulary, which might not include all of the FDA-approved drugs for a particular indication. As another example, third-party payors may require use of alternative therapies or a demonstration that a product is medically necessary for a particular patient before use of a product will be covered. A decision by a third-party payor not to cover our products could reduce utilization of those products.

A third-party payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will apply, or patient copayment will be at an acceptable level for physicians to choose to prescribe our drug. In addition, pharmaceutical companies often need to offer third party payors rebates on the cost of drugs dispensed to the payors' members in order to increase the possibility of favorable coverage and adequate cost sharing thresholds for patients. We may be required to provide such rebates to some third-party payors in relation to our product(s). Adequate third-party reimbursement, taking into account such rebates as applicable, may not be available and we may not be able to maintain price levels sufficient to realize an appropriate profit, including a return on our investment in product development.

Outside of the U.S., in some countries, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take a significant amount of time after receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. In some countries, we or our partners may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our product candidates to other available products in order to obtain or maintain reimbursement or pricing approval. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, there could be a material adverse effect on our business.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

The U.S. and several foreign jurisdictions are considering, or have already enacted, a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our or our partners' ability to sell approved products profitably. Among policymakers and payors in the U.S. and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access to healthcare. In the U.S., the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

The U.S. government and individual states have aggressively pursued healthcare reform, as evidenced by the passage of the Healthcare Reform Act. The Healthcare Reform Act substantially changed the way healthcare is financed by both governmental and private insurers and contains a number of provisions that affect coverage and reimbursement of drug products and/or that might affect the demand for pharmaceutical products such as increasing drug rebates under state Medicaid programs for brand name prescription drugs and extending those rebates to Medicaid managed care and assessing a fee on manufacturers and importers of brand name prescription drugs reimbursed under certain government programs, including Medicare and Medicaid. Since its enactment, there have been numerous judicial, administrative, executive, and legislative challenges to certain aspects of the Healthcare Reform Act, and we expect there will be additional challenges and amendments to the Healthcare Reform Act in the future. For instance, tax reform legislation was enacted at the end of 2017 that eliminated the individual health insurance mandate. In addition, the Healthcare Reform Act has been subject to judicial challenge. On June 17, 2021, the U.S. Supreme Court dismissed the latest judicial challenge to the Healthcare Reform Act brought by several states without specifically ruling constitutionality of the Healthcare Reform Act. There have also been significant health care reform efforts beyond the Healthcare Reform Act. See "*Government Regulation - Health Care and Other Reform*". We cannot predict the ultimate content, timing or effect of any changes to the Healthcare Reform Act or other federal and state reform efforts.

Additional legislative actions to control U.S. healthcare or other costs have passed. The Budget Control Act, as amended, resulted in the imposition of 2% reductions in Medicare, but not Medicaid, payments to providers in 2013 and remains in effect through 2031 (except May 1, 2020 to March 31, 2022) unless additional Congressional action is taken. Under current legislation the actual reduction in Medicare payments will vary from 1% in 2022 to up

to 3% in the final fiscal year of this sequester. Any significant spending reductions affecting Medicare, Medicaid or other publicly funded or subsidized health programs that may be implemented and/or any significant taxes or fees that may be imposed on us could have an adverse impact on our results of operations.

There is no assurance that federal or state healthcare reform or other legislative and regulatory initiatives will not adversely affect our business and financial results, and we cannot predict how future federal or state legislative, judicial or administrative changes relating to healthcare reform will affect our business.

In the U.S. there is increasing scrutiny of drug prices and federal or state reforms could impact our ability to establish what we believe is a fair price for our products, and ultimately diminish our revenue prospects.

Recently, there has been considerable public and government scrutiny in the U.S. of pharmaceutical pricing and proposals to address the perceived high cost of pharmaceuticals. There have also been several recent state legislative efforts to address drug costs, which generally have focused on increasing transparency around drug costs or limiting drug prices or price increases. Adoption of new legislation at the federal or state level could affect demand for, or pricing of, our product candidates, if approved for sale and could diminish our ability to establish what we believe is a fair price for our products, ultimately diminishing our revenue for our products.

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

We participate in the Medicaid Drug Rebate Program and a number of other federal and state government pricing programs in the U.S. in order to obtain coverage for NUZYRA by certain government healthcare programs. These programs generally require us to pay rebates or provide discounts to certain private and government purchasers or government programs in connection with our products when dispensed to patients of the purchasers or beneficiaries of the programs. In some cases, such as with the Medicaid Drug Rebate Program, the rebates are based on pricing and rebate calculations that we report on a monthly and quarterly basis to the government agencies that administer the programs. The terms, scope and complexity of these government pricing programs change frequently. We may also have reimbursement obligations or be subject to penalties if we fail to provide timely and accurate information to the government, pay the correct rebates or offer the correct discounted pricing. Changes to the price reporting or rebate requirements of these programs would affect our obligations to pay rebates or offer discounts. Responding to current and future changes may increase our costs and the complexity of compliance, will be time-consuming, and could have a material adverse effect on our results of operations.

If we or our partners market products in a manner that violates fraud and abuse and other healthcare laws, or if we or our partners violate government price reporting laws, we or our partners may be subject to administrative civil and/or criminal penalties.

Within the U.S., various federal and state healthcare laws apply to the pharmaceutical industry. These laws may constrain the business or financial arrangements and relationships through which we or our partners conduct business, including how we research, market, sell, and distribute our products. The laws and regulations that may affect our and our partners' ability to operate include:

- federal false claims, false statements and civil monetary penalties laws prohibiting, among other things, any person from knowingly presenting, or causing to be presented, a false claim for payment of government funds or knowingly making, or causing to be made, a false statement to get a false claim paid;
- federal healthcare program anti-kickback law, which prohibit, among other things, persons from soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual for, or the purchasing or ordering of, a good or service for which payment may be made under federal healthcare programs such as Medicare and Medicaid;
- federal anti-kickback prohibition known as Eliminating Kickbacks in Recovery Act or EKRA, enacted in 2018, which prohibits certain payments related to referrals of patients to certain providers (recovery homes, clinical treatment facilities and laboratories) and applies to services reimbursed by private health plans as well as government health care programs;
- federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, collectively, HIPAA, which, in addition to privacy protections applicable to healthcare providers and

other entities, prohibits executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

- the FDCA, which among other things, strictly regulates drug marketing, prohibits manufacturers from marketing such products for off-label use and regulates the distribution of samples;
- federal laws that require pharmaceutical manufacturers to report certain calculated product prices to the government or provide certain discounts or rebates to government authorities or private entities, often as a condition of reimbursement under government healthcare programs;
- the so-called "federal sunshine" law, which requires pharmaceutical and medical device companies to monitor and report certain financial interactions with physicians, certain non-physician practitioners and teaching hospitals to the federal government for re-disclosure to the public; and
- state law equivalents 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 payor, including commercial insurers, state laws regulating interactions between pharmaceutical manufactures and healthcare providers, 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 often are not preempted by federal laws, thus complicating compliance efforts.

Efforts to ensure that our and our partners' business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. With approved products of NUZYRA and SEYSARA, we will need to continue, to expend resources to develop and implement policies and processes to promote ongoing compliance. Although we believe we currently maintain an appropriate compliance program, we cannot be certain that the program will adequately detect or prevent violations.

Many of these laws and their implementing regulations contain ambiguous requirements or require administrative guidance for implementation. Given the lack of clarity in laws and their implementation, our activities could be subject to challenge. It is possible that governmental authorities will conclude that our or our partners' business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws. If our or our partners' operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we or our partners may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could significantly harm our business.

Outside of the U.S., foreign laws may also regulate our activities, or those of our collaboration partners.

Risks Related to Our Business

A pandemic, epidemic or outbreak of an infectious disease, such as COVID-19, has and may in the future adversely affect our business, results of operations and financial condition.

If a pandemic, epidemic or outbreak of an infectious disease occurs, our business may be adversely affected. Such events may result in a period of business and manufacturing disruption or in an inability to scale our production to meet demand in a cost-effective manner or at all, any of which could materially affect our financial condition and results of operations. For example, U.S residents and businesses have been hit especially hard by the global spread of COVID-19, which has resulted in disruptions to our business and in the future may result in additional disruptions. Examples of both include the following:

- *Health risks.* The health and wellbeing of our employees, including our sales representatives and clinical educators who visit our hospital customers, as well as employees of our suppliers, is at risk if a critical threshold of our personnel, or the personnel of our suppliers, were to be diagnosed with COVID-19 or a similar infectious disease, placed in quarantine due to potential exposure, or need to care for family members, it may result in significant business disruption.

- *Limitations on suppliers.* Some of our suppliers have been, and may in the future be, limited, and at times, precluded, from delivering to us products, materials, and components in the quantities needed on a timely basis, for a variety of reasons, including an evolving understanding of how international, federal, and/or

state authorities define "essential business", their inability to remain open due to lost business in other parts of their portfolios, or because of international, federal, and/or state prioritization orders requiring our suppliers to produce for governmental entities and/or other manufacturers before they produce for us. We presently maintain a supply chain structure that has allowed us to avoid material disruptions by the current COVID-19 outbreak; however, the future impact of this outbreak or other similar outbreaks on our supply chain is highly uncertain and cannot be predicted. Our demand has increased at the same time as our supply chain has begun to face limitations, which has, and may in the future, result in a shortage of supply, increased costs of products, materials, and components and delays in the timely delivery thereof. The increased demand we are placing on our suppliers at the same time their sub-suppliers face limitations may in the future lead to our suppliers to seek to pass through expenses or otherwise increase pricing for products, materials, and components that we require to meet our production needs. If COVID-19 or a similar infectious disease affects the producers of certain materials required by us for the production of NUZYRA, or by Almirall for the production of SEYSARA, our business and financial performance could be adversely affected.

- *Requirements for alternative sourcing.* We have had to develop alternate sources of supply for certain products, materials, and components as a result of the limitations, or complete inability, of some of some of our suppliers to meet our production needs. Although we have successfully been able to develop and validate these alternate sources of supply to date, doing so is time consuming, difficult, and costly, and if we need to develop and validate additional alternate sources of supply in the future for any reason, we may not be able to do so in a timeframe acceptable to meet customer demand.

- *Importation limitations*. Federal authorities may restrict our ability to import products into the U.S., which could negatively impact our business, operations, and relationships with our international distributors and customers in a significant and long-term way that we may not be able to rebuild for an extended period of time, or at all.

- *Shipping delays*. While we have priority shipping status with our carriers, we have experienced, and may experience in the future, shipping delays throughout the U.S. and internationally during the COVID-19 outbreak or a similar outbreak of another infectious disease, and as a result, there have been and may continue to be delays in our ability to ship our product to customers and distributors in a timely manner, potentially resulting in returned product, and we have and may continue to face extraordinary freight fees, including air freight fees and expedition fees for all modes of transportation.

- *Travel and access restrictions*. Travel restrictions and hospital limitations or denials of access for non-patients have impacted, and may in the future impact, the ability of our direct sales team and clinical educators in the U.S. to access physicians and clinicians in order to educate them about NUZYRA, impacting the ramp and growth of the NUZYRA launch. Travel restrictions have also complicated and delayed our ability to qualify and retain new suppliers or audit our existing suppliers, which might have a negative impact on our quality management system and our product quality in the future.

- *Work from home limitations*. We continue to permit all office-based employees to work from home, which could impact our ability to effectively plan, execute, communicate and maintain our corporate culture. The remote nature of our working environment could make us susceptible to additional cyber security risk, data accessibility concerns, and communication disruptions.

- *Clinical studies.* Site activation and study conduct may be delayed due to resource limitations within the healthcare system as they continue to focus on the COVID-19 pandemic. In addition, enrollment in clinical trials may be slower due to concerns over exposure and travel limitations. Therefore, we may be required to delay future clinical studies as a direct or indirect result of the COVID-19 pandemic or a future pandemic.

- *FDA review*. As a result of the COVID-19 pandemic, there may be interruptions or delays in the operations of the FDA or other health authorities, which could result in delays of reviews and approvals of our product candidates.

- *Competition*. Our competitors may in the future secure significant purchase agreements from the federal government or various states before we are able to do so, or may be selected instead of us, precluding us from those commercial opportunities.

- *Debt covenants*. A significant disruption to our business resulting in an inability to build and ship product to customers for an extended period of time may impair our ability to maintain compliance with our debt covenants.

- *Capital markets volatility*. Equity and debt markets have experienced significant volatility since the spread of COVID-19 into the U.S. Should significant volatility continue, or they experience declines due to the economic impact of COVID-19 or a future pandemic, we may not be able to raise capital at a reasonable valuation or at all.

Each of these factors could have a material adverse effect on our business and results of operations. The full extent to which COVID-19 impacts our business and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including new information about COVID-19 and the actions to treat or contain COVID-19 or to otherwise limit its impact, among others.

We are highly dependent on the commercial success of NUZYRA in the U.S. and, to a lesser extent, SEYSARA.

Our success is currently dependent on the successful commercialization of NUZYRA in the U.S., as well as the commercialization of Zai in the Zai territory, and, to a lesser extent, SEYSARA, which Almirall has the rights to commercialize in the U.S. and the greater China region. We are not currently developing, and have no such plans to develop, any other product candidates, other than omadacycline for the treatment of NTM, anthrax, and other relevant preclinical or clinical investigations. We may need additional financing or grants to fund development of any current or future product candidates.

The majority of our time, resources and effort are focused on the commercialization of NUZYRA, the success of which depends on, among other things, our ability to:

- secure sufficient starting materials and maintain commercial manufacturing arrangements with third-party manufacturers;
- produce, through a validated process, sufficient quantities and inventory of NUZYRA to meet demand;
- build and maintain internal sales, distribution and marketing capabilities sufficient to generate commercial sales of NUZYRA, including in the community setting;
- secure widespread acceptance of our product from physicians, healthcare payors, patients and the medical community;
- properly price and obtain coverage and adequate reimbursement of NUZYRA by governmental authorities, private health insurers, managed care organizations and other third-party payors;
- maintain compliance with ongoing FDA labeling, packaging, storage, advertising, promotion, recordkeeping, safety and other PMRs;
- manage our costs and expenses commensurate with NUZYRA's projected growth; and
- establish and maintain collaborations with third parties for the commercialization of NUZYRA in countries outside of the U.S., such as our existing collaboration with Zai to develop, manufacture and commercialize omadacycline in the Zai territory, and such collaborators' ability to obtain regulatory and reimbursement approvals in such countries.

There are no guarantees that we will be successful in completing these tasks. In addition, we will need to continue investing substantial financial and management resources to build out our commercial infrastructure and to recruit and train sufficient additional qualified marketing, sales and other personnel in support of our sales of NUZYRA.

If BARDA were to eliminate, reduce, or delay funding for our contract, we would experience a negative impact on our programs associated with such funding and perhaps on our ability to maintain the infrastructure necessary to maximize our NUZYRA commercial opportunity.

On December 18, 2019, we entered into a contract with BARDA to support the development of NUZYRA for the treatment of pulmonary anthrax and the fulfillment of FDA PMRs associated with NUZRYA's initial approval. The BARDA contract also includes the ability for BARDA to procure up to 10,000 treatment courses of NUZYRA for use against potential biothreats. The first procurement of NUZYRA was delivered to and accepted by BARDA in June 2021. The three additional procurements of NUZYRA under the BARDA contract have not yet been activated and represent a maximum of approximately $115.4 million of funding under the contract. Activation of BARDA's option is tied to our future progress in the ongoing anthrax development program and will be triggered upon achievement of the following development milestones: (1) BARDA's receipt of positive top line data from our pilot efficacy study for the treatment of inhalation anthrax in rabbits, (2) BARDA's receipt of positive top line data in PEP and treatment of inhalation anthrax from a combination of our pilot and pivotal efficacy studies in animal models () and (3) our receipt of sNDA approval from the FDA for treatment of inhalational anthrax. If BARDA were to fail to exercise its options, eliminate, reduce, or materially delay funding, including with respect to further procurements under the BARDA contract due to our failure to achieve the developmental milestones on our anticipated timeline or otherwise, or prohibit reimbursement of some of our incurred costs, we would have to seek additional funding to continue development of NUZYRA for the treatment of anthrax or significantly decrease or cease the product's development for that indication. Moreover, a loss of BARDA funding could jeopardize our ability to maintain the infrastructure needed to maximize NUZYRA's commercial potential, and to fulfill NUZYRA's FDA PMRs in a timely manner.

The BARDA contract includes special requirements, which subject us to the risk of a reduction or loss of funding.

Our BARDA contract subjects us to various U.S. government contract requirements, including general clauses for a cost-reimbursement research and development contract, which may limit our reimbursement. In addition, if we are found to be in violation of the BARDA contract, it could result in termination. If BARDA terminates our contract with us for its convenience, or if we default by failing to perform in accordance with the contract schedule and terms, a significant negative impact on our cash flows and operations could result.

U.S. government contracts, such as our BARDA contract, generally contain unfavorable termination provisions, which may subject us to additional risks as compared to our competitors that have not entered into such contracts. These risks include the ability of the U.S. government to unilaterally:

- terminate or reduce the scope of our contract with or without cause;
- interpret relevant regulations (federal acquisition regulation clauses);
- require performance under circumstances which may not be favorable to us;
- require an in-process review where the U.S. government will review the project and its options under the contract;
- control the timing and amount of funding, which impacts the development progress of our programs; and
- audit and object to our contract-related costs and fees, including allocated indirect costs.

Termination and audit provisions in our BARDA contract could create additional risks for our business.

The U.S. government may terminate our BARDA contract for its convenience or if we default by failing to perform in accordance with the contract schedule and terms. Termination for convenience provisions generally enable us to recover only our incurred or committed costs, and settlement expenses and profit on the work completed prior to termination. Termination does not permit these recoveries under default provisions. If our contract expires or is terminated, the U.S. government could dispute wind-down and termination costs and may question prior expenses under the contract and deny payment of those expenses. If we decide to challenge the U.S. government for denying certain payments under a contract, such a challenge could subject us to substantial additional expenses which we may or may not recover. Further, should the U.S. government terminate our BARDA contract for its convenience, or if we default by failing to perform in accordance with the contract schedule and terms, our cash flows and business operations could be negatively impacted.

Sales of NUZYRA and SEYSARA may be slow or limited for a variety of reasons including competing therapies or safety issues. If NUZYRA and SEYSARA are not successful in gaining broad commercial acceptance, our business would be harmed.

Sales of NUZYRA and SEYSARA are dependent on several factors including our and our partners' ability to educate and increase physician awareness of the benefits, safety and cost-effectiveness of NUZYRA and SEYSARA relative to competing therapies. The degree of market acceptance of NUZYRA and SEYSARA among physicians, patients, healthcare payors and the medical community depends on a number of factors, including:

- acceptable evidence of safety and efficacy;
- relative convenience and ease of administration;
- prevalence and severity of any adverse side effects as a result of treatment with NUZYRA and SEYSARA;
- availability of alternative treatments;
- pricing, cost effectiveness and value propositions;
- effectiveness of our sales and marketing capability and strategies, especially during the restrictions resulting from COVID-19 on our commercial, medical and manufacturing teams;
- complications or barriers that inhibit our commercial team from reaching the appropriate audience to promote our product(s) because of the spread of COVID-19 or any outbreak of other contagious diseases;
- ability to obtain sufficient third-party coverage and reimbursement;
- the clinical indications for which NUZYRA and SEYSARA are approved, as well as changes in the standard of care for their targeted indications;
- the continuing effectiveness of our manufacturing and supply chain;
- warnings and limitations contained in the approved labeling for NUZYRA and SEYSARA, including that efficacy of SEYSARA beyond 12 weeks and safety beyond 12 months have not been established;
- safety concerns with similar products marketed by others;
- our ability to comply with FDA PMRs associated with the FDA approval of NUZYRA, including conducting and completing post-marketing studies; and
- the actual market-size for NUZYRA and SEYSARA, which may be larger or smaller than expected.

In addition, since NUZYRA and SEYSARA are subject to continual review by the FDA, there can be no assurance that newly discovered or developed safety issues will not arise. With the use of any newly marketed drug by a wider patient population, serious adverse events may occur from time to time that initially do not appear to relate to the drug itself. For example, any safety issues could cause us to suspend or cease marketing NUZYRA, cause us to modify how we market NUZYRA, and may subject us to substantial liabilities and adversely affect our revenues and financial condition. In the event of a withdrawal of NUZYRA from the market, our revenues would decline significantly, and our business would be seriously harmed and could fail. We and our partners additionally may experience significant fluctuations in sales of NUZYRA and SEYSARA from period to period and, ultimately, we may never generate sufficient revenues from NUZYRA and SEYSARA to reach or maintain profitability or sustain our anticipated operations.

We face significant competition and if our competitors develop and market products that are more effective, safer or less expensive than our products, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive and subject to rapid and significant technological change, including but not limited to with respect to innovations related to diagnostic devices. NUZYRA and SEYSARA do or will compete with other drugs and therapies that currently exist or are being developed. Products that we may develop in the future are also likely to face competition from other drugs and therapies, some of which we may not currently be aware. We have competitors both in the U.S. and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, generic

manufacturing companies, universities and other research institutions. In addition, universities and private and public research institutes may become active in our target indications, and smaller or early-stage companies may enter collaborative arrangements with large, established companies. Many of our competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing pharmaceutical products. These companies also have significantly greater research, development and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds to in-license novel compounds or develop technologies that could make the product candidates that we develop obsolete or less competitive. As a result of all of these factors, our competitors may succeed in obtaining patent protection and/or regulatory approvals or discovering, developing and commercializing competing technologies before we do so for any of our product candidates.

The GAIN Act is intended to provide incentives for the development of new QIDPs. These incentives may result in more competition in the market for new antibiotics and may cause pharmaceutical and biotechnology companies with more resources than we have to shift their efforts toward the development of products that could be competitive with our product candidates. Furthermore, price competition may inhibit the acceptance of our products, physicians may be reluctant to switch from existing products to our products, physicians may switch to other newly approved drug products, or physicians may choose to reserve our products for use in limited circumstances.

NUZYRA competes with other antibiotics in the serious bacterial skin infection market. These include, but are not limited to, vancomycin, marketed as a generic by Abbott Laboratories and others; linezolid, marketed as Zyvox by Pfizer Inc. and available as a generic; daptomycin, marketed as Cubicin by Merck Pharmaceuticals, Inc. and available as a generic; dalbavancin, marketed as Dalvance by Abbvie; tedizolid, marketed as Sivextro by Nabriva Therapeutics.; oritavancin, marketed as Orbactiv and delafloxacin marketed as Baxdela by Melinta Therapeutics, Inc.; quinupristin/dalfopristin, marketed as Synercid by Pfizer, Inc.; tigecycline, marketed as Tygacil by Pfizer Inc. and available as a generic; telavancin, marketed as Vibativ by Cumberland Therapeutics Inc.; ceftaroline, marketed as Teflaro by Abbvie; and generic trimethoprim/sulfamethoxazole and clindamycin.

NUZYRA also competes with other antibiotics in the community-acquired pneumonia market. These include azithromycin, marketed as Zithromax and Z-PAK by Pfizer Inc. and available as a generic; clarithromycin, marketed as Biaxin by Abbott Laboratories and available as a generic; moxifloxacin, marketed as Avelox by Bayer AG and available as a generic; levofloxacin, marketed as Levaquin by Johnson & Johnson and available as a generic; tigecycline, marketed as Tygacil by Pfizer Inc. and available as a generic; linezolid, marketed as Zyvox by Pfizer Inc. and available as a generic; ceftriaxone, marketed as Rocephin by F. Hoffman-La Roche Ltd and available as a generic; and ceftaroline, marketed as Teflaro by Abbvie, delafloxacin marketed as Baxdela by Melinta Therapeutics Inc; lefamulin marketed as Xenleta by Nabriva Therapeutics. We are also aware of various drugs that are or may eventually be under development for the treatment of CABP, including, but not limited to, GSK2140944, under development by GSK and nemanoxacin, under development by TaiGen Biotechnology.

Finally, SEYSARA faces competition in the acne markets where generic tetracyclines such as doxycycline and minocycline are available in every market around the world. Branded generic versions of tetracycline derivatives are sold by several companies.

Our competitors' drugs may be more effective, or more effectively marketed and sold, than NUZYRA, SEYSARA or any future product candidate we may commercialize and may render NUZYRA, SEYSARA or our other product candidates obsolete or non-competitive before we can recover the expenses of our development and commercialization. We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available.

If the FDA or other applicable regulatory authorities approve generic products that compete with NUZYRA, SEYSARA or any of our or our partners' product candidates, or if existing generic antibiotics are viewed as being

equally effective to NUZYRA, SEYSARA or any of our or our partners' product candidates, the sales of NUZYRA, SEYSARA or, if approved, such product candidates would be adversely affected.

Once an NDA or marketing authorization application outside of the U.S. is approved, the product covered thereby becomes a "listed drug" that can, in turn, be cited by potential competitors in support of approval of an ANDA in the U.S. Agency regulations and other applicable regulations and policies provide incentives to manufacturers to create modified, non- infringing versions of a drug to facilitate the approval of an ANDA or other application for generic substitutes in the U.S. and in nearly every pharmaceutical market around the world. These manufacturers might only be required to conduct a relatively inexpensive study to show that their product has the same active ingredient(s), dosage form, strength, route of administration and conditions of use, or labeling, as our product candidate and that the generic product is bioequivalent to ours, meaning it is absorbed in the body at the same rate and to the same extent as our product candidate. These generic equivalents, which must meet the same quality standards as branded pharmaceuticals, would be significantly less costly than ours to bring to market, and companies that produce generic equivalents are generally able to offer their products at lower prices. Thus, after the introduction of a generic competitor, a significant percentage of the sales of any branded product is typically lost to the generic product. Accordingly, competition from generic equivalents to ours or any of our partners' future products, if any, would materially adversely impact our future revenue, profitability and cash flows and substantially limit our ability to obtain a return on the investments we have made in our or any of our partners' products, including NUZYRA and SEYSARA. For example, vancomycin has been available in generic form for many years, and Zyvox (linezolid) is now available in generic form. We cannot yet ascertain what impact these generic products and any future approved generic products will have on sales of NUZYRA, SEYSARA or, if approved, any of our or our partners' product candidates.

We rely and will continue to rely on outsourcing arrangements for manufacturing of NUZYRA and any future product candidates, which could impair the commercialization of NUZYRA or delay approval of any future product candidates.

We do not currently own or operate manufacturing facilities for the production of NUZYRA or any other product candidate, nor do we currently intend to do so in the future. We currently depend on third-party contract manufacturers for the supply of the active pharmaceutical ingredients for NUZYRA. We have entered into certain long-term manufacturing and supply agreements, including agreements for the (i) supply of starting materials for crude omadacycline, (ii) supply of active pharmaceutical ingredient for our omadacycline products, (iii) manufacture and supply of omadacycline oral solid dosage tablets and omadacycline in injectable form, (iv) primary packing, labelling, storage and related services for omadacycline oral solid dosage tablets and injectable omadacycline in vials, and (v) distribution and logistics services. We are currently in discussions with several third-party manufacturers and may enter into additional long-term supply agreements with them. We may not be able to reach agreement with some of these contract manufacturers, or to identify and reach arrangement on satisfactory terms with other contract manufacturers, to manufacture NUZYRA or any future product candidates. Additionally, we anticipate that the facilities used by any contract manufacturer to manufacture NUZYRA or any future product candidates will be the subject of inspections by regulatory agencies before the FDA and other regulatory authorities that approve an NDA or marketing authorization for the product candidate manufactured at that facility. We will depend on these third-party manufacturing partners for compliance with the FDA's manufacturing requirements for finished products. If our manufacturers cannot successfully manufacture material that conforms to our specifications and the FDA and other regulatory authorities' cGMP requirements, any future product candidates may not be approved or, in the case of NUZYRA, may be subject to delays in release and/or product recalls. While third-party manufacturers of NUZYRA have previously passed FDA and other regulatory agency inspections, we cannot provide assurance that they will pass such inspections in the future.

Furthermore, any interruption of the development or operation of the manufacturing facilities due to, among other reasons, the COVID-19 pandemic or events such as order delays for equipment or materials, equipment malfunction, quality control and quality assurance issues, regulatory delays, or and possible negative effects of such delays on supply chains and expected timelines for product availability, production yield issues, shortages of qualified personnel, discontinuation of a facility or business or failure or damage to a facility by natural disasters or pandemics, could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available NUZYRA, other product candidates or materials. To date we maintain a supply chain structure that has allowed us to avoid material disruptions by the COVID-19 pandemic. However, the future impact of this outbreak is highly uncertain and cannot be predicted. If the COVID-19 pandemic affects the producers of certain materials or if

the duration of the disruption is longer than anticipated, our business and financial performance could be adversely affected.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured products and product candidates ourselves, including:

- the possibility of a breach of the manufacturing agreements by the third parties because of factors beyond our control;
- the possibility of termination or nonrenewal of the agreements by the third parties before we are able to arrange for a qualified replacement third-party manufacturer;
- the possibility that third parties are unable to manufacture NUZYRA consistently in commercial quantities, at acceptable costs on expected timelines;
- the possibility that we may not be able to maintain or secure manufacturers or manufacturing capacity in a timely manner and on satisfactory terms in order to meet our manufacturing needs; and
- the possibility that the third parties may not be able to respond adequately to unexpected changes in demand forecasts that may result in either lost revenue or excessive inventory with decreasing shelf-life.

Any of these factors could cause the delay of further commercialization of NUZYRA, delay the development and approval of any future product candidates, or cause us to incur higher costs or prevent us from commercializing any future product candidates successfully. Furthermore, if contract manufacturers fail to continuously meet FDA compliance standards or fail to deliver the required commercial quantities of finished product on a timely basis and at commercially reasonable prices, and we are unable to find one or more replacement manufacturers capable of production at a substantially equivalent cost, in substantially equivalent volumes and quality and on a timely basis, we would likely be unable to meet demand for our products and could lose potential revenue. It may take one or more years to establish an alternative source of supply and to have any such new source approved by the FDA or any other relevant regulatory authorities.

Our current and anticipated future dependence upon others for manufacturing may adversely affect our future profit margins and our ability to commercialize on a timely and competitive basis NUZYRA or any future product candidates that receive marketing approval.

The success of our business may be dependent on the actions of our collaborative partners. An element of our business and funding strategy is to enter into collaborative arrangements with established pharmaceutical and biotechnology companies who will finance or otherwise assist in the development, manufacture and marketing of products incorporating our technology, and who also provide us with funding in the form of milestone payments for progress in clinical development or regulatory approval. For example, we exclusively license rights to sarecycline for the treatment of acne in the U.S. to Almirall, and Almirall is responsible for all clinical development, registration and commercialization in the U.S. of sarecycline for the treatment of acne. In addition, Almirall has an exclusive license to develop and commercialize sarecycline (i) for the treatment of acne in the greater China region and (ii) for the treatment of rosacea in the U.S., which converted to a non-exclusive license in December 2014 after Allergan did not exercise its development option with respect to rosacea. Additionally, we are party to the Zai Collaboration Agreement, pursuant to which we granted Zai an exclusive license to develop, manufacture and commercialize omadacycline in the Zai territory for all human therapeutic and preventative uses other than biodefense. Zai is responsible for the development, manufacturing and commercialization of the licensed product in the Zai territory, at its sole cost with certain assistance from Paratek.

Accordingly, our prospects will depend in part upon our ability to attract and retain collaborative partners and to develop technologies and products that achieve the criteria for milestone payments. When we collaborate with a third party for development and commercialization of a product candidate, we can expect to relinquish some or all of the control over the future success of that product candidate to the third party in the respective territory. In addition, our collaborative partners may have the right to abandon research or development projects and terminate applicable agreements, including funding obligations, prior to or upon the expiration of the agreed upon terms. We may not be successful in establishing or maintaining collaborative arrangements on acceptable terms or at all, collaborative partners may terminate funding before completion of projects, our product candidates may not achieve the criteria

for milestone payments, our collaborative arrangements may not result in successful product commercialization, and we may not derive any revenue from such arrangements. In the past, certain of our collaborators, including Novartis, have terminated their partnering relationships with us due to delays and uncertainties in connection with the FDA regulatory pathway for approval of omadacycline for the ABSSSI and CABP indications. This past history may affect our ability to attract and enter into collaboration arrangements with future partners or collaborators.

In addition, we face significant competition in seeking appropriate collaborators. Whether or not we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside of the U.S., the potential market for the product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the patent position protecting the product candidate, the potential of competing products, the need to seek licenses or sub-licenses to third-party intellectual property and industry and market conditions generally

To the extent that we are not able to develop and maintain collaborative arrangements, we would need substantial additional capital to undertake research, development and commercialization activities on our own, we may be forced to limit the number of our product candidates we can commercially develop or the territories in which we commercialize them, and we might fail to commercialize products or programs for which a suitable collaborator cannot be found.

Reliance on collaborative relationships poses a number of risks, including the following:

- our collaborators may not perform their obligations as expected or in compliance with applicable laws;
- the prioritization, amount and timing of resources dedicated by our collaborators to their respective collaborations with us is not under our control;
- some product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products;
- our collaborators may elect not to proceed with the development of product candidates that we believe to be promising;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- some of our collaborators might develop independently, or with others, products that could compete with our products;
- A delay in the development timeline for omadacycline in the Zai territory would result in a potential loss of milestone payments and future royalties from the partnership under the Zai Collaboration Agreement; and
- if the exclusive rights to sarecycline in the U.S. or the greater China region are returned to us by Almirall, or the rights to omadacycline in the Zai territory returned to us by Zai, we will need to establish a new development and commercialization partnership to further sarecycline in the U.S. and greater China region or omadacycline in the Zai territory. There can be no assurance that we would be able to find such a partner.

We are continuing to build our sales and distribution infrastructure. If we are unable to develop our sales, marketing and distribution capability on our own or through collaborations with marketing partners, we will not be successful in commercializing NUZYRA or any future product candidates to their full potential.

We are continuing to grow the sales force and commercialization capabilities within our organization through the expansion of our community-based sales force, subsequent to the termination of our arrangement with a third

party to provide a contract field sales force. We are also continuing to invest in a sales and marketing organization with technical expertise and supporting distribution capabilities to successfully commercialize NUZYRA, which can be expensive and time consuming. In addition, we may not be able to hire a sales force in the U.S. that is large enough or has adequate expertise in the medical markets that we intend to target. Any failure or delay in the development of our sales, marketing and distribution capabilities would adversely impact the commercialization of NUZYRA.

With respect to our existing products and any future product candidates, we may choose to collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or as an alternative to our own sales force and distribution systems. To the extent that we enter into co-promotion or other licensing arrangements, our product revenue and profitability may be lower than if we directly marketed or sold any approved products. In addition, any revenue we receive will depend in whole or in part upon the efforts of these third parties, which may not be successful and are generally not within our control. If we are unable to enter into these arrangements on acceptable terms or at all, we may not be able to successfully commercialize any approved products. If we are not successful in commercializing any approved products, either on our own or through collaborations with one or more third parties, our future product revenue will suffer, and we may incur significant additional losses.

We will need to commit significant time and financial and managerial resources to maintain and further develop our sales and marketing organization to ensure they have the technical expertise required to address any challenges we may face with the commercialization of NUZYRA.

Factors that may inhibit our efforts to maintain and develop our commercialization capabilities include:

- an inability to retain an adequate number of effective commercial personnel in the medical markets we intend to target;
- an inability to train sales personnel, who may have limited experience with our company or NUZYRA, to deliver a consistent message regarding NUZYRA and be effective in convincing physicians to prescribe NUZYRA;
- a lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines;
- an inability to equip sales personnel with effective materials, including medical and sales literature to help them educate physicians and our healthcare providers regarding NUZYRA and its proper administration;
- unforeseen costs and expenses associated with maintaining and further developing an independent sales and marketing organization; and
- complications or barriers that inhibit our commercial team from reaching the appropriate audience to promote our product(s) because of the spread of COVID-19 or any outbreak of other contagious diseases.

If we are not successful in establishing and maintaining an effective sales and marketing infrastructure, we will have difficulty commercializing NUZYRA and our future product revenue will suffer, which would adversely affect our business and financial condition.

If we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenues or the profitability of these product revenues to us are likely to be lower than if we were to market and sell any products that we develop ourselves. In addition, we likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing NUZYRA.

If we are unable to establish and maintain our agreements with third parties to distribute NUZYRA to patients, our results of operations and business could be adversely affected.

We rely on third parties to commercially distribute NUZYRA to patients. We have contracted with a third-party logistics company to warehouse NUZYRA and to process and ship customer orders and have negotiated contracts with specialty pharmacies and specialty distributors to sell and distribute NUZYRA. The specialty pharmacies sell NUZYRA directly to patients and provide patient education and ongoing management. The specialty distributors sell NUZYRA to hospitals and other large buying institutions. We have also contracted with a third-party patient services hub to help us with some or all of the following: benefits investigation and reimbursement adjudication support, patient assistance programs and ongoing compliance support. This distribution network requires significant coordination with our sales and marketing and finance organizations. In addition, failure to coordinate financial systems could negatively impact our ability to accurately report product revenue from NUZYRA. If we are unable to effectively manage the distribution process, sales of NUZYRA, as well as any future products we may commercialize, sales could be delayed or severely compromised and our results of operations may be harmed.

In addition, the use of specialty pharmacies, specialty distributors and a third-party patient services hub involves certain risks, including, but not limited to, risks that these organizations will:

- not provide us with accurate or timely information regarding their inventories, the number of patients who are using NUZYRA or serious adverse reactions, events and/or product complaints regarding NUZYRA;
- not effectively sell or support NUZYRA, or communicate publicly concerning NUZYRA in a manner that is contrary to FDA rules and regulations;
- reduce or discontinue their efforts to sell or support NUZYRA;
- not devote the resources necessary to sell NUZYRA in the volumes and within the time frame we expect;
- be unable to satisfy financial obligations to us or others; or
- cease operations.

Any such events may result in decreased product sales and lower product revenue, which would harm our results of operations and business. Additionally, the provision of patient support services, although fairly typical in the pharmaceutical industry, can be subject to challenge under fraud and abuse or FDA laws if not structured appropriately.

Independent clinical investigators and CROs that we engage to conduct our clinical trials may not devote sufficient time or attention to our and our partners' clinical trials or be able to repeat their past success.

We expect to depend on independent clinical investigators and CROs to participate in and conduct our clinical trials. There is a limited number of third-party service providers that specialize or have the expertise required to achieve our business objectives. Identifying, qualifying and managing performance of third-party service providers can be difficult, time consuming and cause delays in our or our partners' development programs. These investigators and CROs will not be our employees, and we will not be able to control, other than by contract, the amount of resources, including time, that they devote to our product candidates and clinical trials. If independent investigators fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product

candidates that we and our partners develop. In addition, the use of third-party service providers requires us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated. Further, the FDA requires that we and our partners comply with standards, commonly referred to as current Good Clinical Practices, for conducting, recording and reporting clinical trials to assure that data and reported results are credible and accurate and that the rights, safety, integrity and confidentiality of clinical trial subjects are protected. Failure of clinical investigators or CROs to meet their obligations to us or comply with current Good Clinical Practices could adversely affect the clinical development of our product candidates and harm our business.

If NUZYRA or SEYSARA do not achieve broad market acceptance among physicians, patients, the medical community and third-party payors, our revenue generated from their sales will be limited.

The commercial success of NUZYRA and SEYSARA will depend upon their level of market acceptance among physicians, patients and the medical community. The degree of market acceptance of NUZYRA and SEYSARA will depend on a number of factors, including:

- limitations or warnings contained in the product's FDA or foreign regulatory approved labeling;
- changes in the standard of care for the targeted indications for any of our products;
- limitations in the approved clinical indications for our products;
- demonstrated clinical safety and efficacy compared to other products;
- lack of significant adverse side effects;
- sales, marketing, reimbursement and distribution support;
- availability of coverage and adequate reimbursement from governmental or private third-party payors, such as Medicare or managed care plans;
- the extent to which government or third-party payors implement utilization management techniques, such as unreasonably high copayment formulary tiers, prior authorization or quantity limits for our product(s), or even refuse to provide coverage or adequate reimbursement for the products;
- timing of market introduction and perceived effectiveness of competitive products;
- the degree of cost-effectiveness and value of our products;
- availability of alternative therapies at similar or lower cost, including generics and over-the-counter products;
- the extent to which the product is approved for inclusion on formularies of hospitals, and third-party payors, including managed care organizations;
- whether the product is designated under physician treatment guidelines as a therapy for particular infections;
- whether the product is designated under national treatment or formulary guidelines;
- adverse publicity about our products or favorable publicity about competitive products;
- convenience and ease of administration of our products; and
- potential product liability claims.

Although we believe our clinical studies demonstrate that NUZYRA and SEYSARA represent clinically meaningful and efficacious options for patients and physicians, it is possible that as we receive data from additional clinical trials or in a post-market setting from physician and patient experiences with the commercial products that do not continue to support such interpretations. It is also possible that the FDA, physicians and third-party payors will not agree with our interpretation of our existing and future clinical trial data. If we are unable to demonstrate the value of NUZYRA and SEYSARA based on our data, our opportunity for these products to maintain premium pricing and be commercialized successfully would be adversely affected. If NUZYRA or SEYSARA do not achieve an adequate level of acceptance by physicians, patients and the medical community, we and our partners may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, efforts to

educate the medical community and third-party payors on the benefits of NUZYRA, SEYSARA or any future product candidates may require significant resources and may never be successful.

Even though NUZYRA and SEYSARA have been approved for marketing in the U.S., we or our partners may never obtain approval of or commercialize NUZYRA or SEYSARA outside of the U.S., which would limit our ability to realize their full market potential.

In October 2018, the FDA approved NUZYRA in the U.S. for the treatment of adults with CABP and ABSSSI that are proven or strongly suspected to be caused by susceptible bacteria. We have global commercial rights to omadacycline, except that we have entered into a collaboration with Zai to develop, manufacture and commercialize omadacycline in the Zai territory. In December 2021, we received regulatory approval for omadacycline for the treatment of CABP in the People's Republic of China. In October 2018, the FDA also approved SEYSARA for the treatment of inflammatory lesions of non-nodular moderate to severe acne vulgaris in patients nine years of age and older. In the U.S. and the greater China region, Almirall has the exclusive rights to commercialize SEYSARA for the treatment of acne, whereas we retain all rights to sarecycline all other countries. In the future, we, or our partners, may seek to commercialize omadacycline or sarecycline in countries outside of the U.S. and the greater China region, and in February 2020, we exclusively licensed from Almirall certain technology owned or in-licensed by Almirall or its affiliates that is necessary or useful to develop or commercialize sarecycline outside of the U.S. Almirall plans to develop sarecycline for acne in China, with a submission to the China National Medical Products Administration, or NMPA, according to Almirall, expected in 2023.

In order to market products outside of the U.S., we and our partners must comply with numerous and varying regulatory requirements of other jurisdictions regarding safety and efficacy. Approval procedures vary among jurisdictions and can involve product testing and administrative review periods different from, and greater than, those in the U.S.

Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional preclinical studies or clinical trials. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries.

Regulatory approval in one jurisdiction does not ensure regulatory approval in another, but failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory process in others. Failure to obtain regulatory approvals in other jurisdictions or any delay or setback in obtaining such approvals could adversely affect our business and financial condition.

Bacteria might develop resistance to NUZYRA, which would decrease the efficacy and commercial viability of NUZYRA.

Antibiotic resistance is primarily caused by the genetic mutation of bacteria resulting from suboptimal exposure to antibiotics where the drug does not eradicate all of the bacteria. While antibiotics have been developed to treat many of the most common infections, the extent and duration of their use worldwide has resulted in new mutated strains of bacteria resistant to current treatments. NUZYRA has been developed to treat patients infected with drug-resistant bacteria. If physicians, rightly or wrongly, associate the resistance issues of older generations of tetracyclines with NUZYRA, physicians might not prescribe NUZYRA for treating a broad range of infections. In addition, bacteria might develop resistance to NUZYRA if such bacteria are improperly dosed or treated repeatedly with NUZYRA over multiple years, causing the efficacy of NUZYRA to decline, which would negatively affect our potential to generate revenue from NUZYRA.

If any product liability lawsuits are successfully brought against us or any of our collaborative partners, we may incur substantial liabilities and may be required to limit commercialization of our products, including NUZYRA and SEYSARA.

We face an inherent risk of product liability lawsuits related to the testing of our products in seriously ill patients and face an even greater risk from sales of NUZYRA and SEYSARA. Product liability claims may be brought against us or our partners by participants enrolled in our clinical trials, patients, healthcare providers or others using, administering or selling any of our products. If we cannot successfully defend ourselves against any such claims, we may incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for NUZYRA or SEYSARA;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire clinical trial programs;
- significant litigation costs;
- substantial monetary awards to or costly settlements with patients or other claimants;
- product recalls or a change in the indications for which they may be used;
- loss of revenue;
- diversion of management and scientific resources from our business operations; and
- the inability of us or our partners to successfully commercialize our products.

With the approval of NUZYRA and SEYSARA for commercial sale, we are highly dependent upon consumer perceptions of us and the safety and quality of our products. We could be adversely affected if we are subject to negative publicity. We could also be adversely affected if any of our products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to patients. Also, because of our dependence upon consumer perceptions, any adverse publicity associated with illness or other adverse effects resulting from patients' use or misuse of our products or any similar products distributed by other companies could have a material adverse impact on our results of operations.

We currently hold $10.0 million in product liability insurance coverage in the aggregate annually, with a per incident limit of $10.0 million, which may not be adequate to cover all liabilities that we may incur. Insurance coverage is becoming increasingly expensive. As a result, we may be unable to maintain or obtain sufficient insurance at a reasonable cost to protect us against losses that could have a material adverse effect on its business. These liabilities could prevent or interfere with our product development and commercialization efforts. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash resources and adversely affect our business, financial condition and results of operation.

If we fail to attract and retain key management and scientific personnel, we may be unable to successfully commercialize NUZYRA or any future product candidates.

Our industry has experienced a high rate of turnover of management personnel in recent years. We are to a certain extent dependent on the members of our senior management team for our business success. The employment agreements with our senior management team can be terminated by us or them at any time, with notice. The departure of any of our executive officers could result in a significant loss in the knowledge and experience that we, as an organization, possesses and could cause significant delays, or outright failure, in the execution of our strategies, the successful commercialization of NUZYRA, and the development of any future product candidates.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, development and clinical personnel. We may not be able to attract or retain such qualified personnel

due to the intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that will impede significantly our development objectives and timelines, the success of our commercialization efforts, our ability to raise additional capital and our ability to implement our business strategy.

We depend on various consultants and advisors for the success and continuation of our development efforts.

We work extensively with various consultants and advisors, who provide advice and/or services in various business and development functions, including clinical development, operations and strategy, regulatory matters, legal and finance. The potential success of our drug development programs depends, in part, on continued successful collaborations with certain of these consultants and advisors. Our consultants and advisors are not our employees and may have commitments and obligations to other entities that may limit their availability to us. Typically, these advisors will not enter into non-compete agreements with us. If a conflict of interest arises between their work for us and their work for another entity, we may lose their services. We do not know if we will be able to maintain such relationships or that such consultants and advisors will not enter into other arrangements with competitors, any of which could have a detrimental impact on our development objectives and our business.

We will need to grow our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of February 28, 2022, we had 207 full-time employees. We expect to expand our employee base for managerial, operational, sales, marketing, financial and other resources. Future growth would impose significant added responsibilities on members of management, including the need to identify, recruit, maintain, motivate and integrate additional employees. Also, our management may need to divert a disproportionate amount of their attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. We may not be able to effectively manage the expansion of our operations that may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of existing and additional product candidates. If our management is unable to effectively manage our expected growth, our expenses may increase more than expected our ability to generate and/or grow revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to successfully commercialize NUZYRA, develop any future product candidates and compete effectively with others in our industry will depend in part, on our ability to effectively manage any future growth.

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

We are exposed to the risk that our employees, contractors, partners, principal investigators, CROs, consultants and vendors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, federal and state healthcare fraud and abuse laws and regulations, laws that require the reporting of financial information or data timely, completely or accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Third-party misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us resulting from this misconduct, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could significantly harm our business.

Risks Related to our Indebtedness

Servicing our debt, including the Notes, the R-Bridge Loan Agreement, and the Royalty-Backed Loan Agreement, requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness depends on our future performance, which is subject to regulatory, economic, financial, competitive and other factors beyond our control. We are a biopharmaceutical company that has not yet generated profit from product sales. We expect to continue to incur losses as we add infrastructure and personnel to support our commercialization and product development efforts and operations. Accordingly, our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

The Notes are subordinated to our senior indebtedness, effectively subordinated to our secured indebtedness and structurally junior to any liabilities of our subsidiaries.

The Notes are our general, unsecured, senior subordinated obligations and rank equally in right of payment with all of our future unsecured, senior subordinated indebtedness; senior to all of our future subordinated indebtedness; junior to all of our existing and future senior indebtedness, whether or not secured; effectively subordinated to all of our secured indebtedness; and structurally junior to the liabilities, including trade payables, of our subsidiaries. In the event of our bankruptcy, liquidation, reorganization or other winding up, our assets that secure debt ranking senior in right of payment to the Notes will be available to pay obligations on the Notes only after the secured debt has been repaid in full from these assets, and the assets of our subsidiaries will be available to pay obligations on the Notes only after all claims senior to the Notes have been repaid in full. There may not be sufficient assets remaining to pay amounts due on any or all of the Notes then outstanding. The indenture governing the Notes does not prohibit us from incurring additional senior debt or secured debt, nor does it prohibit any of our subsidiaries from incurring additional liabilities.

Despite our current debt levels, we may still incur substantially more debt or take other actions which would intensify the risks discussed above.

Despite our current consolidated debt levels, we and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. For example, we are not restricted under the terms of the indenture governing the Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the Notes that could have the effect of diminishing our ability to make payments on the Notes when due.

We may not have the ability to raise the funds necessary to repurchase the Notes upon a fundamental change, and our existing or future debt may contain limitations on our ability to repurchase the Notes.

Holders of the Notes have the right to require us to repurchase their Notes upon the occurrence of a fundamental change at a fundamental change repurchase price equal to 100% of the principal amount of the Notes to be repurchased, *plus* accrued and unpaid interest, if any. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Notes surrendered therefor. In addition, our ability to repurchase the Notes may be limited by law, by regulatory authority or by agreements governing our indebtedness that exist at the time of the repurchase. Our failure to repurchase Notes at a time when the repurchase is required by the indenture governing the Notes would constitute a default under the indenture. A default under the indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes.

We may fail to pay any cash amount upon repurchase of the Notes.

Our failure to repurchase the Notes as required under the terms of the Notes would constitute a default under the indenture governing the Notes and permit holders of the Notes to accelerate our obligations under the Notes. A default under the indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes.

Our level of indebtedness and debt service obligations could adversely affect our financial condition and may make it more difficult for us to fund our operations.

On December 31, 2020, or the Closing Date, we, through our wholly-owned subsidiary PRTK SPV2 LLC, a Delaware limited liability company, or the Subsidiary, entered into a royalty and revenue interest-backed loan agreement with an affiliate of R-Bridge Healthcare Investment Advisory, Ltd., herein referred to as the R-Bridge Loan Agreement. Pursuant to the terms of the R-Bridge Loan Agreement, the Subsidiary borrowed a $60.0 million term loan, secured by, and repaid with proceeds from, (i) royalties from our license agreement with Zai (Shanghai) Co., Ltd., or the Zai Collaboration Agreement, and such royalties, or the Royalty Interest, and (ii) a revenue interest based on our U.S. sales of NUZYRA in an initial amount of two and a half percent (2.5%), which amount may adjust under certain circumstances up to five percent (5%), of our net U.S. sales, subject to an annual cap of $10.0 million, which may adjust under certain circumstances to $12.0 million, or the Revenue Interest. Under the R-Bridge Loan Agreement, the outstanding principal balance will bear interest at an annual rate of 7.0%, increasing to an annual rate of 10% during the continuance of any event of default.

Prior to the eighth (8th) anniversary of the Closing Date, the R-Bridge Loan Agreement will automatically terminate once the Subsidiary has paid to the R-Bridge Lender, in the form of regularly scheduled payments or as a voluntary prepayment, a capped amount of $114 million, less principal, interest and certain fee payments through the date of such prepayment, or the Capped Amount. After the eighth (8th) anniversary of the Closing Date, the Revenue Interest can be terminated but the Royalty Interest payments shall continue until maturity of the R-Bridge Loan Agreement on December 31, 2032, at which time, the outstanding principal amount of the loan, if any, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash by the Subsidiary.

The R-Bridge Loan Agreement contains certain customary affirmative covenants, including those relating to: use of proceeds; maintenance of books and records; financial reporting and notification; compliance with laws; and protection of Company intellectual property. The R-Bridge Loan Agreement also contains certain customary negative covenants, barring the Subsidiary from: certain fundamental transactions; issuing dividends and distributions; incurring additional indebtedness outside of the ordinary course of business; engaging in any business activity other than related to the Zai Collaboration Agreement; and permitting any additional liens on the collateral provided to the R-Bridge Lender under the R-Bridge Loan Agreement. As of December 31, 2021, we were in compliance with all covenants under the R-Bridge Loan Agreement.

In April 2018, we issued $165.0 million aggregate principal amount of 4.75% Convertible Senior Subordinated Notes due 2024, or the Notes. The Notes bear cash interest at the annual rate of 4.75%, payable on November 1 and May 1 of each year, beginning on November 1, 2018, and mature on May 1, 2024 unless earlier repurchased, redeemed or converted.

In addition, in February 2019, we, through our wholly-owned subsidiary Paratek Royalty Corporation, or Royalty, entered into a royalty-backed loan agreement, or the Royalty-Backed Loan Agreement, with Healthcare Royalty Partners III, L.P., or HCRP. Pursuant to the terms of the Royalty-Backed Loan Agreement, Royalty borrowed a $32.5 million loan, which was secured by, and is being repaid based upon, royalties from the Almirall Collaboration Agreement. The Royalty-Backed Loan Agreement matures on May 1, 2029, at which time, if not earlier repaid in full, the outstanding principal amount of the loan, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash by Royalty.

The Royalty-Backed Loan Agreement contains customary defined events of default, upon which any outstanding principal and unpaid interest shall be immediately due and payable. These include: failure to pay any principal or interest when due; any uncured breach of a representation, warranty or covenant; any uncured failure to perform or observe covenants; any uncured cross default under a material contract; any uncured breach of our representations, warranties or covenants under its Contribution and Servicing Agreement with the Subsidiary; any termination of the Almirall Collaboration Agreement; and certain bankruptcy or insolvency events.

To the extent additional debt is added to our current debt levels, the risks described above could increase.

We may not have cash available to us in an amount sufficient to enable us to make interest or principal payments on our indebtedness when due.

Failure to satisfy our current and future debt obligations under the R-Bridge Loan Agreement, Royalty-Backed Loan Agreement, and the Notes could result in an event of default and, as a result, the respective lenders could accelerate all of the amounts due. In the event of any such acceleration of amounts due as a result of an event of default, we may not have sufficient funds or may be unable to arrange for additional financing to repay our indebtedness. In addition, the R-Bridge Lender and Royalty-Backed Lender could seek to enforce its respective security interests in the assets.

We are subject to certain restrictive covenants which, if breached, could have a material adverse effect on our business and prospects.

The R-Bridge Loan Agreement and Royalty-Backed Loan Agreement each impose operating and other restrictions on us. Such restrictions will affect, and in many respects limit or in some respects may prohibit, our ability to, among other things:

- dispose of substantially all of our assets or certain assets related to NUZYRA or Seysara, as;
- engage in mergers or consolidations;
- incur additional indebtedness secured by certain assets related to NUZYRA; and
- create liens on certain assets related to NUZYRA.

Risks Related to Our Intellectual Property

If we are unable to obtain and enforce patent protection for products, our product candidates and related technology, our business could be materially harmed.

Issued patents may be challenged, invalidated or circumvented. In addition, court decisions may introduce uncertainty in the enforceability or scope of patents owned by pharmaceutical companies. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not allow us to protect our inventions with patents to the same extent as do the laws of the U.S. Because patent applications in the U.S. and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries or may not be the first to make the inventions claimed in issued patents or pending patent applications, or may not be the first to file for protection of the inventions set forth in our patents, or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions. If such inventions or related inventions are successfully patented by others, we may be required to obtain licenses under third-party patents to market our product candidates, as

described in greater detail below. Therefore, enforceability and scope of our patents in the U.S. and in foreign countries cannot be predicted with certainty, and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection from our pending patent applications, from those we may file in the future, or from those we may license from third parties. Moreover, even if we are able to obtain patent protection, such patent protection may be of insufficient scope to achieve our business objectives or may not survive legal or administrative challenges by competitors.

Our strategy depends on our ability to identify and seek and obtain patent protection for our discoveries. This process is expensive and time consuming, and we may not be able to file and prosecute successfully all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. Despite our efforts to protect our proprietary rights, unauthorized parties may be able to obtain and use information that we regard as proprietary. The issuance of a patent does not ensure that it is valid or enforceable, so even if we obtain patents, they may not be valid or enforceable against third parties. In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own patented product and practicing our own patented technology. Third parties may also seek to market generic versions of any approved products by submitting ANDAs to the FDA in which they claim that patents owned or licensed by us are invalid, unenforceable and/or not infringed. Alternatively, third parties may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find our patents invalid and/or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

The patent position of pharmaceutical or biotechnology companies, including ours, is generally uncertain and involves complex legal and factual considerations. The standards that the U.S. Patent and Trademark Office, or USPTO, and its foreign counterparts use to grant patents are not always applied predictably or uniformly and can change. There is also no uniform, worldwide policy regarding the subject matter and scope of claims granted or allowable in pharmaceutical or biotechnology patents. The laws of some foreign countries do not protect proprietary information to the same extent as do the laws of the U.S., and many companies have encountered significant problems and costs in protecting their proprietary information in these foreign countries. Outside of the U.S., patent protection must be sought in individual jurisdictions, further adding to the cost and uncertainty of obtaining adequate patent protection outside of the U.S. Accordingly, additional patents protecting our technology may not issue in the U.S. or in foreign jurisdictions, and any patents that do issue may not have claims of adequate scope to provide competitive advantage. Moreover, third parties may be able to successfully obtain claims and such claims may be broad. The allowance of broader claims may increase the incidence and cost of patent interference proceedings, opposition proceedings and/or reexamination proceedings, the risk of infringement litigation and the vulnerability of the claims to challenge. On the other hand, the allowance of narrower claims does not eliminate the potential for adversarial proceedings and may fail to provide a competitive advantage. Our issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage. Moreover, even after they have issued, our patents and any patent for which we have licensed or may license rights may be challenged, narrowed, invalidated or circumvented. If our patents are invalidated or otherwise limited or expire prior to the commercialization of our product candidates, other companies may be better able to develop products that compete with our products which could adversely affect our competitive business position, business prospects and financial condition. The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we or our partners may initiate litigation or other proceedings against third parties to enforce our patent rights;
- third parties may initiate litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us;
- third parties may initiate opposition or reexamination proceedings challenging the validity or scope of our patent rights, requiring us or our partners to participate in such proceedings to defend the validity and scope of our patents;
- there may be a challenge or dispute regarding inventorship or ownership of patents currently identified as being owned by or licensed to us;

- the USPTO may initiate an interference between patents or patent applications owned by or licensed to us and those of our competitors, requiring us or our collaborators to participate in an interference proceeding to determine the priority of invention, which could jeopardize our patent rights; or
- third parties may submit ANDAs to the FDA seeking approval to market generic versions of our approved or future approved products prior to expiration of relevant patents owned by or licensed to us, requiring us to defend our patents, including by filing lawsuits alleging patent infringement.

These lawsuits and proceedings would be costly and could adversely affect our results of operations and divert the attention of our managerial and scientific personnel. A court or administrative body may decide that our patents are invalid or not infringed by a third party's product or activity or that the scope of certain issued claims must be further limited. An adverse outcome in a litigation or proceeding involving our own patents could limit our ability to assert our patents against these or other competitors and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition. An adverse outcome in a dispute involving inventorship or ownership of our patents could, for example, subject us to additional royalty obligations and expand the number of product candidates that are subject to the royalty and other obligations of our license agreement with Tufts.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop a platform that is similar to, or better than, ours in a way that is not covered by the claims of our patents;
- others may be able to make compounds that are similar to our products or product candidates but that are not covered by the claims of our patents;
- we might not have been the first to make the inventions covered by our pending patent applications;
- we might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- we may be unable to effectively protect our trade secrets;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found invalid or unenforceable;
- we may not develop additional proprietary technologies that are patentable; or
- the patents of others may have an adverse effect on our business.

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Our and our partners' success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to manufacture, use, sell, offer for sale or import our products or impair our competitive position. Patent applications that we believe we do not infringe, but that we may ultimately be found to infringe, could be issued to third parties. In addition, to the extent that a third party develops new technology that covers our products or product candidates, we and our partners may be required to obtain licenses to that technology, which licenses may not be available or may not be available on commercially reasonable terms. Third parties may have or obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates using our technology. Our failure to obtain a license to any technology that we require may materially harm our business, financial condition and results of operations. Moreover, our or our partners' failure to maintain a license to any technology that we require may also materially harm our business, financial condition and results of operations. Furthermore, we would be exposed to a threat of litigation.

In the pharmaceutical industry, significant litigation and other proceedings regarding patents, patent applications, trademarks and other intellectual property rights have become commonplace. The types of situations in which we may become a party to such litigation or proceedings include:

- we or our partners may initiate litigation or other proceedings against third parties seeking to invalidate the patents held by those third parties or to obtain a judgment that our products or processes do not infringe those third parties' patents;
- if our competitors file patent applications that claim technology also claimed by us, we or our collaborators may be required to participate in interference or opposition proceedings to determine the priority of invention, which could jeopardize our patent rights and potentially provide a third party with a dominant patent position;
- if third parties initiate litigation claiming that our processes, products or use of products infringe their patent or other intellectual property rights, we and our collaborators will need to defend against such proceedings;
- if third parties initiate litigation claiming that our brand names infringe their trademarks, we and our collaborators will need to defend against such proceedings; and
- if a license to necessary technology is terminated, the licensor may initiate litigation claiming that our processes or products infringe or misappropriate their patent or other intellectual property rights and/or that we breached our obligations under the license agreement, and we and our collaborators would need to defend against such proceedings.

These lawsuits would be costly and could affect our results of operations and divert the attention of our managerial and scientific personnel. There is a risk that a court would decide that we or our partners are infringing the third party's patents and would order us or our collaborators to stop the activities covered by the patents. In that event, we or our partners may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product or product candidate. In addition, there is a risk that a court will order us or our partners to pay the other party damages. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties and require us to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. Any of these outcomes could have a material adverse effect on our business.

The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid, and we may not be able to do this. Proving invalidity is difficult. For example, in the U.S., proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and divert management's time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, do not develop or obtain non-infringing

technology, fail to defend an infringement action successfully or has infringed patents declared invalid, we may incur substantial monetary damages, encounter significant delays in bringing our product candidates to market and be precluded from manufacturing or selling our products.

The cost of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time and financial resources. There are inherent risks and uncertainties associated with any litigation, including those involving intellectual property, which litigation and risks can be costly in of itself or create an environment making it challenging to raise additional capital.

If we or our partners fail to comply with our obligations under our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are currently party to an intellectual property license agreement with Tufts. The license agreement imposes, and we expect that future license agreements may impose, various diligence, milestone payment, royalty, insurance and other obligations on us. For example, we are required to use our best efforts to effect introduction of licensed products under the agreement into the U.S. commercial market. If we fail to comply with our obligations under the license, Tufts may have the right to terminate the license agreement, in which event we might not be able to market any product that is covered by the agreement, such as NUZYRA. Termination of the license agreement or reduction or elimination of our licensed rights may result in us having to negotiate a new or reinstated license with less favorable terms. If Tufts were to terminate its license agreement with us for any reason, our business could be materially harmed. In the event that we are unable to maintain the Tufts license, we may lose the ability to exclude third parties from offering substantially identical products for sale and may even risk the threat of a patent infringement lawsuit from our former licensor based on our continued use of its intellectual property. Either of these events could adversely affect our competitive business position and harm our business.

Under our license agreement with Tufts, we are responsible for prosecution and maintenance of the licensed patents and patent applications, including payment of necessary government fees. In the event that any of the licensed patents or patent applications unintentionally lapse or are otherwise materially diminished in value, our relationship with Tufts could be harmed. This could result in termination of the license, loss of the rights to control prosecution of the licensed patents and patent applications and/or liability to Tufts for any loss.

If we or our partners are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of trade secrets and proprietary information, our policy is to enter into confidentiality agreements with our employees, consultants, collaborators and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees and our personnel policies also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants, or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual. Such assignment or license may not be available on commercially reasonable terms or at all.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. In addition, others may independently discover trade secrets and proprietary information, and the existence of our own trade secrets affords no protection against such independent discovery.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of the patents and/or applications. We have systems in place to remind us to pay these fees, and we rely on our outside counsel to pay these fees when due. Additionally, the USPTO and various foreign patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If such an event were to occur, it could have a material adverse effect on our business. In addition, we are responsible for the payment of patent fees for patent rights that we have licensed from other parties. If any licensor of these patents does not itself elect to make these payments, and we fail to do so, we may be liable to the licensor for any costs and consequences of any resulting loss of patent rights.

If we do not obtain protection under the Hatch-Waxman Amendments and similar foreign legislation by extending the term of patents covering each of our product candidates, our business may be materially harmed.

Based on the FDA marketing approval of our products, one or more of our U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process, with the condition that this five-year extension does not extend the patent for more than fourteen years from the approval date. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than our request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product may not extend beyond the current patent expiration dates and our competitors may obtain approval to market competing products sooner. As a result, our revenue could be reduced, possibly materially.

Our contract with BARDA may affect our intellectual property rights.

Our contract with BARDA includes provisions that implement the Bayh-Dole Act of 1980 and grant the U.S. government certain rights in inventions that may be conceived or first actually reduced to practice under the contract. In particular, the U.S. government is granted a nonexclusive, nontransferable, irrevocable, paid-up, worldwide license to practice such inventions or have such inventions practiced for or on the U.S. government's behalf. The U.S. government also has "march-in" rights with respect to such inventions, which allow the U.S. government to directly or require us, our assignee, or our exclusive licensee to license such inventions to a third party on an exclusive, partially exclusive, or non-exclusive basis if the U.S. government determines that such an action is necessary (i) because adequate steps have not been taken to achieve practical application of such an invention, (ii) to alleviate health or safety needs, (iii) to meet requirements for public use specified by federal regulations, or (iv) due to a violation of an agreement to manufacture substantially in the U.S. a product embodying such an invention or produced through the use of such an invention. Unless waived by the U.S. government, we are required to obtain such an agreement to manufacture substantially in the U.S. from another party to which we exclusively license such an invention. The U.S. government also has the right to take title to such inventions if we fail to disclose, elect title to, or pursue or maintain patent protection for such inventions within specified periods of time.

Risks Related to Our Common Stock

The trading price of our common stock is volatile.

The trading price of our common stock could be subject to significant fluctuations. Market prices for securities of pharmaceutical, biotechnology and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the trading price of our common stock to fluctuate include:

- the commercial performance of NUZYRA and SEYSARA;
- our ability to maintain and expand regulatory approval for NUZYRA;
- issues in manufacturing NUZYRA;
- the results of our current and any future clinical trials of NUZYRA or any future product candidates;
- the entry into, or termination of, key agreements, including key commercial partner agreements;
- the initiation of material developments in, or conclusion of litigation to enforce or defend any of our intellectual property rights or defend against the intellectual property rights of others;
- announcements by commercial partners or competitors of new commercial products, clinical progress or the lack thereof, significant contracts, commercial relationships or capital commitments;
- adverse publicity relating to the antibiotics market, including with respect to other products and potential products in such market;
- the introduction of technological innovations or new therapies that compete with our products;
- the loss of key employees;
- changes in estimates or recommendations by securities analysts, if any, who cover our common stock;
- general and industry-specific economic conditions that may affect our research and development expenditures;
- changes in the structure of healthcare payment systems; and
- period-to-period fluctuations in our financial results, including, in particular, our use of cash in operations.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. For example, the trading prices for our common stock and that of other biopharmaceutical companies have been highly volatile due to both the COVID-19 pandemic, especially as a result of investor concerns and uncertainty related to the impact of the outbreak on the economies of countries worldwide, and the Russian invasion of Ukraine in February 2022. Such broad market fluctuations, as well as general economic, political and market conditions, may adversely affect the trading price of our common stock.

In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm our profitability and reputation.

We do not anticipate that we will pay any cash dividends in the foreseeable future.

We expect that we will retain our future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain, if any, for the foreseeable future.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.

Provisions in our certificate of incorporation and bylaws may delay or prevent an acquisition or a change in management. These provisions include a classified board of directors, a prohibition on actions by written consent of our stockholders and the ability of the board of directors to issue preferred stock without stockholder approval. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, or DGCL, which prohibits stockholders owning in excess of 15% of our voting stock from merging or combining with us. Although we believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove then current management by making it more difficult for stockholders to replace members of the board of directors, which is responsible for appointing the members of management.

Our amended and restated by-laws designate specific courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders; (iii) any action asserting a claim against us or any of our directors or officers or other employees arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; or (iv) any action asserting a claim against us or any of our directors or officers or other employees governed by the internal affairs doctrine. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to this provision of our amended and restated bylaws. However, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. In addition, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. As a result, there is uncertainty as to whether a court would enforce such a provision, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Future sales of shares by existing stockholders could cause the trading price of our common stock to decline.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline. As of December 31, 2021, approximately 2.3 million shares of common stock are held by our directors, executive officers and other affiliates and are subject

to volume limitations under Rule 144 under the Securities Act. In addition, approximately 3.8 million shares of common stock that are subject to outstanding options and restricted stock units as of December 31, 2021 will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements and Rule 144 under the Securities Act. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Future sales of our common stock or equity-linked securities in the public market could lower the market price for our common stock.

In the future, we may sell additional shares of our common stock or equity-linked securities to raise capital. In addition, a substantial number of shares of our common stock are reserved for issuance upon the exercise of stock options and upon conversion of the Notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of substantial amounts of common stock or equity-linked securities, or the perception that such issuances and sales may occur, could adversely affect the market price of our common stock and impair our ability to raise capital through the sale of additional equity or equity-linked securities.

Because our merger resulted in an ownership change under Section 382 of the Internal Revenue Code for Transcept, Transcept's pre-merger net operating loss carryforwards and certain other tax attributes are subject to limitations. The net operating loss carryforwards and other tax attributes of the former Paratek entity and us may also be subject to limitations as a result of ownership changes.

If a corporation undergoes an "ownership change" within the meaning of Section 382 of the Internal Revenue Code of 1986, as amended, or Section 382, the corporation's net operating loss carryforwards and certain other tax attributes arising from before the ownership change are subject to limitations on use after the ownership change. In general, an ownership change occurs if there is a cumulative change in the corporation's equity ownership by certain stockholders that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. The Merger resulted in an ownership change for Transcept and, accordingly, Transcept's net operating loss carryforwards and certain other tax attributes are subject to limitations on their use after the Merger. Old Paratek's net operating loss carryforwards may also be subject to limitation as a result of prior shifts in equity ownership and/or the Merger. Additional ownership changes in the future could result in additional limitations on Transcept's, Old Paratek's and our net operating loss carryforwards. Consequently, even if we achieve profitability, we may not be able to utilize a material portion of Transcept's, Old Paratek's or our net operating loss carryforwards and other tax attributes, which could have a material adverse effect on cash flow and results of operations.

If securities or industry analysts do not publish research or reports or publish inaccurate or unfavorable research about us, the trading price and trading volume of our common stock could decline.

The trading market for our common stock is influenced by the research and reports that securities or industry analysts publish about us, our business and our common stock. As of December 31, 2021, we had research coverage by three securities analysts. If the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research regarding us or our business model, technology or stock performance, the trading price of our common stock would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause the trading price or trading volume of our common stock to decline. Moreover, the unpredictability of our financial results likely reduces the certainty, and therefore reliability, of the forecasts by securities or industry analysts of our future financial results, adding to the potential volatility of the trading price of our common stock.

Maintaining and improving our financial controls and the requirements of being a public company may strain our resources, divert management's attention and affect our ability to attract and retain qualified board members.

The trading market for our common stock is influenced by the research and reports that securities or industry analysts publish. As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and The Nasdaq Global Market rules. The requirements of these rules and regulations have increased and will continue to significantly increase our legal and financial compliance costs, including costs associated with the hiring of additional personnel, making some activities more difficult, time-consuming or costly, and may also place undue strain on our personnel, systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and financial condition.

The Sarbanes-Oxley Act requires, among other things, that we maintain disclosure controls and procedures and internal control over financial reporting. Ensuring that we have adequate internal financial and accounting controls and procedures in place, as well as maintaining these controls and procedures, is a costly and time-consuming effort that needs to be re-evaluated frequently. Section 404 of the Sarbanes-Oxley Act, or Section 404, requires that we annually evaluate our internal control over financial reporting to enable management to report on the effectiveness of those controls. In connection with the Section 404 requirements, we test our internal controls and could, as part of that documentation and testing, identify material weaknesses, significant deficiencies or other areas for further attention or improvement.

Implementing any appropriate changes to our internal controls may require specific compliance training for our directors, officers and employees, require the hiring of additional finance, accounting and other personnel, entail substantial costs to modify our existing accounting systems, and take a significant period of time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and could materially impair our ability to operate our business. Moreover, adequate internal controls are necessary for us to produce reliable financial reports and are important to help prevent fraud. As a result, our failure to satisfy the requirements of Section 404 on a timely basis could result in the loss of investor confidence in the reliability of our financial statements, which in turn could cause the market value of our common stock to decline.

Various rules and regulations applicable to public companies make it more difficult and more expensive for us to maintain directors' and officers' liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to maintain coverage. If we are unable to maintain adequate directors' and officers' liability insurance, our ability to recruit and retain qualified officers and directors, especially those directors who may be deemed independent for purposes of The Nasdaq Global Market rules, will be significantly curtailed.

General Risk Factors

We may be subject to significant fines if we fail to comply with data privacy and securities laws.

We are or may be subject to privacy and security laws in the various jurisdictions in which we operate, obtain or store personally identifiable information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues with the potential to affect our business.

Within the U.S., our operations may be affected by the Health Insurance Portability and Accountability Act of 1996 as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, collectively, HIPAA, which impose obligations on certain "covered entities," such as healthcare providers, health plans and healthcare clearinghouses, and certain of their "business associate" contractors with respect to safeguarding the privacy, security and transmission of individually identifiable health information. Although we believe that we currently are neither a "covered entity" nor a "business associate" under the legislation, a business associate relationship may be imputed from facts and circumstances even in the absence of an actual business associate agreement. In addition, HIPAA may affect our interactions with customers who are covered entities or their business associates because HIPAA affects the ability of these entities to disclose patient health information to us. Various states also have laws that regulate the privacy and security of personal information and so may affect our business operations. For example, we are subject to the California Consumer Privacy Act, or CCPA, that became effective on January 1, 2020. The CCPA gives California consumers, defined to include all California residents, certain rights, including the right to ask companies to disclose the types of personal information collected, specific pieces of information collected by a company, the categories of sources from which such information was collected, the business purpose for collecting or selling the consumer's personal information, and the categories of third parties with whom a company shares personal information. The CCPA also imposes several obligations on companies to provide notice to California consumers regarding a company's data processing activities. Additionally, the CCPA gives California consumers the right to ask companies to delete a consumer's personal information and it places limitations on a company's ability to sell personal information, including providing consumers a right to opt out of sales of their personal information. These protections will be expanded by the California Privacy Rights Act (CPRA), which was approved by California voters in November 2020 and will be operational in most key respects

on January 1, 2023. Colorado and Virginia have also passed comprehensive privacy laws that may impact our operations, and there are similar legislative proposals being advanced in other US states, as well as in Congress.

Outside the U.S., other data privacy and security regulations may apply. For example, the processing of personal data in the European Economic Area, or the EEA, is subject to the General Data Protection Regulation, or the GDPR, which took effect in May 2018, and is also applicable in the U.K. as it forms part of the law of England and Wales, Scotland and Northern Ireland by virtue of section 3 of the European Union (Withdrawal) Act 2018 and as amended by the Data Protection, Privacy and Electronic Communications (Amendments etc.) (EU Exit) Regulations 2019 (SI 2019/419) ("UK GDPR") which went into effect in January 2021. The GDPR increases obligations with respect to clinical trials conducted in the EEA and the U.K., such as in relation to the provision of fair processing notices, exercising data subject rights and reporting certain data breaches to regulators and affected individuals, as well as how we document our relationships with third parties that process GDPR-covered personal data on our behalf. The GDPR also increases the scrutiny applied to transfers of personal data from the EEA, including from clinical trial sites in the EEA, to countries that are considered by the European Commission or the U.K. Secretary of State to lack an adequate level of data protection, such as the U.S. Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA and the U.K. to the United States, and other jurisdictions. Most recently, in July 2020, the Court of Justice of the E.U. ("CJEU") limited how organizations could lawfully transfer personal data from the EEA to the United States, by invalidating the Privacy Shield and placing limitations on the use of the European Commission's approved Standard Contractual Clauses ("SCCs"). Compliance with data privacy and security regulation can require allocation of resources as well as changes in operations and non-compliance can result in substantial fines. In addition, the GDPR and the CCPA impose substantial fines and other regulatory penalties for breaches of data protection requirements and they confer a private right of action on data subjects, in the case of the GDPR, and consumers, in the case of the CCPA, and their representatives for breaches of certain data protection requirements.

Our business and operations would suffer in the event of computer system failures or cyber attacks.

Despite the implementation of security measures, our internal computer systems, and those of our CROs, our partners and other third parties on which we rely, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, fire, terrorism, war and telecommunication and electrical failures. In addition, our systems safeguard important confidential personal data regarding our subjects. If a computer failure were to occur and cause interruptions in our operations, such as in the event of a ransomware attack, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed, ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further commercialization of NUZYRA and development of any future product candidates could be delayed.

Cyber attacks are growing in sophistication and come from a variety of sources, including criminal hackers, hacktivists, state-sponsored intrusions, industrial espionage, and insider threats. While we invest in our systems and technology and in the protection of its products and data to reduce the risk of an attack or other significant disruption, there can be no assurance that these measures and efforts will prevent future attacks or other significant disruptions to any of the systems on which we rely. Similarly, there can be no assurance that third party information technology providers with whom we contract will not suffer a significant attack or disruption that impacts customers, such as supply chain attacks. A successful attack could result in significant adverse consequences, including regulatory inquiries or litigation, increased costs and expenses including costs related to insurance and remediation of any security vulnerabilities, reputational damage, lost revenue, and fines or penalties.

Our and our partners' business may become subject to economic, political, regulatory, and other risks associated with international operations.

Our business is subject to risks associated with conducting business internationally, in part due to a number of our suppliers and collaborative and clinical trial relationships being located outside of the U.S. Accordingly, our future results could be harmed by a variety of factors, including:

- economic weakness, including inflation or political instability, in particular foreign economies and markets;
- differing regulatory requirements for drug approvals, as well as product pricing and reimbursement, in foreign countries;

- potentially reduced protection for intellectual property rights;
- difficulties in compliance with non-U.S. laws and regulations;
- changes in non-U.S. regulations and customs, tariffs and trade barriers;
- changes in non-U.S. currency exchange rates and currency controls;
- changes in a specific country's or region's political or economic environment;
- trade protection measures, import or export licensing requirements or other restrictive actions by U.S. or non-U.S. governments;
- negative consequences from changes in tax laws;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- workforce uncertainty in countries where labor unrest is more common than in the U.S;
- difficulties associated with staffing and managing foreign operations, including differing labor relations;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war (such as the current armed conflict in Ukraine) and terrorism, or natural disasters, including earthquakes, typhoons, floods and fires and pandemics such as the COVID-19 pandemic.

These risks may materially adversely affect our ability to attain or sustain profitable operations.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development involves the use of potentially hazardous materials and chemicals. Our operations may have produced hazardous waste products. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by local, state and federal laws and regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. We are also subject to numerous environmental, health and workplace safety laws and regulations and fire and building codes, including those governing laboratory procedures, exposure to blood-borne pathogens, use and storage of flammable agents and the handling of biohazardous materials. Although we have always maintained workers' compensation insurance as prescribed by the Commonwealths of Massachusetts and Pennsylvania to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us. Additional federal, state, and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

We enter into various contracts in the normal course of our business in which we indemnify the other party to the contract. In the event we have to perform under these indemnification provisions, it could have a material adverse effect on our business, financial condition, and results of operations.

In the normal course of business, we periodically enter into academic, commercial, service, collaboration, licensing, consulting and other agreements that contain indemnification provisions. With respect to our academic and other research agreements, we typically indemnify the institution and related parties from losses arising from claims relating to the products, processes or services made, used, sold or performed pursuant to the agreements for which we have secured licenses, and from claims arising from our or our sub licensees' exercise of rights under the agreement. With respect to our commercial agreements, we indemnify our vendors from any third-party product liability claims that could result from the production, use or consumption of the product, as well as for alleged infringements of any patent or other intellectual property right by a third party. With respect to consultants, we indemnify them from claims arising from the good faith performance of their services.

Should our obligation under an indemnification provision exceed applicable insurance coverage or if we were denied insurance coverage, our business, financial condition, and results of operations could be adversely affected. Similarly, if we are relying on a collaborator to indemnify us and the collaborator is denied insurance coverage or

does not have assets available to indemnify us, our business, financial condition, and results of operations could be adversely affected.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of former employers.

Certain of our former employees were previously employed at universities or other biotechnology or pharmaceutical companies, including competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we ourselves inadvertently or otherwise used or disclosed trade secrets or other proprietary information. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper or prevent us or a collaboration partner's ability to develop or commercialize certain potential products, which could severely harm the business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our headquarters are located in Boston, Massachusetts, where we occupy approximately 4,000 square feet of office space under a lease that expires in August 2023. We also rent approximately 19,000 square feet of office space in King of Prussia, Pennsylvania on a monthly basis under a lease that expires in 2024.

Item 3. Legal Proceedings

From time to time the Company is involved in legal proceedings arising in the ordinary course of business. The Company believes there is no litigation pending that could have, individually, or in the aggregate, a material adverse effect on its results of operations or financial condition.

Item 4. Mine Safety Disclosures

None.

PART II

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

Market Information

Our common stock is traded on The Nasdaq Global Market under the symbol "PRTK." As of February 28, 2022, there were 78 holders of record of our common stock.

Recent Sales of Unregistered Securities

During the year ended December 31, 2021, there were no unregistered sales of our securities.

Securities authorized for issuance under equity compensation plans

The following table provides certain information with respect to all of our equity compensation plans in effect as of December 31, 2021:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights		Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights		Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans(1)	
Equity compensation plans approved by stockholders (1)	6,696,444	(2)	$ 2.83	(3)	776,305	(4)
Equity compensation plans not approved by stockholders	707,343	(5)	7.86	(6)	626,098	(7)
Total	7,403,787		$ 3.31		1,402,403	

(1) The number of authorized shares under the 2015 Equity Incentive Plan, or the 2015 Plan, will automatically increase on January 1 of each year, for the period commencing on (and including) January 1, 2016 and ending on (and including) January 1, 2025, in an amount equal to 5% of the total number of shares of common stock outstanding on December 31st of the preceding calendar year. Notwithstanding the foregoing, the Board of Directors of the Company may act prior to January 1st of a given year to provide that there will be no January 1st increase in the Share Reserve for such year or that the increase in the Share Reserve for such year will be a lesser number of shares of common stock than would otherwise occur.

(2) Includes 1,521,762 shares relating to outstanding options and 4,741,713 shares relating to restricted stock units.

(3) Represents the weighted-average exercise price of outstanding options, warrants and rights.

(4) Includes 459,870 shares available under the 2009 and 2018 Employee Stock Purchase Plans. All shares cancelled or forfeited during the years ended December 31, 2021 and 2020 under the 2006 and 2014 Plans became available for grant under the 2015 Plan. The 2006 Plan terminated on July 2, 2020.

(5) Includes 528,993 shares relating to outstanding options and 178,350 shares relating to restricted stock units under the 2015 Inducement Plan and the 2017 Inducement Plan.

(6) Represents the weighted-average exercise price of outstanding options and rights.

(7) Includes 341,500 shares that remain available for grant under the 2015 Inducement Plan that the Company does not currently anticipate issuing.

Issuer Purchases of Equity Securities

There were no repurchases of our common stock during 2021.

Item 6. Reserved

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains certain statements that are not strictly historical and are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995 and involve a high degree of risk and uncertainty. Actual results may differ materially from those projected in the forward-looking statements due to other risks and uncertainties. All forward-looking statements included in this section are based on information available to us as of the date hereof, and we assume no obligation to update any such forward-looking statement, except as required by law.

Company Overview

We are a commercial-stage biopharmaceutical company focused on the development and commercialization of novel life-saving therapies for life-threatening diseases or other public health threats for civilian, government and military use. Our United States, or U.S., Food and Drug Administration, or FDA, approved commercial product, NUZYRA® (omadacycline) is a once-daily oral and intravenous antibiotic for the treatment of adult patients with community-acquired bacterial pneumonia, or CABP, and acute skin and skin structure infections, or ABSSSI, caused by susceptible pathogens. We retain worldwide commercial rights to omadacycline, with the exception in the People's Republic of China, Hong Kong, Macau and Taiwan, where we have entered into a collaboration agreement with Zai Lab (Shanghai) Co., Ltd., or Zai. The National Medical Products Administration, or NMPA, of China approved NUZYRA for the treatment of CABP and ABSSSI in December 2021.

SEYSARA® (sarecycline) is an FDA-approved product with respect to which we have exclusively licensed in the U.S. and the People's Republic of China, Hong Kong and Macau, or the greater China region, certain rights to Almirall, LLC, or Almirall. SEYSARA is currently being marketed by Almirall in the U.S. as a once-daily oral therapy for the treatment of moderate to severe acne vulgaris. With respect to our technology as it relates to sarecycline, we retain development and commercialization rights in all countries other than the U.S. and the greater China region, and in February 2020, we exclusively licensed from Almirall certain technology owned or in-licensed by Almirall or its affiliates that is necessary or useful to develop or commercialize sarecycline outside of the U.S. Almirall plans to develop sarecycline for acne in China, with a submission to the China National Medical Products Administration, or NMPA, according to Almirall, expected in 2023.

We believe that NUZYRA has the potential to become the primary choice of physicians for use as a broad-spectrum monotherapy antibiotic for ABSSSI, CABP and other serious community-acquired bacterial infections where resistance is of concern. NUZYRA is used in the emergency room, hospital, and community care settings. We have designed NUZYRA to provide potential advantages over existing antibiotics, including activity against resistant bacteria, broad-spectrum antibacterial activity, oral and IV formulations with once-daily dosing, no dosing adjustments for patients on concomitant medications and a generally safe and well-tolerated profile. NUZYRA also has the potential to be used as an oral and IV antibiotic for the treatment of NTM and pulmonary anthrax, where it could be suitable for post-exposure prophylaxis use as a priority medical countermeasure.

Financial Operations Overview

Product Revenue, Net

Product revenue, net, is recognized when earned on sales of NUZYRA, which was approved by the FDA in October 2018 and launched in the U.S. in February 2019. NUZYRA is sold principally to a limited number of specialty distributors and specialty pharmacy providers in the U.S. These customers subsequently resell our product to health care providers or dispense the product to patients. In addition to distribution agreements with customers, we enter into arrangements with health care providers and payers that provide for government mandated and/or privately negotiated rebates, chargebacks and discounts with respect to the purchase of our product. Product revenue is recognized net of reserves for all variable consideration, including rebates, chargebacks, discounts and product returns.

Under the terms of the BARDA contract, BARDA can procure up to 10,000 anthrax treatment courses of NUZYRA. As of December 31, 2021, the initial 2,500 treatment courses of NUZYRA were purchased by BARDA. The product procurement performance obligations generate revenue at a point in time, which will be upon transfer of control of the product. As such, the related revenue for these performance obligations is recognized at a point in time as product revenue within our consolidated statement of operations. Refer to Note 5, *Government Contract Revenue* in the accompanying notes to the consolidated financial statements included in this Annual Report on Form 10-K for further discussion of the BARDA contract and related revenue recognition.

Government Contract Service Revenue

Government contract service revenue is recognized when earned under our BARDA contract and represents the reimbursement by BARDA of costs incurred by us for work performed to develop NUZYRA for the treatment of pulmonary anthrax plus a small fixed administrative fee. Refer to Note 5, *Government Contract Revenue* in the accompanying notes to the consolidated financial statements included in this Annual Report on Form 10-K for further discussion of the BARDA contract and related revenue recognition.

Government Contract Grant Revenue

The allocated consideration of government contract grant revenue is recognized when earned under our BARDA contract and represents the reimbursement by BARDA of costs incurred by us for FDA post-marketing requirements, or PMRs, associated with the approval of NUZYRA, including CABP and pediatric studies, as well as a five-year post-marketing bacterial surveillance study. Refer to Note 5, *Government Contract Revenue* in the accompanying notes to the consolidated financial statements included in this Annual Report on Form 10-K for further discussion of the BARDA contract and related revenue recognition.

Collaboration and Royalty Revenue

Collaboration and royalty revenue are recognized when revenue earned under our collaboration and license agreements. Refer to Note 6, *License and Collaboration Agreements* in the accompanying notes to the consolidated financial statements included in this Annual Report on Form 10-K for further discussion of the collaboration agreements and the related revenue recognition.

Cost of Product Revenue

Cost of product revenue represents the cost of the product itself, labor and overhead, and any reserve for excess or obsolete inventory, as well as stability studies, inventory scrap and royalty expense. Cost of product revenue also represents royalties owed on net sales of NUZYRA.

Research and Development Expense

Research and development expenses consisted primarily of costs directly incurred by us for the development of our product candidates, which include:

- expenses incurred under agreements with clinical research organizations, or CROs, and investigative sites that conduct our clinical trials;
- the cost of acquiring and manufacturing preclinical and clinical study materials and developing manufacturing processes;
- direct employee-related expenses, including salaries, benefits, travel and stock-based compensation expense of our research and development personnel;
- allocated facilities, depreciation, and other expenses, which include rent and maintenance of facilities, insurance and other supplies; and
- costs associated with preclinical activities and regulatory compliance.

Research and development expenses also include gross reimbursable costs incurred related to research and development services performed for the treatment of pulmonary anthrax, services performed for U.S. manufacturing onshoring and security requirements, and services performed for FDA PMRs under the BARDA contract.

Research and development costs are expensed as incurred. Costs for certain development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and our clinical sites.

We cannot determine with certainty the duration and completion costs of the current or future clinical trials of our product candidates or if, when, or to what extent we will generate revenues from the commercialization and sale of any of our products or product candidates for which we or any partner obtain regulatory approval, such as NUZYRA and SEYSARA. Aside from the FDA approval of NUZYRA and SEYSARA in the U.S., we or our partners may never succeed in achieving other regulatory approvals for NUZYRA, or any of our other product candidates. The duration, costs and timing of clinical trials and development of our product candidates depend on a variety of factors, including:

- the scope, rate of progress, and expense of our ongoing, as well as any additional, clinical trials and other research and development activities;
- future clinical trial results;
- potential changes in government regulation; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that therapeutic candidate. For example, if the FDA, or another regulatory authority, were to require us to conduct clinical trials beyond those that we currently anticipate will be required for the completion of the clinical development of product candidates, or if we experience significant delays in the enrollment in any clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

We manage certain activities, such as clinical trial operations, manufacture of clinical trial material, and preclinical animal toxicology studies, through third-party contract organizations. The only costs we track by each product candidate are external costs such as services provided to us by CROs, manufacturing of preclinical and clinical drug product, and other outsourced research and development expenses. We do not assign or allocate to individual development programs internal costs such as salaries and benefits, facilities costs, lab supplies and the costs of preclinical research and studies. Our research and development expenses for omadacycline and other projects during the years ended December 31, 2021 and 2020 are as follows:

	Year Ended December 31,	
(in thousands)	**2021**	**2020**
Omadacycline	$ 17,712	$ 13,992
Other research and development costs	12,641	9,930
Total	$ 30,353	$ 23,922

Selling, General and Administrative Expense

Selling, general and administrative expenses consist principally of compensation costs associated with our contract sales force, commercial support personnel, and medical affairs professionals, as well as personnel in executive and other administrative functions. Other selling, general and administrative expenses include marketing, trade, and other commercial costs and distribution fees necessary to support the launch of NUZYRA and professional fees for legal, consulting and accounting services.

Interest Income

Interest income represents interest earned on our money market funds and marketable securities.

Interest Expense

Interest expense represents interest incurred on the R-Bridge Loan Agreement, the Notes, and the Royalty-Backed Loan Agreement (each as defined in Note 13, *Long-Term Debt* in the accompanying notes to the consolidated financial statements included in this Annual Report on Form 10-K), as well as the adjustment of our marketable securities to amortized cost.

Results of Operations

Comparison of the Years Ended December 31, 2021 and 2020

	Year Ended December 31,	
	2021	2020
Product revenue, net	$ 106,084	$ 38,753
Government contract service revenue	6,639	3,299
Government contract grant revenue	9,211	3,407
Collaboration and royalty revenue	8,228	1,465
Net revenue	130,162	46,924
Expenses:		
Cost of product revenue	21,535	8,651
Research and development	30,353	23,922
Selling, general and administrative	119,404	89,855
Total operating expenses	171,292	122,428
Loss from operations	(41,130)	(75,504)
Other income and expenses:		
Interest income	66	1,515
Interest expense	(17,408)	(20,240)
Loss on extinguishment of debt	-	(2,368)
Other gains (losses), net	(12)	56
Net loss before provision for income taxes	(58,484)	(96,541)
Provision for income taxes	600	—
Net loss	$ (59,084)	$ (96,541)

Product Revenue, Net

Net product revenue recognized on sales of NUZYRA in the U.S. was $106.1 million and $38.8 million for the years ended December 31, 2021 and December 31, 2020, respectively. The increase in net product revenue is primarily the result of the delivery and acceptance of the first procurement of NUZYRA under the BARDA contract of $37.9 million and an increase in sales volume due to higher customer demand.

Government Contract Service Revenue

Government contract service revenue earned under our BARDA contract was $6.6 million and $3.3 million during the years ended December 31, 2021 and December 31, 2020, respectively. The increase in government contract service revenue is primarily the result of increased costs incurred for the U.S. onshoring of NUZYRA manufacturing.

Government Contract Grant Revenue

Government contract grant revenue earned under our BARDA contract was $9.2 million and $3.4 million during the years ended December 31, 2021 and December 31, 2020, respectively. The increase in government contract service revenue is primarily the result of increased costs incurred to support existing FDA PMRs.

Collaboration and Royalty Revenue

Collaboration and royalty revenue were $8.2 million and $1.5 million for the years ended December 31, 2021 and December 31, 2020, respectively.

Under the terms of the Zai Collaboration Agreement, we earned a milestone payment of $6.0 million upon regulatory approval of NUZYRA in the People's Republic of China in December 2021. Royalty revenue recognized for sales of SEYSARA in the U.S. was estimated using third-party data and an approximation of discounts and allowances to calculate net product sales, to which we then applied the applicable royalty percentage specified in the Almirall Collaboration Agreement. Differences between actual and estimated royalty revenue will be adjusted in the period in which they become known, which is expected to be the following quarter.

Cost of Product Revenue

Cost of product revenue was $21.5 million for the year ended December 31, 2021, compared to $8.7 million for the year ended December 31, 2020. The $12.8 million increase is primarily the result of the delivery and acceptance of the first procurement of NUZYRA under the BARDA contract, an increase in NUZYRA product sales and an increase in royalties owed on net sales of NUZYRA. Based on our policy to expense costs associated with the manufacture of our products prior to regulatory approval, certain of the costs of NUZYRA units recognized as revenue during years ended December 31, 2021 and December 31, 2020 were expensed prior to FDA approval in October 2018, and therefore are not included in cost of product revenue during the periods. We expect cost of product revenue to increase in absolute dollars as product revenue increases.

Research and Development Expense

Research and development expenses were $30.4 million for the year ended December 31, 2021, compared to $23.9 million for the year ended December 31, 2020. The $6.5 million increase in research and development expenses was primarily due to increased costs reimbursed under the BARDA contract, which included costs for the U.S. onshoring of NUZYRA manufacturing and for FDA PMRs associated with the approval of NUZYRA, compensation expense for the first tranche of our Revenue Performance Incentive Plan recognized when the related performance condition was deemed probable during 2021, and costs incurred for the Phase 2b NTM study. Refer to Note 15, *Stock Based and Incentive Compensation*, included in this Annual Report on Form 10-K for further details on our Revenue Performance Incentive Plan. We anticipate an increase in research and development expenses in future periods as we continue development of NUZYRA for the treatment of and PEP against pulmonary anthrax, continue the work on our FDA PMRs, and continue the onshoring of our manufacturing process, the majority of which is reimbursable under the BARDA contract. We will also incur additional spend as we continue exploring pathways for NTM indications.

Selling, General and Administrative Expense

Selling, general and administrative expenses were $119.4 million for the year ended December 31, 2021, compared to $89.9 million for the year ended December 31, 2020. The $29.5 million increase is primarily the result of compensation expense for the first tranche of our Revenue Performance Incentive Plan recognized when the related performance condition was deemed probable during 2021, costs incurred for the NUZYRA community expansion, and an increase in stock-based compensation expense due to the probability and timing of the achievement of performance-based vesting milestones. Refer to Note 15, *Stock Based and Incentive Compensation*, included in this Annual Report on Form 10-K for further details on our Revenue Performance Incentive Plan.

We anticipate an increase in selling, general and administrative expenses in support of our expansion into the community setting and other commercial activities, as well as the continued costs of operating as a public company. These increases will likely include costs for travel, in-person training events and sales meetings, the hiring of additional personnel, executing marketing and promotional programs, and engaging consultants, legal and other professional fees, and other operating expenses.

Other Income and Expenses

Interest expense for the year ended December 31, 2021 represents interest incurred on the Notes of $8.8 million, R-Bridge Loan Agreement of $4.5 million, and the Royalty-Backed Loan Agreement of $4.1 million, and insignificant interest expense related to our money market funds and marketable securities. Interest income for the year ended December 31, 2021 represents interest earned on our money market funds and marketable securities of $0.1 million. Interest expense for the year ended December 31, 2020 represents interest incurred on the Notes of $8.8 million, the A&R Hercules Loan Agreement of $7.3 million, the Royalty-Backed Loan Agreement of $4.0 million and interest expense related to our money market funds and marketable securities of $0.1 million. Interest

income for the year ended December 31, 2020 represents interest earned on our money market funds and marketable securities of $1.5 million.

Loss on extinguishment of debt

On December 31, 2020, we used the proceeds from the sale of the Royalty Interest and Revenue Interest from the R-Bridge Loan Agreement (as defined below), together with cash on hand, to prepay in full all obligations outstanding under the A&R Hercules Loan Agreement. Repayment of all amounts outstanding under the A&R Hercules Loan Agreement qualified as an extinguishment of debt on the date the payment was made in satisfaction of all amounts due and we were unconditionally relieved of our obligations therein. The loss on extinguishment of debt of $2.4 million was calculated as the difference between the reacquisition price and the net carrying amount of the debt, which includes any unamortized debt discount and issuance costs.

***Provision for income* taxes**

Provision for taxes incurred in connection with $6.0 million milestone earned upon regulatory approval of NUZYRA in the People's Republic of China under our Zai Collaboration Agreement.

Liquidity and Capital Resources

On May 11, 2020, we filed a registration statement on Form S-3 with the SEC, as amended on June 19, 2020 and declared effective on July 9, 2020, to sell certain of our securities in an aggregate amount of up to $250.0 million. As of February 28, 2022, $229.5 million remains available on this shelf registration statement, with $29.5 million reserved for potential sales under our Sales Agreement (as defined below).On May 17, 2021, we entered into an At-the-Market Sales Agreement, or the Sales Agreement, with BTIG, LLC, or BTIG, under which we may offer and sell our common stock having aggregate sales proceeds of up to $50.0 million from time to time through BTIG as our sales agent. Sales of our common stock through BTIG, if any, will be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, including without limitation sales made directly on the Nasdaq Global Market or any other existing trading market for its common stock. BTIG will use commercially reasonable efforts to sell our common stock from time to time, based upon instructions (including any price, time or size limits or other customary parameters or conditions we may impose). We will pay BTIG a commission of 3% of the gross sales proceeds of any common stock sold through BTIG under the Sales Agreement. During the twelve months ended December 31, 2021, we sold 3,175,657 shares of our common stock pursuant to the Sales Agreement for $18.64 million in proceeds, after deducting an insignificant amount of commissions. As of February 28, 2022, $29.5 million remains available for sale under the Sales Agreement.

We have used and we intend to continue to use the net proceeds from the above offerings of our common stock and the Notes, as well as other current and retired long-term debt agreements, together with our existing capital resources and future NUZYRA product sales, government contract revenue and royalty revenue, to fund our ongoing company operations, including clinical studies of omadacycline, NUZYRA commercial operations, and for working capital and other general corporate purposes. Refer to Note 16, *Long-Term Debt*, included in this Annual Report on Form 10-K for further details on our loan agreements.

As of December 31, 2021, we had cash, cash equivalents and marketable securities of $95.5 million.

The following table summarizes our cash provided by and (used in) operating, investing and financing activities (in thousands):

	Year Ended December 31,	
	2021	2020
Net cash used in operating activities	$ (48,273)	$ (103,424)
Net cash provided by (used in) investing activities	4,510	92,499
Net cash provided by financing activities	18,332	11,340

Operating Activities

Net cash used in operating activities was $48.3 million for the year ended December 31, 2021, compared to $103.4 million for the year ended December 31, 2020. The change in net cash used in operating activities primarily consists of our net losses adjusted for non-cash items and changes in components of operating assets and liabilities as follows:

- For the year ended December 31, 2021, a net loss of $59.1 million was adjusted for non-cash items including stock-based compensation expense of $14.3 million, non-cash interest expense of $4.3 million, and a net increase of $8.2 million due to changes in operating assets and liabilities. The significant items in the change in operating assets and liabilities include a combined increase in accounts receivable, prepaid and other current assets, and inventory of $37.3 million, which was partially offset by a combined decrease in accounts payable and accrued expenses and other liabilities, primarily associated with obligations under the Revenue Incentive Plan, and other assets of $29.1 million.

- For the year ended December 31, 2020, a net loss of $96.5 million was adjusted for non-cash items including stock-based compensation expense of $10.2 million, non-cash interest expense of $1.5 million, loss on extinguishment of debt of $1.1 million, and a net decrease of $20.3 million due to changes in operating assets and liabilities. The significant items in the change in operating assets and liabilities include an increase in accounts receivable, other receivables, prepaid, and other current assets of $7.5 million and an increase in inventories of $11.8 million.

Investing Activities

Net cash provided by investing activities during the year ended December 31, 2021 consists of $20.0 million in proceeds from maturities of marketable securities, offset by $15.1 million of investments in marketable securities (U.S. treasury securities) and $0.4 million in purchases of fixed assets.

Net cash provided by investing activities during the year ended December 31, 2020 consists of $122.5 million in proceeds from maturities of marketable securities, offset by $29.6 million of investments in marketable securities (U.S. treasury securities) and $0.4 million in purchases of fixed assets.

Financing Activities

Net cash provided by financing activities for 2021 includes the following:

- $18.4 million in net proceeds from the sale of our common stock through the Sales Agreement;
- $0.7 million in proceeds from the Paratek Pharmaceuticals, Inc. 2018 Employee Stock Purchase Plan, or the 2018 ESPP; offset by
- $0.4 million in debt issuance costs under the R-Bridge Loan Agreement; and
- $0.3 million in principal payments on long-term debt under our R-Bridge Loan Agreement.

Net cash provided by financing activities for 2020 includes the following:

- $58.7 million in net proceeds from the issuance of the R-Bridge Loan Agreement;
- $21.9 million in net proceeds from the sale of our common stock through the Sales Agreement;
- $0.6 million in proceeds from the 2018 ESPP;
- $0.2 million in proceeds from the exercise of stock options; offset by
- $70.0 million in principal debt payments on long-term debt.

Future Funding Requirements

We began generating revenue from product sales when we launched NUZYRA in the U.S. in February 2019 and from royalties on net sales of SEYSARA in the U.S. when Almirall launched the product in January 2019. Our future funding requirements will depend on our ability to generate continued revenue from sales of NUZYRA, and our partners, Almirall and Zai's, ability to generate continued revenue from sales of SEYSARA and NUZYRA, respectively, with respect to which we are entitled to tiered royalties in the U.S. and flat royalties in the greater China region. We do not expect to generate any other revenue unless and until our omadacycline greater China region partner, Zai, commercializes NUZYRA in the greater China region, and our SEYSARA greater China region partner, Almirall, obtains regulatory approval of and commercializes its respective product in the greater China region. Zai received approval from the National Medical Products Administration (NMPA) of China of NUZYRA for the treatment of CABP and ABSSSI in December 2021.

We will require substantial additional funding to meet FDA PMRs for NUZYRA, which we expect to continue to be funded through the BARDA contract. Additional resources will also be needed to support and accelerate the commercialization of NUZYRA, fund the development of omadacycline in other indications, including NTM, and to advance the development of potential other product candidates, and such funding may not be available on favorable terms or at all. BARDA's procurements of NUZYRA will also be an important component to satisfying future funding requirements.

We expect to continue to incur significant expenditures and operating losses for the next several years as we:

- conduct additional clinical trials of omadacycline;
- seek regulatory approvals for additional indications for omadacycline, such as omadacycline for the treatment of NTM;
- continue to augment our sales, marketing and distribution infrastructure to commercialize NUZYRA and increase our manufacturing capacity and capabilities to satisfy demand;
- add personnel to support our planned commercialization efforts;
- build product inventory; and
- service and pay down our debt.

Based upon our current operating plan, we anticipate that our existing cash, cash equivalents and marketable securities of $95.5 million as of December 31, 2021, will extend our cash runway through the end of 2023 with a pathway to cash flow break even.

We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development and commercialization of our pharmaceutical products, especially given the constraints on in-person promotion of NUZYRA, reduced access to prescribers due to restrictions in access to hospitals during the COVID-19 pandemic, and the unknown extent to which we will maintain existing or enter into new collaborations with third parties to participate in the development and commercialization of our product and product candidates, we are unable to estimate with certainty the amounts of increased capital outlays and operating expenditures that we will require to fund our continuing operations, including for our clinical development programs and commercialization efforts for NUZYRA. Our future capital requirements will depend on many factors, including:

- the progress of clinical development of omadacycline in additional indications, including NTM;
- the costs and timing of commercialization activities for NUZYRA;
- product revenue received from commercial sales of NUZYRA;
- royalty revenue received from commercial sales of SEYSARA by Almirall;
- timing and amount of actual reimbursements and NUZYRA purchases under the BARDA contract;
- the ability of Zai to manufacture and commercialize NUZYRA in the Zai territory;
- the number and characteristics of other product candidates that we may pursue;

- the scope, progress, timing, cost and results of research, preclinical development and clinical trials;
- the costs, timing and outcome of seeking, obtaining, maintaining and expanding FDA and non-U.S. regulatory approvals;
- the costs associated with manufacturing and maintaining high quality sales, marketing and distribution capabilities;
- the number and characteristics of other product candidates that we may pursue;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make in connection with the licensing, filing, defense and enforcement of any patents or other intellectual property rights;
- our need and ability to hire additional management, scientific, commercial, operations and medical personnel;
- the effect of competing products that may limit market penetration of our products;
- our need to implement additional internal systems and infrastructure, including financial and reporting systems;
- resources required to develop and implement policies and processes to promote ongoing compliance with applicable healthcare laws and regulations;
- costs required to ensure that our and our partners' business arrangements with third parties comply with applicable healthcare laws and regulations;
- the economic and other terms, timing and success of our existing collaboration and licensing arrangements and any collaboration, licensing or other arrangements into which we may enter in the future, including the timing of receipt of any milestone or royalty payments under such arrangements; and
- the effect of the COVID-19 pandemic on the economy generally and on our business and operations specifically, including our sales of NUZYRA, sales by our collaboration partners with respect to which we are entitled to royalties, our third-party manufacturers and supply chain, our research and development efforts, our clinical trials and our employees.

Until we can generate a sufficient amount of product and royalty revenue to finance our cash requirements, if ever, we expect to finance our future cash needs primarily through a combination of public or private equity offerings, debt or other structured financings, strategic collaborations, grant funding and government funding. We do not have any committed external sources of funds other than the rights under the BARDA contract and the rights to contingent milestone payments and/or royalties under the Almirall Collaboration Agreement, the Almirall China License, the Tetraphase License Agreement and the Zai Collaboration Agreement, which are terminable by Almirall, Tetraphase and Zai, respectively, upon prior written notice. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect stockholders' rights. Future debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. Additionally, future equity or debt financing may be difficult to obtain on favorable terms, if at all, complicated by the increased volatility within the global financial markets as a result of the COVID-19 pandemic. If we raise additional funds through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, NUZYRA, sarecycline, future revenue streams, research programs, product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts or grant rights to develop and market NUZYRA, sarecycline or our other product candidates that we may otherwise prefer to develop and market ourselves.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with generally accepted accounting principles of the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, and expenses and the disclosure of contingent liabilities in our financial statements. On an ongoing basis, we evaluate our estimates and judgments, including those related to, among other items, accounts receivable and related reserves, inventory and related reserves, accrued sales allowances, net product revenue, government contract service revenue, government contract grant revenue, SEYSARA royalty revenue, leases, stock-based compensation arrangements, manufacturing and clinical accruals, useful lives for depreciation and valuation allowances on deferred tax assets. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2, *Summary of Significant Accounting Policies*, to the consolidated financial statements included in Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K, we believe that the following accounting policies are the most critical to assist stockholders and investors reading the consolidated financial statements in fully understanding and evaluating our financial condition and results of operations.

Revenue Recognition

Accounting Standards Codification, or ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606, applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, and financial instruments. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. We only apply the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, we assess the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied as services are rendered.

We enter into collaboration agreements for research, development, manufacturing and commercial services that are within the scope of ASC 606, under which it licenses certain rights to its product candidates to third parties. The terms of these arrangements typically include payment to us of one or more of the following: non-refundable, upfront license fees; reimbursement of certain costs; customer option exercise fees; development, regulatory and commercial milestone payments; and royalties on net sales of licensed products. The amount of variable consideration is constrained until it is probable that the revenue is not at a significant risk of reversal in a future period. The contracts into which we enter generally do not include significant financing components.

As part of the accounting for these arrangements, we must use significant judgment to determine: (a) the transaction price under step (iii) above and (b) the timing of revenue recognition, including the appropriate measure of progress, in step (v) above. We use judgment to determine whether milestones or other variable consideration, except for royalties, should be included in the transaction price, as described further below. The transaction price is allocated to each performance obligation on a relative stand-alone selling price basis, for which we recognize revenue as or when the performance obligations under the contract are satisfied. If a milestone or other variable consideration relates specifically to our efforts to satisfy a single performance obligation or to a specific outcome from satisfying the performance obligation, we generally allocate the milestone amount entirely to that performance obligation once it is probable that a significant revenue reversal would not occur.

Amounts received prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion.

Licenses of intellectual property

In assessing whether a license is distinct from the other promises, we consider factors such as the research, development, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, we consider whether the collaboration partner can benefit from a license for its intended purpose without the receipt of the remaining promise(s), whether the value of the license is dependent on the unsatisfied promise(s), whether there are other vendors that could provide the remaining promise(s), and whether it is separately identifiable from the remaining promise(s). For licenses that are combined with other promises, we utilize judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue. We evaluate the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

Customer options

If an arrangement is determined to contain customer options that allow the customer to acquire additional goods or services, the goods and services underlying the customer options are not considered to be performance obligations at the outset of the arrangement, as they are contingent upon option exercise. We evaluate the customer options for material rights, or options to acquire additional goods or services for free or at a discount. If the customer options are determined to represent or include a material right, the material right is recognized as a separate performance obligation at the outset of the arrangement. We allocate the transaction price to material rights based on the relative standalone selling price, which is determined based on the identified discount and the probability that the customer will exercise. Amounts allocated to a material right are not recognized as revenue until, at the earliest, the option is exercised.

Milestone payments

At the inception of each arrangement that includes milestone payments, we evaluate whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of us or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. We evaluate factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgment involved in determining whether it is probable that a significant reversal of cumulative revenue would not occur. At the end of each subsequent reporting period, we reevaluate the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Royalties

For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all the royalty has been allocated is satisfied (or partially satisfied).

Contract costs

We recognize as an asset the incremental costs of obtaining a contract with a customer if the costs are expected to be recovered. As a practical expedient, we recognize the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less. To date, we have not incurred any incremental costs of obtaining a contract with a customer.

The Company sells its product principally to a limited number of specialty distributors and specialty pharmacy providers in the U.S. These customers subsequently resell the Company's product to health care providers or dispense the product to patients. In addition to distribution agreements with customers, the Company enters into arrangements with health care providers and payers that provide for government mandated and/or privately negotiated rebates, chargebacks and discounts with respect to the purchase of our product.

Revenues from product sales are recognized when the customer obtains control of the Company's product, which typically occurs once the Company has transferred physical possession of the good to the customer. The transaction price that the Company recognizes as revenue reflects the amount it expects to be entitled to in connection with the sale and transfer of control of product to its customers. Variable consideration is only included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the time that the Company's customers take control of the product, which is when the Company's performance obligation under the sales contracts is complete, the Company records product revenues net of applicable reserves for various types of variable consideration based on the Company's estimates of channel mix. The types of variable consideration in our product revenue are as follows:

- Trade discounts and allowances
- Product returns
- Chargebacks and rebates
- Government rebates
- Commercial payer and other rebates
- Voluntary patient assistance programs

In determining the amounts of certain allowances and accruals, the Company must make significant judgments and estimates. For example, in determining these amounts, the Company estimates prescription demand from the specialty pharmacies, hospital demand, buying patterns by hospitals, hospital systems and/or group purchasing organizations and the levels of inventory held by specialty distributors and customers. Making these determinations involves analyzing third-party industry data to determine whether trends in historical channel distribution patterns will predict future product sales. The Company receives data periodically from its specialty distributors and customers on inventory levels and historical channel sales mix, and the Company considers this data when determining the amount of the allowances and accruals for variable consideration.

The amount of variable consideration is estimated by using either of the following methods, depending on which method better predicts the amount of consideration to which the Company is entitled:

a) The "expected value" is the sum of probability-weighted amounts in a range of possible consideration amounts. Under ASC 606, an expected value may be an appropriate estimate of the amount of variable consideration if the Company has many contracts with similar characteristics.

b) The "most likely amount" is the single most likely amount in a range of possible consideration amounts (i.e., the single most likely outcome of the contract). Under ASC 606, the most likely amount may be an appropriate estimate of the amount of variable consideration if the contract has only two possible outcomes (i.e., either achieve or do not achieve a threshold specified in a contract).

The method selected is applied consistently throughout the contract when estimating the effect of an uncertainty on an amount of variable consideration. In addition, the Company considers all the information (historical, current, and forecasted) that is reasonably available to the Company and shall identify a reasonable number of possible consideration amounts. The relevant factors used in this determination include, but are not limited to, current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns.

In assessing whether a constraint is necessary, the Company considers both the likelihood and the magnitude of the revenue reversal. Actual amounts of consideration ultimately received may differ from the Company's estimates. If actual results in the future vary from the Company's estimates, the Company adjusts these estimates, which would affect net product revenue and earnings in the period such variances become known. The specific considerations the Company uses in estimating these amounts related to variable consideration associated with the Company's products are as follows:

Trade Discounts and Allowances - The Company generally provides customers with discounts that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. In addition, the Company receives sales order management, data and distribution services from certain customers. To the extent the services received are distinct from the Company's sale of products to the customer, these payments are classified in selling, general and administrative expenses in the consolidated statements of operation and comprehensive.

Product Returns – Generally, the Company's customers have the right to return any unopened/unused product supply during the 18-month period beginning six months prior to the labeled expiration date and ending 12 months after the labeled expiration date. As the Company distributes its product and establishes historical sales over a longer period of time, the Company looks at industry data for comparable products in the market as well as its own historical purchasing, demand and return patterns of its customers when evaluating reserves for product returns. As the Company distributes its product and establishes historical sales over a longer period of time, it will place less reliance on industry data.

At the end of each reporting period for any of our products, the Company may decide to constrain revenue for product returns based on information from various sources, including channel inventory levels and dating and sell-through data, the expiration dates of product currently being shipped, price changes of competitive products and introductions of generic products.

Chargebacks – Although the Company primarily sells products to specialty distributors in the U.S., the Company also enters into agreements with hospitals and outpatient infusion centers, either directly or through group purchasing organizations acting on behalf of their members, in connection with the purchase of product. Based on these agreements, some of the Company's customers have the right to receive a discounted price on product purchases. In the case of discounted pricing, the Company typically provides a credit to its specialty distributors customer (i.e., chargeback), representing the difference between the customer's acquisition list price and the discounted price.

Government Rebates –The Company is subject to discount obligations under state Medicaid programs and Medicare. The Company estimates our Medicaid and Medicare rebates based upon a range of possible outcomes that are probability-weighted for the estimated payer mix. These reserves are recorded in the same period the related product revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability that is included in accrued expenses on the consolidated balance sheet. For Medicare, the Company also estimates the number of patients in the prescription drug coverage gap for whom it will owe an additional liability under the Medicare Part D program. The Company's liability for these rebates consists of an estimate of claims for the current quarter and estimated future claims that will be made for product sales that have been recognized as revenue but remain in distribution channel inventory at period end.

Commercial Payer and Other Rebates – The Company plans to continue to contract with certain private payer organizations, primarily insurance companies and pharmacy benefit managers, for the payment of rebates with respect to utilization of NUZYRA and contracted formulary status. The Company estimates these rebates and records reserves for such estimates in the same period the related revenue is recognized. These rebates result from performance-based goals, formulary position and price increase limit allowances (price protection). The calculation of the reserve for these rebates is based on an estimate of the coverage patterns and the resulting applicable rebate rate(s) to be earned over a contractual period.

Patient Assistance – The Company offers certain voluntary patient assistance programs for prescriptions, such as co-pay assistance programs, which are intended to provide financial assistance to qualified commercially insured patients with prescription drug co-payments required by payers. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the cost per claim that the Company expects to receive associated with product sale that has been recognized as revenue but remains in the distribution and pharmacy channel inventories at the end of each reporting period.

At the end of each reporting period, the Company adjusts its allowances for cash discounts, product returns, chargebacks, and other rebates and discounts when the Company believes actual experience may differ from current estimates.

Revenue Earned Under Government Contracts

If the Company concludes that some or all aspects of its government contracts represent a transaction with a customer to obtain services or goods that are an output of its ordinary activities in exchange for consideration, it accounts for those aspects of the arrangement in accordance with ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606. Arrangements that are entirely in the scope of other guidance are accounted for under that guidance.

The Company recognizes sales of NUZYRA under its government contracts as product revenue when control of NUZYRA is transferred, in accordance with ASC 606. It also recognizes government contract service revenue and government contract grant revenue as defined below.

Government Contract Service Revenue

Government contract service revenue is recognized as services are performed. Revenue and related reimbursable expenses are presented on a gross basis in the Company's consolidated statements of operations. The related reimbursable expenses are expensed as incurred as research and development expense.

Government Contract Grant Revenue

The allocated consideration of government contract grant revenue is recognized as the related reimbursable expenses are incurred. The cost reimbursements that are reported as revenue is presented gross of the related reimbursable expenses in the Company's consolidated statements of operations. The related reimbursable expenses are expensed as incurred as research and development expense.

Inventory

Inventories are stated at the lower of cost or estimated net realizable value, on a first-in, first-out basis. Prior to the regulatory approval of our product candidates, we incurred expenses for the manufacture of drug product that could potentially be available to support the commercial launch of our products. Until the first reporting period when regulatory approval has been received or is otherwise considered probable, we record all such costs as research and development expense. Inventory used in clinical trials is also expensed as research and development expense when selected for such use. We classify inventory costs as long-term when we expect to utilize the inventory beyond its normal operating cycle. We perform an assessment of the recoverability of capitalized inventory during each reporting period and writes down any excess and obsolete inventory to its net realizable value in the period in which the impairment is first identified. Such impairment charges, should they

occur, are recorded as a component of cost of product sales in the consolidated statements of operations and comprehensive loss. The determination of whether inventory costs will be realizable requires the use of estimates by management. If actual market conditions are less favorable than projected by management, additional write-downs of inventory may be required.

Recent Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on our financial position or results of operations upon adoption.

In June 2016 the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,* or ASU 2016-13. The FASB subsequently issued amendments to ASU 2016-13, which have the same effective date and transition date of January 1, 2023. These standards require that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, these standards now require allowances to be recorded instead of reducing the amortized cost of the investment. These standards limit the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. Based on the composition of our investment portfolio, accounts receivable and other financial assets, current market conditions and historical credit loss activity, we do not expect the adoption of these standards to have a material effect on the Company's consolidated balance sheet, consolidated statements of operation and comprehensive loss and related disclosures.

Contractual Obligations and Commitments

Leases

We lease our Boston, Massachusetts and King of Prussia, Pennsylvania office spaces under non-cancelable operating leases expiring in 2023 and 2024, respectively.

We executed an amendment to the existing lease agreement on its Boston office space in April 2021. The amended lease agreement released 8,104 rentable square feet of office space and extends the lease term for the remaining 4,153 rentable square feet of office space through August 2023 for an additional commitment of $0.4 million. In accordance with the amendment, we were refunded the insignificant security deposit paid in July 2016.

We executed an amended lease agreement on our King of Prussia office space in October 2016. The amended lease agreement is for 19,708 rentable square feet of office space and we took control of such office space during the first quarter of 2017. The total lease commitment is over a seven-year and seven-month lease term. The amended lease agreement contains rent escalation and a partial rent abatement period, which is accounted for as rent expense under the straight-line method. We are required to make additional payments under the facility operating leases for taxes, insurance, and other operating expenses incurred during the operating lease period.

Licenses

In February 1997, we and Tufts University, or Tufts, entered into a license agreement under which we acquired an exclusive license to certain patent applications and other intellectual property of Tufts related to the drug resistance field to develop and commercialize products for the treatment or prevention of bacterial or microbial diseases or medical conditions in humans or animals or for agriculture. We subsequently entered into eleven amendments to that agreement, collectively the Tufts License Agreement, to include patent applications filed after the effective date of the original license agreement, to exclusively license additional technology from Tufts, to expand the field of the agreement to include disinfectant applications, and to change the royalty rate and percentage of sublicense income paid by us to Tufts under sublicense agreements with specified sublicensees.

In September 2009, we and Novartis International Pharmaceutical Ltd., or Novartis, entered into a Collaborative Development, Manufacture and Commercialization License Agreement, or the Novartis Agreement, which provided Novartis with a global, exclusive patent and technology license for the development, manufacturing and marketing of omadacycline. The Novartis Agreement was terminated by Novartis without cause in June 2011 and the termination was effective 60 days later. We and Novartis subsequently entered in a letter agreement in January 2012, or the Novartis Letter Agreement, as amended, pursuant to which we reconciled shared development costs and expenses and granted Novartis a right of first negotiation with respect to commercialization rights of omadacycline following approval of omadacycline from the FDA, EMA, or any regulatory agency, but only to the extent we have not previously granted such commercialization rights related to omadacycline to another third party as of any such approval.

Long-Term Debt

As of December 31, 2021, we had recorded long-term debt obligations of $254.4 million, net of debt discount and issuance costs of $5.7 million. Debt issuance costs are presented on the consolidated balance sheet as a direct deduction from the related debt liability rather than capitalized as an asset in accordance with ASU No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*.

R-Bridge Loan Agreement

On December 31, 2020, or the Closing Date, we, through our wholly-owned subsidiary PRTK SPV2 LLC, a Delaware limited liability company, or the Subsidiary, entered into a royalty and revenue interest-backed loan agreement with an affiliate of R-Bridge Healthcare Investment Advisory, Ltd., herein referred to as the R-Bridge Loan Agreement. Pursuant to the terms of the R-Bridge Loan Agreement, the Subsidiary borrowed a $60.0 million term loan, secured by, and repaid with proceeds from, (i) royalties from our license agreement with Zai (Shanghai) Co., Ltd., or the Zai Collaboration Agreement, and such royalties, or the Royalty Interest, and (ii) a revenue interest based on our U.S. sales of NUZYRA in an initial amount of two and a half percent (2.5%), which amount may adjust under certain circumstances up to five percent (5%), of our net U.S. sales, subject to an annual cap of $10.0 million, which may adjust under certain circumstances to $12.0 million, or the Revenue Interest.

Under the R-Bridge Loan Agreement, the outstanding principal balance will bear interest at an annual rate of 7.0%, increasing to an annual rate of 10% during the continuance of any event of default. Payments of the obligations outstanding under the R-Bridge Loan Agreement are made quarterly out of the Royalty Interest payments and Revenue Interest payments received by the Subsidiary during such quarter, or the Collection Amount. On each payment date, after payment of certain expenses, the Collection Amount shall be applied first to accrued interest, with any excess up to $15.0 million per annum applied to repay principal until the balance is fully repaid, and any shortfalls being capitalized are added to the principal balance of the loan. Amounts in excess of the $15.0 million annual cap shall be shared between us and R-Bridge Healthcare Investment Advisory, Ltd., or the R-Bridge Lender, based on a formula set out in the R-Bridge Loan Agreement. Following repayment in full of the loan, the first $15.0 million per annum in Collection Amount shall be paid to us and any amounts in excess shall be shared between us and the R-Bridge Lender based on a formula set out in the R-Bridge Loan Agreement.

Prior to the eighth (8th) anniversary of the Closing Date, the R-Bridge Loan Agreement will automatically terminate once the Subsidiary has paid to the R-Bridge Lender, in the form of regularly scheduled payments or as a voluntary prepayment, a capped amount of $114 million, less principal, interest and certain fee payments through the date of such prepayment, or the Capped Amount. After the eighth (8th) anniversary of the Closing Date, the Revenue Interest can be terminated but the Royalty Interest payments shall continue until maturity of the R-Bridge Loan Agreement on December 31, 2032, at which time, the outstanding principal amount of the loan, if any, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash by the Subsidiary.

Our subsidiary, PRTK SPV1 LLC, a Delaware limited liability company and owner of the Subsidiary's capital stock, has entered into a Pledge and Security Agreement in favor of the R-Bridge Lender, pursuant to which the Subsidiary's obligations under the R-Bridge Loan Agreement are secured by PRTK SPV1 LLC's pledge of all of the Subsidiary's capital stock.

The R-Bridge Loan Agreement contains certain customary affirmative covenants, including those relating to: use of proceeds; maintenance of books and records; financial reporting and notification; compliance with laws; and protection of Company intellectual property. The R-Bridge Loan Agreement also contains certain customary negative covenants, barring the Subsidiary from: certain fundamental transactions; issuing dividends and distributions; incurring additional indebtedness outside of the ordinary course of business; engaging in any business activity other than related to the Zai Collaboration Agreement; and permitting any additional liens on the collateral provided to the R-Bridge Lender under the R-Bridge Loan Agreement. As of December 31, 2021, we were in compliance with all covenants under the R-Bridge Loan Agreement.

An ancillary agreement executed by us and the Subsidiary in respect of the Revenue Interest, contains negative covenants applicable to us, including restrictions on the sale or transfer of our assets related to NUZYRA and giving rise to the Revenue Interest, each subject to the exceptions set forth therein.

The R-Bridge Loan Agreement contains customary defined events of default, upon which any outstanding principal, unpaid interest and other obligations of the Subsidiary, shall be immediately due and payable by the Subsidiary. These include: failure to pay any principal or interest when due; failure to pay the Capped Amount when due following a non-qualified change of control, any uncured breach of a representation, warranty or covenant; any uncured failure to perform or observe covenants; any uncured breach of our representations, warranties or covenants under an ancillary agreement executed by the us and the Subsidiary in respect of the Royalty Interest; any termination of the Zai Collaboration Agreement; and certain bankruptcy or insolvency events. No events of default had occurred under the R-Bridge Loan Agreement through December 31, 2021.

The net proceeds of the term loan were used by the Subsidiary to purchase from the Company the Royalty Interest and Revenue Interest, pursuant to the terms of the Revenue Interest Purchase Agreement and the Contribution and Servicing Agreement, respectively. We raised approximately $58.3 million in net proceeds in connection with the R-Bridge Loan Agreement, comprised of the $60.0 million term loan funded at execution, net of $1.1 million in lender fees accounted for as debt discount and $0.6 million in direct and incremental third-party expenses accounted for as debt issuance costs. The net proceeds of the term loan, together with cash on hand, was used to prepay in full all obligations outstanding under the loan arrangement with Hercules Capital, Inc.

Convertible Senior Subordinated Notes

On April 18, 2018, we entered into a Purchase Agreement, or the Purchase Agreement, with several initial purchasers, or the Initial Purchasers, for whom Merrill Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC acted as representatives, relating to the sale of $135.0 million aggregate principal amount of 4.75% Convertible Senior Subordinated Notes due 2024, or the Notes, to the Initial Purchasers. We also granted the Initial Purchasers an option to purchase up to an additional $25.0 million aggregate principal amount of Notes, which was exercised in full on April 20, 2018.

The Purchase Agreement includes customary representations, warranties and covenants. Under the terms of the Purchase Agreement, we agreed to indemnify the Initial Purchasers against certain liabilities.

In addition, J. Wood Capital Advisors LLC, our financial advisor, purchased $5.0 million aggregate principal amount of Notes in a separate, concurrent private placement on the same terms as other investors.

The Notes were issued by us on April 23, 2018, pursuant to an Indenture, dated as of such date, or the Indenture, between us and U.S. Bank National Association, as trustee, or the Trustee. The Notes bear cash interest at the annual rate of 4.75%, payable on November 1 and May 1 of each year, beginning on November 1, 2018, and mature on May 1, 2024 unless earlier repurchased, redeemed or converted. We will settle conversions of the Notes through delivery of shares of our common stock in accordance with the terms of the Indenture. The initial conversion rate for the Notes is 62.8931 shares of common stock (subject to adjustment as provided for in the Indenture) per $1,000 principal amount of the Notes, which is equal to an initial conversion price of approximately $15.90 per share, representing a conversion premium of approximately 20% above the closing price of the common stock of $13.25 per share on April 18, 2018.

Holders of the Notes may convert all or any portion of their Notes, in multiples of $1,000 principal amount, at their option at any time prior to the close of business on the second scheduled trading day immediately preceding the stated maturity date.

We may redeem for cash all or part of the Notes, at its option, on or after May 6, 2021 if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provides notice of redemption at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

If we experience a fundamental change, as described in the Indenture, prior to the maturity date of the Notes, holders of the Notes will, subject to specified conditions, have the right, at their option, to require us to repurchase for cash all or a portion of their Notes at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any, to, but not including, the fundamental change repurchase date. In addition, following certain corporate events that occur prior to the maturity date of the Notes and following a notice of redemption of the Notes, we will increase the conversion rate for a holder who elects to convert its Notes in connection with such corporate event or redemption.

The Indenture provides for customary events of default. In the case of an event of default with respect to the Notes arising from specified events of bankruptcy or insolvency, all outstanding Notes will become due and payable immediately without further action or notice. If any other event of default with respect to the Notes under the Indenture occurs or is continuing, the Trustee or holders of at least 25% in aggregate principal amount of the then outstanding Notes may declare the principal amount of the Notes to be immediately due and payable.

After deducting costs incurred of $6.0 million, we raised net proceeds from the issuance of the Notes of $159.0 million in April 2018. All costs were deferred and are being amortized over the life of the Notes at an effective interest rate of 5.47% and recorded as additional interest expense.

Royalty-Backed Loan Agreement

On February 25, 2019, we, through our wholly-owned subsidiary Paratek Royalty Corporation, or the Subsidiary, entered into a royalty-backed loan agreement, or the Royalty-Backed Loan Agreement, with Healthcare Royalty Partners III, L.P., or HCRP. Pursuant to the terms of the Royalty-Backed Loan Agreement, upon the satisfaction of the conditions precedent set forth therein, the Subsidiary borrowed a $32.5 million loan, which was secured by, and will be repaid based upon, royalties from the Almirall Collaboration Agreement. On May 1, 2019, we received $27.8 million, net of $0.5 million lender discount, $0.2 million in lender expenses incurred, and $4.0 million that was deposited into an interest reserve account. We also paid $1.2 million in other lender fees related to the Royalty-Backed Loan Agreement.

Under the Royalty-Backed Loan Agreement, the outstanding principal balance will bear interest at an annual rate of 12.0%. Payments of interest under the Royalty-Backed Loan Agreement are made quarterly out of the Almirall Collaboration Agreement royalty payments received since the immediately preceding payment date. On each interest payment date, any royalty payments in excess of accrued interest on the loan will be used to repay the principal of the loan until the balance is fully repaid. In addition, the Subsidiary made up-front payments to HCRP of (i) a 1.5% fee and (ii) up to $300,000 for HCRP's expenses. The Royalty-Backed Loan Agreement matures on May 1, 2029, at which time, if not earlier repaid in full, the outstanding principal amount of the loan, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash. We entered into a Pledge and Security Agreement in favor of HCRP, pursuant to which the Subsidiary's obligations under the Royalty-Backed Loan Agreement are secured by a pledge of all of our holdings of the Subsidiary's capital stock.

The Royalty-Backed Loan Agreement contains certain customary affirmative covenants, including those relating to: use of proceeds; maintenance of books and records; financial reporting and notification; compliance with laws; and protection of our intellectual property. The Royalty-Backed Loan Agreement also contains certain customary negative covenants, barring the Subsidiary from: certain fundamental transactions; issuing dividends and distributions; incurring additional indebtedness outside of the ordinary course of business; engaging in any business activity other than related to the Almirall Collaboration Agreement; and permitting any additional liens on the collateral provided to HCRP under the Royalty-Backed Loan Agreement.

The Royalty-Backed Loan Agreement contains customary defined events of default, upon which any outstanding principal and unpaid interest shall be immediately due and payable. These include: failure to pay any principal or interest when due; any uncured breach of a representation, warranty or covenant; any uncured failure to perform or observe covenants; any uncured cross default under a material contract; any uncured breach of our representations, warranties or covenants under its Contribution and Servicing Agreement with the Subsidiary; any termination of the Almirall Collaboration Agreement; and certain bankruptcy or insolvency events.

Contract Service Providers

In the course of normal business operations, we also have agreements with contract service providers to assist in the performance of research and development, clinical trials, manufacturing and other activities for operating purposes which are cancelable at any time by us, generally upon 30 days' prior written notice. These payments are not included in this table of contractual obligations.

We could also enter into additional collaborative research, contract research, manufacturing, supplier and contractor agreements in the future, which may require upfront payments and/or long-term commitments of cash.

Commercial Supply Agreements

We have entered into multiple commercial supply agreements. Please refer to Item 1, *Business*, for further details on our agreements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We do not enter into financial instruments for trading or speculative purposes. Our cash, cash equivalents and investments balance as of December 31, 2021 consisted of cash and cash equivalents and U.S. treasury securities. The goals of our investment policy are preservation of capital, fulfillment of liquidity needs and fiduciary control of cash and investments. We also seek to maximize income from our investments without assuming significant risk. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of interest rates, particularly because our investments are in short-term marketable securities. Due to the short-term duration of our investment portfolio and the low-risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our portfolio. We have the ability and intention to hold our investments until maturity and, therefore, we would not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on our investment portfolio.

We engage CROs and contract manufacturers on a global scale. We may be subject to fluctuations in foreign currency rates in connection with certain of these agreements. We currently do not hedge any such foreign currency exchange rate risk. Transactions denominated in currencies other than U.S. dollars are recorded based on exchange rates at the time such transactions arise and were less than 5.0% of total liabilities as of December 31, 2021.

Item 8. Financial Statements and Supplementary Data

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Paratek Pharmaceuticals, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Paratek Pharmaceuticals, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, stockholders' equity (deficit), and cash flows for the years then ended, 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, 2021 and 2020, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

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 Public Company Accounting Oversight Board (United States) (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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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 matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Reserves for Government Rebates

Description of the Matter

As described in Notes 2 and 3 to the consolidated financial statements, the Company recognizes revenues for product sales net of applicable reserves for various types of variable consideration based on the Company's estimates of the channel mix. Variable consideration for product sales includes trade discounts and allowances, product returns, chargebacks and rebates, government rebates, commercial payer and other rebates, and patient assistance. Reserves for government rebates totaled $5.2 million and were recorded within accrued expenses at December 31, 2021.

Auditing the Company's measurement of government rebates was complex and judgmental because the estimates involve subjective management assumptions about buying and payment patterns, including the units of product in the distribution channel as of the balance sheet date, and the estimated payer mix. The reductions to gross product revenue are sensitive to these significant assumptions.

How We Addressed the Matter in Our Audit

To test the adequacy of the Company's reserves for government rebates, our audit procedures included, among others, assessing the methodologies used to determine the reserves and testing the significant assumptions discussed above, including the underlying data used in developing the significant assumptions. We evaluated management's significant assumptions by (i) comparing the assumptions used to calculate the reserves to external data (ii) testing contracted rates, historical claims and payment data, (iii) evaluating the sensitivity of the estimated reserve calculations based on changes in the significant assumptions, (iv) comparing the actual results to previous estimates, (v) performing analytical procedures based on historical data to estimate the reserves and (vi) assessing information subsequent to the balance sheet date to determine whether there were any new information that would require adjustment. In addition, we involved our professionals with an understanding of government reimbursement requirements to assist us in evaluating management's methodology and calculations used to measure government rebates.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

Boston, Massachusetts
March 14, 2022

Paratek Pharmaceuticals, Inc.
Consolidated Balance Sheets
(in thousands, except for share and par value amounts)

	December 31,	
	2021	**2020**
Assets		
Current assets		
Cash and cash equivalents	$ 80,367	$ 105,157
Marketable securities	15,107	20,005
Restricted cash	125	891
Accounts receivable, net	29,438	11,878
Inventories, net	11,020	14,555
Other receivables	3,679	3,855
Prepaid and other current assets	12,364	7,776
Total current assets	152,100	164,117
Long-term restricted cash	125	-
Fixed assets, net	794	964
Goodwill	829	829
Right-of-use asset	1,757	2,010
Long term inventories, net	27,767	8,728
Other long-term assets	497	205
Total assets	$ 183,869	$ 176,853
Liabilities and Stockholders' Deficit		
Current liabilities		
Accounts payable	5,394	1,813
Accrued expenses	23,446	20,826
Other current liabilities	2,457	1,314
Total current liabilities	31,297	23,953
Long-term debt	254,428	250,474
Long-term lease liabilities	1,308	1,544
Accrued long-term compensation	21,846	
Other liabilities	2,777	3,142
Total liabilities	311,656	279,113
Commitments and contingencies (Note 18)		
Stockholders' deficit		
Preferred stock:		
Undesignated preferred stock: $0.001 par value; 5,000,000 authorized; no shares issued and outstanding	—	—
Common stock, $0.001 par value, 200,000,000 shares authorized, 51,711,809 and 46,516,567 issued and outstanding at December 31, 2021 and 2020, respectively	52	46
Additional paid-in capital	739,053	705,489
Accumulated other comprehensive income (loss)	(9)	4
Accumulated deficit	(866,883)	(807,799)
Total stockholders' deficit	(127,787)	(102,260)
Total liabilities and stockholders' deficit	$ 183,869	$ 176,853

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

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

	Year Ended December 31,	
	2021	**2020**
Product revenue, net	$ 106,084	$ 38,753
Government contract service revenue	6,639	3,299
Government contract grant revenue	9,211	3,407
Collaboration and royalty revenue	8,228	1,465
Net revenue	130,162	46,924
Expenses:		
Cost of product revenue	21,535	8,651
Research and development	30,353	23,922
Selling, general and administrative	119,404	89,855
Total operating expenses	171,292	122,428
Loss from operations	(41,130)	(75,504)
Other income and expenses:		
Interest income	66	1,515
Interest expense	(17,408)	(20,240)
Loss on extinguishment of debt	—	(2,368)
Other gains (losses), net	(12)	56
Net loss before provision for income taxes	(58,484)	(96,541)
Provision for income taxes	600	—
Net loss	$ (59,084)	$ (96,541)
Other comprehensive loss		
Unrealized gain (loss) on available-for-sale securities, net of tax	(13)	(70)
Other comprehensive gain (loss)	(13)	(70)
Comprehensive loss	$ (59,097)	$ (96,611)
Net loss per share:		
Basic and diluted net loss per common share	$ (1.22)	$ (2.19)
Weighted average common shares outstanding		
Basic and diluted	48,415,500	44,174,765

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

Paratek Pharmaceuticals, Inc.
Consolidated Statements of Stockholders' Equity (Deficit)
(in thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount				
Balances at December 31, 2019	39,827,749	$ 40	$ 671,497	$ 74	$ (711,258)	$ (39,647)
Issuance of common stock, net of expenses	5,176,000	5	21,886	—	—	21,891
Exercise of stock options	39,479	—	170	—	—	170
Vesting of restricted stock unit awards	1,281,968	1	(1)	—	—	—
Issuance of stock under the employee stock purchase plan	191,371	—	562	—	—	562
Employee stock purchase plan expense	—	—	143	—	—	143
Unrealized loss on available-for-sale securities, net of tax	—	—	—	(70)	—	(70)
Stock-based compensation expense	—	—	10,105	—	—	10,105
Issuance of warrants for common stock	—	—	1,127	—	—	1,127
Net loss	—	—	—	—	(96,541)	(96,541)
Balances at December 31, 2020	46,516,567	$ 46	$ 705,489	$ 4	$ (807,799)	$ (102,260)
Issuance of common stock, net of expenses	3,175,657	4	18,574	—	—	18,578
Exercise of stock options	1,809	—	6	—	—	6
Vesting of restricted stock unit awards	1,864,431	2	(2)	—	—	—
Issuance of stock under the employee stock purchase plan	146,946	—	650	—	—	650
Employee stock purchase plan expense	—	—	128	—	—	128
Unrealized loss on available-for-sale securities, net of tax	—	—	—	(13)	—	(13)
Stock-based compensation expense	—	—	14,208	—	—	14,208
Issuance of warrants for common stock	6,399	—	—	—	—	—
Net loss	—	—	—	—	(59,084)	(59,084)
Balances at December 31, 2021	51,711,809	$ 52	$ 739,053	$ (9)	$ (866,883)	$ (127,787)

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

Paratek Pharmaceuticals, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2021	**2020**
Net loss	$ (59,084)	$ (96,541)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, amortization and accretion	391	578
Stock-based compensation expense	14,336	10,248
Non-cash interest expense	4,273	1,518
Loss on extinguishment of debt	—	1,059
Changes in operating assets and liabilities		
Accounts receivable, other receivables, prepaid, and other current assets	(21,785)	(7,459)
Inventories	(15,504)	(11,760)
Operating lease right-of-use asset	253	504
Accounts payable and accrued expenses	6,751	1,618
Long-term operating lease liability	(236)	(551)
Accrued long-term compensation	21,846	—
Other liabilities and other assets	486	(2,638)
Net cash used in operating activities	(48,273)	(103,424)
Investing activities		
Purchase of fixed assets	(373)	(376)
Purchase of marketable securities	(15,117)	(29,625)
Proceeds from maturities of marketable securities	20,000	122,500
Net cash provided by investing activities	4,510	92,499
Financing activities		
Proceeds from issuance of long-term royalty-backed loan agreement, net of costs	—	58,717
Payment of long-term royalty-backed loan agreement debt issuance costs	(397)	—
Proceeds from employee stock purchase plan	650	562
Proceeds from exercise of stock options	6	170
Principal payments on long-term debt	(319)	(70,000)
Proceeds from issuance of common stock, net	18,392	21,891
Net cash provided by financing activities	18,332	11,340
Net increase in cash, cash equivalents and restricted cash	(25,431)	415
Cash, cash equivalents and restricted cash at the beginning of period	106,048	105,633
Cash, cash equivalents and restricted cash at end of period	$ 80,617	$ 106,048
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION		
Cash paid for interest	$ 13,144	$ 22,703
Debt issuance costs in accrued expenses	$ —	$ 397
Purchases of equipment included in accrued expenses	$ —	$ 152
SUPPLEMENTAL DISCLOSURES OF NONCASH FINANCING ACTIVITIES		
Paid in-kind interest included in accrued expenses	$ 2,934	$ 152
Fair value of warrants issued	$ —	$ 1,127

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

1. Organization

Paratek Pharmaceuticals, Inc., or the Company or Paratek, is a Delaware corporation with its corporate office in Boston, Massachusetts and an office in King of Prussia, Pennsylvania.

The Company is a commercial-stage biopharmaceutical company focused on the development and commercialization of novel life-saving therapies for life-threatening diseases or other public health threats for civilian, government and military use. The Company's United States, or U.S., Food and Drug Administration, or FDA, approved commercial product, NUZYRA® (omadacycline), is a once-daily oral and intravenous antibiotic for the treatment of adult patients with community-acquired bacterial pneumonia, or CABP, and acute skin and skin structure infections, or ABSSSI, caused by susceptible pathogens. The Company has a collaboration agreement with Zai Lab, or Zai, for the development and commercialization of omadacycline in the greater China region and retains all remaining global rights, which received China National Medical Products Administration, or NMPA, approval in December 2021.

SEYSARA® (sarecycline) is an FDA-approved product with respect to which the Company has exclusively licensed in the U.S. and the People's Republic of China, or the PRC, Hong Kong and Macau, or the greater China region, certain rights to Almirall, LLC, or Almirall. SEYSARA is currently being marketed by Almirall in the U.S. as a once-daily oral therapy for the treatment of moderate to severe acne vulgaris. With respect to the Company's technology as it relates to sarecycline, the Company retains development and commercialization rights in all countries other than the U.S. and the greater China region, and in February 2020, the Company exclusively licensed from Almirall certain technology owned or in-licensed by Almirall or its affiliates that is necessary or useful to develop or commercialize sarecycline outside of the U.S. Almirall plans to develop sarecycline for acne in China , with a submission to the NMPA, according to Almirall, expected in 2023.

The Company has incurred significant losses since inception in 1996. The Company has generated an accumulated deficit of $866.9 million through December 31, 2021 and may require substantial additional funding in connection with the Company's continuing operations to support clinical development and commercialization activities associated with NUZYRA. Based upon the Company's current operating plan, it anticipates that cash, cash equivalents, and available for sale marketable securities of $95.5 million as of December 31, 2021 will enable the Company to fund operating expenses and capital expenditure requirements through at least the next twelve months from the issuance of the financial statements included in this Annual Report on Form 10-K. The Company expects to finance future cash needs primarily through a combination of product sales, royalties, public or private equity offerings, debt or other structured financings, strategic collaborations, grant funding and government funding. The Company is subject to risks common to companies in the biopharmaceutical industry, including, but not limited to, risks of failure of preclinical studies and clinical trials, the need to obtain additional financing to fund the future development of the Company's product candidates, the need to obtain compliant product from third-party manufacturers, the need to obtain marketing approval for the Company's product candidates, the need to successfully commercialize and gain market acceptance of product candidates, the risks of manufacturing product with an external supply chain, dependence on key personnel, and compliance with government regulations.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP, as found in the Accounting Standards Codification, or ASC, and Accounting Standards Update, or ASU, of the Financial Accounting Standards Board, or FASB, and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission, or the SEC.

Principles of Consolidation

The accompanying audited consolidated financial statements include the results of operations of Paratek Pharmaceuticals, Inc. and its wholly-owned subsidiaries, Paratek Pharma, LLC, Paratek Securities Corporation, Transcept Pharma, Inc., Paratek Ireland Limited, Paratek Royalty Corporation, Paratek Royalty Corporation II, PRTK SPV1 LLC and PRTK SPV2 LLC. All significant intercompany accounts and transactions have been eliminated in consolidation.

Prior Period Reclassifications

The accompanying audited consolidated balance sheet includes a prior year reclassification to conform with current year presentation. Specifically, the long-term inventory balance, which was included in other long-term assets as of 12/31/2020, is now presented separately.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management of the Company to make certain estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are based on management's best knowledge of current events and actions the Company may undertake in the future. Management considers many factors in selecting appropriate financial accounting policies and controls, and in developing the estimates and assumptions that are used in the preparation of these financial statements. Management must apply significant judgment in this process. In addition, other factors may affect estimates, including expected business and operational changes, sensitivity and volatility associated with the assumptions used in developing estimates, and whether historical trends are expected to be representative of future trends. The estimation process often may yield a range of potentially reasonable estimates of the ultimate future outcomes and management must select an amount that falls within that range of reasonable estimates. This process may result in actual results differing materially from those estimated amounts used in the preparation of the financial statements. Estimates are used in accounting for, among other items, accounts receivable and related reserves, inventory and related reserves, goodwill, net product revenue, government contract service revenue, government contract grant revenue, collaboration and royalty revenue, leases, stock-based compensation arrangements, manufacturing and clinical accruals, useful lives for depreciation and valuation allowances on deferred tax assets. Actual results could differ from those estimates. The Company evaluates its estimates on an ongoing basis. Changes in estimates are reflected in reported results in the period in which they become known by the Company's management.

Cash and Cash Equivalents and Marketable Securities

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. Cash and cash equivalents include cash held in banks and amounts held primarily in interest-bearing money market accounts. Cash equivalents are carried at cost, which approximates their fair market value.

The Company determines the appropriate classification of marketable securities at the time of purchase and reevaluates such designation at each balance sheet date. The Company classified all of its marketable securities at December 31, 2021 as "available-for-sale" pursuant to ASC 320, *Investments – Debt and Equity Securities.* Investments not classified as cash equivalents are presented as either short-term or long-term investments based on both their maturities as well as the time period the Company intends to hold such securities. Available-for-sale securities are maintained by an investment manager and consist of U.S. treasury securities. Available-for-sale securities are carried at fair value with the unrealized gains and losses included in other comprehensive income (loss) as a component of stockholders' equity (deficit) until realized. Any premium or discount arising at purchase is amortized or accreted to interest expense or income over the life of the instrument. Realized gains and losses are determined using the specific identification method and are included in other income or expense. There were no material realized gains or losses on marketable securities recognized for the years ended December 31, 2021 and 2020.

The Company reviews marketable securities for other-than-temporary impairment whenever the fair value of a marketable security is less than the amortized cost and evidence indicates that a marketable security's carrying amount is not recoverable within a reasonable period of time. Other-than-temporary impairments of investments are recognized in the consolidated statements of operations and comprehensive loss if the Company has experienced a credit loss, has the intent to sell the marketable security, or if it is more likely than not that the Company will be required to sell the marketable security before recovery of the amortized cost basis. Evidence considered in this assessment includes reasons for the impairment, compliance with the Company's investment policy, the severity and duration of the impairment and changes in value subsequent to the end of the period. There were no other-than-temporary impairments of investments recognized for the years ended December 31, 2021 and 2020.

Fair Value of Financial Instruments

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. FASB ASC 820, *Fair Value Measurements and Disclosures*, or ASC 820, establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available. Observable inputs are those that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2—Valuations based on quoted prices for similar assets or liabilities in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3—Valuations that require inputs that reflect the Company's own assumptions that are both significant to the fair value measurement and unobservable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

Restricted Cash

Cash accounts with any type of restriction are classified as restricted cash. If restrictions are expected to be lifted or to be used to pay a third party in the next twelve months, the restricted cash account is classified as current.

Accounts Receivable, Net

Accounts receivable as of December 31, 2021 is primarily comprised of trade accounts receivable of $19.2 million due from customers for gross sales of NUZYRA, net of prompt payment discounts, chargebacks, rebates and certain fees. The balance of accounts receivable as of December 31, 2021 incudes $6.0 million milestone payment earned from Zai upon NMPA approval, $1.2 million of government contract service revenue earned under the BARDA contract, $1.7 million of government contract grant revenue earned under the BARDA contract, and $0.5 million in estimated revenue from royalties earned on U.S. sales of SEYSARA under the Almirall Collaboration Agreement and U.S. sales of XERAVA under the Tetraphase License Agreement. Refer to Note 5, *Government Contract Revenue* and Note 6, *License and Collaboration Agreements* for further details.

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk consist primarily of cash, restricted cash, and accounts receivable. The Company places its cash in an accredited financial institution and this balance is above federally insured amounts. The Company has no off-balance sheet concentrations of credit risk such as foreign currency exchange contracts, option contracts or other hedging arrangements.

Fixed Assets

Fixed assets, including leasehold improvements, are recorded at cost and depreciated when placed into service using the straight-line method, based on their estimated useful lives as follows:

	Estimated Useful Life In Years
Laboratory equipment	5
Office equipment	5
Machinery and equipment	5
Computer equipment	3
Computer software	3

In addition, leasehold improvements are depreciated over the shorter of their estimated useful lives or the term of the respective lease on a straight-line basis.

Costs for capital assets not yet placed into service have been capitalized as construction-in-progress and will be depreciated in accordance with the above guidelines once placed into service. The Company reviews its long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Each impairment test is based on a comparison of the undiscounted cash flow to the recorded value of the asset. If impairment is indicated, the asset will be written down to its estimated fair value on a discounted cash flow basis. Upon sale or retirement, the asset cost and related accumulated depreciation are removed from the respective accounts, and any related gain or loss is reflected in results of operations. Repair and maintenance costs are expensed as incurred.

Inventory

Inventories are stated at the lower of cost or estimated net realizable value, on a first-in, first-out basis. Prior to the regulatory approval of its product candidates, the Company incurs expenses for the manufacture of drug product that could potentially be available to support the commercial launch of its products. Until the first reporting period when regulatory approval has been received or is otherwise considered probable, the Company records all such costs as research and development expense. Inventory used in clinical trials is also expensed as research and development expense, when selected for such use. The Company classifies inventory costs as long-term when the Company expects to utilize the inventory beyond its normal operating cycle. The Company performs an assessment of the recoverability of capitalized inventory during each reporting period and writes down any excess and obsolete inventory to its net realizable value in the period in which the impairment is first identified. Such impairment charges, should they occur, are recorded as a component of cost of product sales in the consolidated statements of operations and comprehensive loss. The determination of whether inventory costs will be realizable requires the use of estimates by management. If actual market conditions are less favorable than projected by management, additional write-downs of inventory may be required.

Valuation of Goodwill

Goodwill is not amortized but is evaluated for impairment within the Company's single reporting unit on an annual basis, during the fourth quarter, or more frequently if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of the Company's reporting unit below its carrying amount. The Company performs a one-step quantitative test and records the amount of goodwill impairment, if any, as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. The Company did not record an impairment charge relating to goodwill for the years ended December 31, 2021 and 2020.

Accrued Expenses

The Company's process of determining accrued expense for a financial period-end involves reviewing open contracts and purchase orders, communicating with personnel to identify services that have been performed for the Company and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of the actual cost. The majority of the Company's service providers invoice periodically in arrears for services performed or when contractual milestones are met. The Company estimates accrued expenses at a financial period-end based on facts and circumstances known at that time and may periodically confirm the accuracy of estimates with its service providers and make adjustments if necessary.

Leases

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement including the use of a distinct identified asset(s) and the Company's control over the use of that identified asset. Most leases are recognized on the balance sheet as right-of-use assets and lease liabilities, current and non-current, as applicable. The Company has elected not to recognize on the balance sheet leases with terms of 12 months or less. These lease costs will be expensed as incurred. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will renew. The Company monitors its plans to renew its material leases on a quarterly basis.

Right-of-use assets and lease liabilities are recorded based on the present value of lease payments over the expected remaining lease term. Certain adjustments to the right-of-use asset may be required for items such as incentives received or initial direct costs. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rate, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. In transition to ASU No. 2016-02, *Leases*, or ASC 842, the Company utilized the remaining lease term of its leases in determining the appropriate incremental borrowing rates.

In accordance with ASC 842, components of a lease should be split into three categories: lease components (e.g., land, building, etc.), non-lease components (e.g., common area maintenance, consumables, etc.), and non-components (e.g., property taxes, insurance, etc.). The fixed and in-substance fixed contract consideration (including any consideration related to non-components) must be allocated based on the respective relative fair values to the lease components and non-lease components.

Although separation of lease and non-lease components is otherwise required, certain expedients are available. Entities may elect to not separate lease and non-lease components by class of underlying asset and account for each lease component and the related non-lease component together as a single component. For new and amended real estate leases beginning in 2019 and thereafter, the Company has elected to account for each lease component and related non-lease component as a single lease component and

allocate all of the contract consideration to the lease component only. In contrast, the Company does not apply the practical expedient for embedded leases in manufacturing and supply agreements with certain of its contract manufacturing organizations and has instead allocated contract consideration between the lease and non-lease components based on their relative standalone price.

Revenue Recognition

Accounting Standards Codification, or ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606, applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, and financial instruments. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied as services are rendered.

The Company sells its product principally to a limited number of specialty distributors and specialty pharmacy providers in the U.S. These customers subsequently resell the Company's product to health care providers or dispense the product to patients. In addition to distribution agreements with customers, the Company enters into arrangements with health care providers and payers that provide for government mandated and/or privately negotiated rebates, chargebacks and discounts with respect to the purchase of our product.

Revenues from product sales are recognized when the customer obtains control of the Company's product, which typically occurs once the Company has transferred physical possession of the good to the customer. The transaction price that the Company recognizes as revenue reflects the amount it expects to be entitled to in connection with the sale and transfer of control of product to its customers. Variable consideration is only included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the time that the Company's customers take control of the product, which is when the Company's performance obligation under the sales contracts is complete, the Company records product revenues net of applicable reserves for various types of variable consideration based on the Company's estimates of channel mix. The types of variable consideration in our product revenue are as follows:

- Trade discounts and allowances
- Product returns
- Chargebacks and rebates
- Government rebates
- Commercial payer and other rebates
- Voluntary patient assistance programs

In determining the amounts of certain allowances and accruals, the Company must make significant judgments and estimates. For example, in determining these amounts, the Company estimates prescription demand from the specialty pharmacies, hospital demand, buying patterns by hospitals, hospital systems and/or group purchasing organizations and the levels of inventory held by specialty distributors and customers. Making these determinations involves analyzing third-party industry data to determine whether trends in historical channel distribution patterns will predict future product sales. The Company receives data periodically from its specialty distributors and customers on inventory levels and historical channel sales mix, and the Company considers this data when determining the amount of the allowances and accruals for variable consideration.

The amount of variable consideration is estimated by using either of the following methods, depending on which method better predicts the amount of consideration to which the Company is entitled:

a) The "expected value" is the sum of probability-weighted amounts in a range of possible consideration amounts. Under ASC 606, an expected value may be an appropriate estimate of the amount of variable consideration if the Company has many contracts with similar characteristics.

b) The "most likely amount" is the single most likely amount in a range of possible consideration amounts (i.e., the single most likely outcome of the contract). Under ASC 606, the most likely amount may be an appropriate estimate of the amount of variable consideration if the contract has only two possible outcomes (i.e., either achieve or do not achieve a threshold specified in a contract).

The method selected is applied consistently throughout the contract when estimating the effect of an uncertainty on an amount of variable consideration. In addition, the Company considers all the information (historical, current, and forecasted) that is reasonably available to the Company and shall identify a reasonable number of possible consideration amounts. The relevant factors used in this determination include, but are not limited to, current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns.

In assessing whether a constraint is necessary, the Company considers both the likelihood and the magnitude of the revenue reversal. Actual amounts of consideration ultimately received may differ from the Company's estimates. If actual results in the future vary from the Company's estimates, the Company adjusts these estimates, which would affect net product revenue and earnings in the period such variances become known. The specific considerations the Company uses in estimating these amounts related to variable consideration associated with the Company's products are as follows:

Trade Discounts and Allowances - The Company generally provides customers with discounts that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. In addition, the Company receives sales order management, data and distribution services from certain customers. To the extent the services received are distinct from the Company's sale of products to the customer, these payments are classified in selling, general and administrative expenses in the consolidated statements of operation and comprehensive loss of the Company.

Product Returns – Generally, the Company's customers have the right to return any unopened/unused product supply during the 18-month period beginning six months prior to the labeled expiration date and ending 12 months after the labeled expiration date. As the Company distributes its product and establishes historical sales over a longer period of time, the Company industry data for comparable products in the market as well as its own historical purchasing, demand and return patterns of its customers when evaluating reserves for product returns. As the Company distributes its product and establishes historical sales over a longer period of time, it will place less reliance on industry data.

At the end of each reporting period for any of our products, the Company may decide to constrain revenue for product returns based on information from various sources, including channel inventory levels and dating and sell-through data, the expiration dates of product currently being shipped, price changes of competitive products and introductions of generic products.

Chargebacks – Although the Company primarily sells products to specialty distributors in the U.S., the Company also enters into agreements with hospitals and outpatient infusion centers, either directly or through group purchasing organizations acting on behalf of their members, in connection with the purchase of product. Based on these agreements, some of the Company's customers have the right to receive a discounted price on product purchases. In the case of discounted pricing, the Company typically provides a credit to its specialty distributors customer (i.e., chargeback), representing the difference between the customer's acquisition list price and the discounted price.

Government Rebates –The Company is subject to discount obligations under state Medicaid programs and Medicare. The Company estimates our Medicaid and Medicare rebates based upon a range of possible outcomes that are probability-weighted for the estimated payer mix. These reserves are recorded in the same period the related product revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability that is included in accrued expenses on the consolidated balance sheet. Medicare, the Company also estimates the number of patients in the prescription drug coverage gap for whom it will owe an additional liability under the Medicare Part D program. The Company's liability for government rebates consists of an estimate of claims for the current quarter and estimated future claims that will be made for product sales that have been recognized as revenue but remain in distribution channel inventory at period end.

Commercial Payer and Other Rebates – The Company contracts with certain private payer organizations, primarily insurance companies and pharmacy benefit managers, for the payment of rebates with respect to utilization of NUZYRA and contracted formulary status. The Company estimates these rebates and records reserves for such estimates in the same period the related revenue is recognized. These rebates result from performance-based goals, formulary position and price increase limit allowances (price protection). The calculation of the reserve for these rebates is based on an estimate of the coverage patterns and the resulting applicable rebate rate(s) to be earned over a contractual period.

Patient Assistance – The Company offers certain voluntary patient assistance programs for prescriptions, such as co-pay assistance programs, which are intended to provide financial assistance to qualified commercially insured patients with prescription drug co-payments required by payers. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the

cost per claim that the Company expects to receive associated with product sale that has been recognized as revenue but remains in the distribution and pharmacy channel inventories at the end of each reporting period.

At the end of each reporting period, the Company adjusts its allowances for cash discounts, product returns, chargebacks, and other rebates and discounts when the Company believes actual experience may differ from current estimates.

The Company enters into collaboration agreements for research, development, manufacturing and commercial services that are within the scope of ASC 606, under which it licenses certain rights to its product candidates to third parties. The terms of these arrangements typically include payment to the Company of one or more of the following: non-refundable, upfront license fees; reimbursement of certain costs; customer option exercise fees; development, regulatory and commercial milestone payments; and royalties on net sales of licensed products. The amount of variable consideration is constrained until it is probable that the revenue is not at a significant risk of reversal in a future period. The contracts into which the Company enters generally do not include significant financing components.

As part of the accounting for these arrangements, the Company must use significant judgment to determine: (a) the transaction price under step (iii) above and (b) the timing of revenue recognition, including the appropriate measure of progress, in step (v) above. The Company uses judgment to determine whether milestones or other variable consideration, except for royalties, should be included in the transaction price, as described further below. The transaction price is allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. If a milestone or other variable consideration relates specifically to the Company's efforts to satisfy a single performance obligation or to a specific outcome from satisfying the performance obligation, the Company generally allocates the milestone amount entirely to that performance obligation once it is probable that a significant revenue reversal would not occur.

Amounts received prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion.

Licenses of intellectual property

In assessing whether a license is distinct from the other promises, the Company considers factors such as the research, development, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, the Company considers whether the collaboration partner can benefit from a license for its intended purpose without the receipt of the remaining promise(s), whether the value of the license is dependent on the unsatisfied promise(s), whether there are other vendors that could provide the remaining promise(s), and whether it is separately identifiable from the remaining promise(s). For licenses that are combined with other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

Customer options

If an arrangement is determined to contain customer options that allow the customer to acquire additional goods or services, the goods and services underlying the customer options are not considered to be performance obligations at the outset of the arrangement, as they are contingent upon option exercise. The Company evaluates the customer options for material rights, or options to acquire additional goods or services for free or at a discount. If the customer options are determined to represent or include a material right, the material right is recognized as a separate performance obligation at the outset of the arrangement. The Company allocates the transaction price to material rights based on the relative standalone selling price, which is determined based on the identified discount and the probability that the customer will exercise. Amounts allocated to a material right are not recognized as revenue until, at the earliest, the option is exercised.

Milestone payments

At the inception of each arrangement that includes milestone payments, the Company evaluates whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making

this assessment. There is considerable judgment involved in determining whether it is probable that a significant reversal of cumulative revenue would not occur. At the end of each subsequent reporting period, the Company reevaluates the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Royalties

For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all the royalty has been allocated is satisfied (or partially satisfied).

Contract costs

The Company recognizes as an asset the incremental costs of obtaining a contract with a customer if the costs are expected to be recovered. As a practical expedient, the Company recognizes the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that the Company otherwise would have recognized is one year or less. To date, the Company has not incurred any incremental costs of obtaining a contract with a customer.

Revenue Earned Under Government Contracts

If the Company concludes that some or all aspects of its government contracts represent a transaction with a customer to obtain services or goods that are an output of its ordinary activities in exchange for consideration, it accounts for those aspects of the arrangement in accordance with ASC 606. Arrangements that are entirely in the scope of other guidance are accounted for under that guidance.

The Company recognizes sales of NUZYRA under its government contracts as product revenue when control of NUZYRA is transferred, in accordance with ASC 606. It also recognizes government contract service revenue and government contract grant revenue as defined below.

Government Contract Service Revenue

Government contract service revenue is recognized as services are performed. Revenue and related reimbursable expenses are presented on a gross basis in the Company's consolidated statements of operations. The related reimbursable expenses are expensed as incurred as research and development expense.

Government Contract Grant Revenue

Government contract grant revenue is recognized as the related reimbursable expenses are incurred. The cost reimbursements that are reported as revenue is presented gross of the related reimbursable expenses in the Company's consolidated statements of operations. The related reimbursable expenses are expensed as incurred as research and development expense.

Cost of Product Revenue

Cost of product revenue consists primarily of the manufacturing costs for NUZYRA and royalties owed on net sales of NUZYRA. All manufacturing costs incurred prior to NUZYRA's approval in the U.S. on October 2, 2018 were expensed in research and development and were not included in cost of revenue.

Research and Development Expenses

Research and development expenses are charged to expense as incurred. Research and development expenses consist of the costs incurred in performing research and development activities, including personnel-related costs, stock-based compensation, facilities, research-related overhead, clinical trial costs, contracted services, manufacturing, license fees and other external costs. Research and development expenses also include gross reimbursable costs incurred through research and development services performed for the treatment of pulmonary anthrax, services performed for U.S. manufacturing onshoring and security requirements, and services performed for FDA PMRs under the BARDA contract. The Company accounts for nonrefundable advance payments for goods and services that will be used in future research and development activities as expenses when the service has been performed or when the goods have been received rather than when the payment is made.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, the Company determines deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that the Company believes that these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If the Company determines that the Company would be able to realize our deferred tax assets in the future in excess of their net recorded amount, the Company would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions in accordance with ASC 740, *Income Taxes*, or ASC 740, on the basis of a two-step process in which (1) the Company determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

The Company recognizes interest and penalties related to unrecognized tax benefits on the income tax expense line in the accompanying consolidated statement of operations. The Company has not recorded interest and penalties related to any unrecognized tax benefits in the years ended December 31, 2021 and 2020.

Stock-Based Compensation

The Company accounts for its stock-based awards in accordance with ASC 718, *Compensation—Stock Compensation*, or ASC 718, which requires all stock-based payments to employees, including grants of stock options, modifications to existing stock options, and restricted stock unit awards, to be recognized as expense based on their fair values. The Company recognizes the compensation cost of awards subject to performance-based vesting conditions over the requisite service period, to the extent achievement of the performance condition is deemed probable relative to targeted performance using the accelerated attribution method. If achievement of the performance condition is not probable, but the award will vest based on the service condition, the Company recognizes the expense over the requisite service period. A change in the requisite service period that does not change the estimate of the total compensation cost (i.e., it does not affect the grant-date fair value or quantity of awards to be recognized) is recognized prospectively over the remaining requisite service period. A change in the estimate of the quantity of the awards that are considered probable of vesting results in a cumulative catch-up of stock-based compensation expense in the period of the change in estimate. The Company expenses restricted stock unit awards to employees based on the fair value of the award on a straight-line basis over the associated service period of the award. The Company recognizes the effect of forfeitures in compensation cost when they occur.

The measurement date for non-employee awards is the date of grant. Stock-based compensation costs for non-employees are recognized as expense over the service period on a straight-line basis.

The Company estimates the fair value of its stock-based awards to employees and non-employees using the Black-Scholes option pricing model, which requires the input of assumptions, including (1) the expected volatility of stock, (2) the expected term of the award, (3) the risk-free interest rate and (4) expected dividends. The Company has estimated the expected volatility by computing its historical volatility data, using the daily closing price during the equivalent period as the calculated expected life, of its stock-based awards. The Company has estimated the expected life of its employee stock options as the average of the midpoints between vesting exercise date for each vesting-tranche and the contractual term of the options as the last available exercise date of the option. The risk-free interest rates for periods within the expected life of the option are based on the U.S. Treasury yield curve in effect during the period the options were granted.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in non-owner sources of equity of a business enterprise during a period from transactions, other events and circumstances and currently consists of net loss and changes in unrealized gains and losses on available-for-sale securities.

Segment and Geographic Information

Operating segments are defined as components of an enterprise engaging in business activities for which discrete financial information is available and regularly reviewed by the chief operating decision maker in deciding how to allocate resources and in

assessing performance. The Company views its operations and manages its business in one operating segment, and the Company operates in only one geographic segment.

Subsequent Events

The Company considers events or transactions that occur after the balance sheet date, but prior to the issuance of the financial statements to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, or ASU 2016-13. The FASB subsequently issued amendments to ASU 2016-13, which have the same effective date and transition date of January 1, 2023. These standards require that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, these standards now require allowances to be recorded instead of reducing the amortized cost of the investment. These standards limit the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. Based on the composition of our investment portfolio, accounts receivable and other financial assets, current market conditions and historical credit loss activity, the adoption of these standards is not expected to have a material effect on the Company's consolidated balance sheet, consolidated statements of operation and comprehensive loss and related disclosures.

3. Product Revenue

To date, the Company's only source of product revenue has been from NUZYRA product sales beginning in February 2019 when NUZYRA launched in the United States. The following table summarizes balances and activity in each of the product revenue allowance and reserve categories (in thousands):

	Chargebacks, discounts and fees	Government and other rebates	Returns	Patient assistance	Total
Balance at December 31, 2019	$ 299	$ 695	$ 369	$ 129	$ 1,492
Provision related to current period sales	3,160	6,091	337	371	9,959
Adjustment related to prior period sales	(8)	19	—	—	11
Credit or payments made during the period	(2,824)	(4,603)	(320)	(286)	(8,033)
Balance at December 31, 2020	$ 627	$ 2,202	$ 386	$ 214	$ 3,429
Provision related to current period sales	4,853	15,010	1,440	606	21,909
Adjustment related to prior period sales	(148)	(272)	(1,100)	24	(1,496)
Credit or payments made during the period	(4,326)	(11,742)	(257)	(505)	(16,830)
Balance at December 31, 2021	$ 1,006	$ 5,198	$ 469	$ 339	$ 7,012

4. Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of common stock outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of common share equivalents outstanding for the period determined using the treasury-stock method or the if-converted method, as applicable. For purposes of this calculation, shares of common stock issuable upon conversion of convertible debt, stock options, restricted stock units, warrants to purchase common stock, and shares issuable under the employee stock purchase plan are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

Common equivalent shares result from stock options and restricted stock units, warrants to purchase shares of common stock, common stock issuable upon conversion of convertible debt and shares issuable under the employee stock purchase plan (the proceeds of which are then assumed to have been used to repurchase outstanding stock using the treasury stock method). In addition, the assumed proceeds under the treasury stock method include the average unrecognized compensation expense of stock options that are in-the-money. This results in the "assumed" buyback of additional shares, thereby reducing the dilutive impact of stock options. The

two-class method is used for outstanding warrants as it is considered to be a participating security, and it is more dilutive than the treasury stock method.

The Company was in a net loss position as of December 31, 2021 and December 31, 2020. The following outstanding shares subject to stock options and restricted stock units, warrants to purchase shares of common stock, common stock issuable upon conversion of convertible debt and shares issuable under the employee stock purchase plan were antidilutive due to a net loss in the periods presented and, therefore, were excluded from the dilutive securities computation for the years ended December 31, 2021 and 2020 as indicated below:

	Year Ended December 31,	
	2021	2020
Excluded potentially dilutive securities (1):		
Common stock issuable under outstanding convertible notes	10,377,361	10,377,361
Shares subject to outstanding options to purchase common stock	2,051,484	1,986,442
Unvested restricted stock units	4,920,063	3,393,425
Shares subject to warrants to purchase common stock	432,240	479,002
Shares issuable under employee stock purchase plan	459,870	606,816
Totals	18,241,018	16,843,046

(1) The number of shares is based on the maximum number of shares issuable on exercise or conversion of the related securities as of the year end. Such amounts have not been adjusted for the treasury-stock method or weighted-average outstanding calculations as required if the securities were dilutive.

5. Government Contract Revenue

Biomedical Advanced Research and Development Authority

In December 2019, the Company entered into the original BARDA contract, which is a five-year contract with an option to extend to ten years. The BARDA contract could result in payments to the Company of up to approximately $303.6 million and consists of a five-year base period-of-performance and a total contract period-of-performance (base period plus option exercises) of up to ten years. The BARDA contract supports the development of NUZYRA for the treatment of pulmonary anthrax, FDA post-marketing requirements, or PMRs, associated with the initial NUZYRA approval, and an option for BARDA to procure up to 10,000 treatment courses of NUZYRA for use against potential biothreats. In September 2021, the Company and BARDA modified the original BARDA contract, herein referred to as the amended BARDA contract, to provide additional funding to expand the development of NUZYRA under an FDA Animal Efficacy Rule development program to support a supplemental New Drug Application, or sNDA, to the FDA to include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax, herein referred to as the amended option.

Under the terms of the original BARDA contract, approximately $59.4 million was awarded to the Company by BARDA in December 2019 for the development of NUZYRA for the treatment of pulmonary anthrax and the purchase of an initial 2,500 treatment courses of NUZYRA. As part of this initial $59.4 million award, the $37.9 million procurement of NUZYRA was delivered to and accepted by BARDA in June 2021, and the amount earned from this procurement was recognized in net U.S. sales of NUZYRA during the second quarter of 2021. The Company has been periodically drawing down the remaining $21.5 million of the initial award based on costs incurred during the development program.

Two additional contractual services under the original BARDA contract were initiated by BARDA in March 2020 that awarded the Company approximately $76.8 million for reimbursement of existing FDA PMRs and approximately $20.4 million for reimbursement of manufacturing-related requirements, which the Company has been drawing down based on costs incurred. This additional staged funding is expected to support all FDA PMRs associated with the approval of NUZYRA, including CABP and pediatric studies, as well as a five-year post-marketing bacterial surveillance study, and support the U.S. onshoring and security requirements of our manufacturing activities for NUZYRA.

BARDA initiated the amended option in September 2021 that awarded the Company additional funding to expand the development of NUZYRA under an FDA Animal Efficacy Rule development program to support an sNDA that will include post-exposure prophylaxis, or PEP, in addition to the treatment of pulmonary anthrax for approximately $31.6 million.

The remaining government options under the amended BARDA contract include a maximum of approximately $115.4 million to provide for three additional purchases of NUZYRA anthrax treatment courses, each of which may be exercised at BARDA's

discretion upon achievement of development milestones related to the anthrax treatment development program. The timing and trigger of future procurements will be linked to specific development milestones. The amended BARDA contract formalized the triggers for BARDA's option to purchase of the second NUZYRA procurement upon BARDA's receipt of positive top-line data from our pilot efficacy treatment study of inhalation anthrax in rabbits, which we anticipate will be available as early as the end of 2022.

The Company and BARDA also agreed under the amended contract on specific development milestones to trigger BARDA's options for the third and fourth procurements of NUZYRA anthrax treatment courses. The third procurement will be triggered by BARDA's receipt of positive top-line data in PEP and treatment of inhalation anthrax from a combination of pilot and pivotal efficacy studies in animal models, which the Company anticipates will be available in 2024. The fourth procurement will be triggered by the Company's receipt of sNDA approval from the FDA for treatment of inhalation anthrax, which is anticipated to follow the third procurement by approximately 18-24 months.

The BARDA contract contains a number of terms and conditions that are customary for government contracts of this nature, including provisions giving the government the right to terminate the contract at any time for its convenience.

The Company evaluated the BARDA contract under ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606, and concluded that a portion of the arrangement represents a transaction with a customer. The Company identified five material promises under the BARDA contract: (i) research and development services performed for the treatment of pulmonary anthrax, (ii) the procurement of 2,500 treatment courses of NUZYRA, (iii) an option for services performed for the supplemental late-stage development of NUZYRA for treatment and prophylaxis of pulmonary anthrax, (iv) an option for services related to U.S. manufacturing onshoring and security requirements, which includes shelf-life stability extension work and regulatory activities that will benefit the manufacturing processes that support NUZYRA for the treatment of pulmonary anthrax, and (v) options to procure up to three tranches of up to 2,500 anthrax treatment courses of NUZYRA each.

In December 2019, the Company determined material promises (i) and (ii) above were performance obligations since they were distinct within the context of the contract as the services are separately identifiable from other promises within the arrangement. The Company also determined that for (i) and (ii) the transaction price included within the BARDA contract was equivalent to the standalone selling price of the services and the cost of the procurement.

The Company evaluated the material promises that contained option rights ((iii), (iv), and (v) above). The Company determined that (iii) and (iv) were not offered at a discount that is incremental to the range of discounts typically given for these goods and services, and therefore do not represent material rights. As such, options for additional services in (iii) and (iv) were not considered performance obligations at the outset of the arrangement. The Company also evaluated the future procurement option rights (v) and determined that those option rights represent a material right. As such, the optional additional NUZYRA procurements in (v) were considered performance obligations at the outset of the arrangement. The Company concluded that three performance obligations existed at the outset of the BARDA contract.

As the BARDA contract is partially within the scope of ASC 606 and partially within the scope of other guidance, the Company applied the guidance of ASC 606 to initially measure the parts of the contract to which ASC 606 is applicable. The total transaction price of the parts of the BARDA contract that existed at the outset of the contract that fall under ASC 606 was determined to be $63.6 million, inclusive of $4.2 million in variable consideration and was allocated to each of the three performance obligations based on the performance obligation's estimated relative stand-alone selling prices. As of December 31, 2021, the Company reevaluated the variable consideration of $4.2 million that is included in the transaction price and determined that the variable consideration should not be constrained as it is not probable that a significant reversal in the amount of the cumulative revenue recognized will occur in a future period. The transaction price was allocated as follows: $21.5 million to research and development services performed for the treatment of pulmonary anthrax in (i), which will be classified as government contract service revenue when recognized, $37.9 million to the procurement of 2,500 treatment courses of NUZYRA in (ii), which was classified as product revenue when recognized, and a total of $4.2 million to the options to procure up to three 2,500 treatment courses of NUZYRA in (v), which will be included within product revenue when recognized upon exercise and transfer of control of related treatment courses. The Company estimated the stand-alone selling price of the research and development services performed for the treatment of pulmonary anthrax based on the Company's projected cost of providing the services plus an applicable profit margin commensurate with observable market data for similar services. The Company estimated the stand-alone selling price of the procurement of 2,500 treatment courses of NUZYRA based on historical pricing of the Company's commercial products to similar customers. The Company estimated the stand-alone selling price of the future procurement options based on the discount that the customer would obtain when exercising the option, adjusted for any discount that the customer could receive without entering into the contract, and the likelihood that the option will be exercised.

The Company's performance obligations are either satisfied over time as work progresses or at a point in time.

The Company concluded that research and development services performed for the treatment of pulmonary anthrax in (i) would be recognized as government contract service revenue over time as the performance obligation is satisfied. Costs incurred represent work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Types of contract costs include labor, material, and third-party services.

The product procurement performance obligations ((ii) and, if any optional additional procurements are exercised from (v) above), generate revenue at a point in time, upon transfer of control of the product. As such, the related revenue for these performance obligations is recognized at a point in time as product revenue within the Company's consolidated statement of operations. As of December 31, 2021, the product procurement performance obligation (ii) was completed and $37.9 million of product revenue was earned and recognized due to the delivery and acceptance of the first procurement under the BARDA contract.

In April 2020, BARDA exercised its option to obtain manufacturing-related services under material promise (iv) and the Company is treating these services as a separate $20.4 million contract for accounting purposes since manufacturing-related services were determined at the contract outset to be optional services that did not represent a material right. The Company's manufacturing-related services are satisfied over time as work progresses.

In September 2021, BARDA exercised the amended option under the amended BARDA contract, to fund an FDA Animal Rule development program to support an sNDA for the treatment of and the PEP against pulmonary anthrax. The Company is treating these services as a separate $31.6 million contract for accounting purposes since the completion of a late-stage development program was determined at the contract outset to be optional services that did not represent a material right. The additional services added as part of the amended option were distinct and the increased transaction price is reflective of the entity's standalone selling prices of the additional promised services. The Company's late-stage development program obligations are satisfied over time as work progresses. Research and development services performed under the amended option will be recognized as government contract service revenue over time as the performance obligation is satisfied.

The Company recognized $6.6 million and $3.3 million of government contract service revenue under the BARDA contract during the twelve months ended December 31, 2021 and December 31, 2020, respectively.

As of December 31, 2021, the aggregate amount of transaction price allocated to remaining performance obligations, excluding unexercised contract options, was $39.8 million. The Company expects to recognize this amount as revenue over the next three to six years.

The Company concluded that BARDA's reimbursement for existing FDA PMRs associated with the initial NUZYRA approval was not within the scope of ASC 606 as BARDA is not receiving services as the Company's customer. The Company estimated the consideration to be allocated to government contract grant revenue based on the consideration under the BARDA contract in excess of the estimated standalone selling prices for components of the BARDA contract accounted for under ASC 606. The Company recognizes the allocated consideration for BARDA's reimbursement of existing FDA PMRs associated with the initial NUZYRA approval of $72.6 million as government contract grant revenue as the related reimbursable expenses are incurred.

The Company recognized $9.2 million and $3.4 million of government contract grant revenue under the BARDA contract during the twelve months ended December 31, 2021 and December 31, 2020, respectively.

Contract Balances

Contract assets (i.e., unbilled accounts receivable) and/or contract liabilities (i.e., customer advances and deposits) may exist at the end of each reporting period under the BARDA contract. When amounts are received prior to performance obligations being satisfied, the amounts allocated to those performance obligations are reflected as contract liabilities on the consolidated balance sheets, as deferred revenue, until the performance obligations are satisfied.

As of December 31, 2021 and 2020, $0.8 million and $0.6 million, respectively, of unbilled accounts receivable were recorded and are a component of accounts receivable, net on the Company's consolidated balance sheet.

As of December 31, 2021 and 2020, $0.8 million and $0.2 million, respectively, of deferred revenue were recorded and are a component of other current liabilities on the Company's consolidated balance sheet.

6. License and Collaboration Agreements

Tetraphase Pharmaceuticals, Inc.

On March 18, 2019, Paratek and Tetraphase Pharmaceuticals, Inc., or Tetraphase, which is now a subsidiary of La Jolla Pharmaceutical Company, entered into a License Agreement, or the Tetraphase License Agreement. Under the terms of the Tetraphase License Agreement, Paratek granted to Tetraphase a non-exclusive, worldwide, royalty-bearing license, with the right to grant sublicenses, under certain Paratek patents, to develop, make, have, use, import, offer for sale and sell the licensed product, or XERAVA, which is a drug for the treatment of complicated, intra-abdominal infections caused by bacteria, which was approved by the FDA in August 2018.

The terms of the Tetraphase License Agreement provide for Tetraphase to pay Paratek royalties at a low single digit percent on net product revenues of the licensed product sold in the U.S. Tetraphase's obligation to pay royalties with respect to the licensed product shall be retroactive to the date of the first commercial sale of the licensed product in the U.S., which occurred in February 2019. Tetraphase is currently selling XERAVA in the U.S.

The Tetraphase License Agreement will continue until the expiration of and payment by Tetraphase of all its payment obligations, which is when there are no longer any valid claims of the licensed Paratek patents that would be infringed, in the absence of a license, by a manufacture, use, or sales of the licensed product. The principal licensed patent under the Tetraphase License Agreement is expected to expire in October 2023.

The Company recognized an insignificant amount of royalty revenue for each of the years ended December 31, 2021 and December 31, 2020 under the Tetraphase License Agreement.

Zai Lab (Shanghai) Co., Ltd.

On April 21, 2017, Paratek Bermuda Ltd., a former wholly-owned subsidiary of Paratek Pharmaceuticals, Inc., and Zai Lab (Shanghai) Co., Ltd., or Zai, entered into a License and Collaboration Agreement, or the Zai Collaboration Agreement. On December 18, 2019 Paratek Bermuda Ltd. assigned its rights under the Agreement to Paratek Pharmaceuticals, Inc. Under the terms of the Zai Collaboration Agreement, Paratek granted Zai an exclusive license to develop, manufacture and commercialize omadacycline, or the licensed product, in the People's Republic of China, Hong Kong, Macau and Taiwan, or the Zai territory, for all human therapeutic and preventative uses other than biodefense. Zai is responsible for the development, manufacturing and commercialization of the licensed product in the Zai territory, at its sole cost with certain assistance from Paratek.

Under the terms of the Zai Collaboration Agreement, Paratek earned an upfront cash payment of $7.5 million in April 2017, $5.0 million upon approval by the FDA of a NDA submission in the CABP indication in October 2018 and $3.0 million upon submission of the first regulatory approval application for a licensed product in the People's Republic of China in December 2019, and a $6.0 million milestone payment upon regulatory approval for a licensed product in the People's Republic of China on December 16, 2021. Paratek is eligible to receive up to $40.5 million in potential future commercial milestone payments. The terms of the Zai Collaboration Agreement also provide for Zai to pay Paratek tiered royalties at a low double digit to mid-teen percent on net sales of the licensed product in the Zai territory.

The Zai Collaboration Agreement will continue, on a region-by-region basis, until the expiration of and payment by Zai of all Zai's payment obligations, which is until the later of: (i) the abandonment, expiry or final determination of invalidity of the last valid claim within the Paratek patents that covers the licensed product in the region in the Zai territory in the manner that Zai or its affiliates or sublicensees exploit the licensed product or intend for the licensed product to be exploited; or (ii) 2032, the eleventh anniversary of the first commercial sale of such licensed product in such region.

The Company evaluated the Zai Collaboration Agreement under ASC 606. The Company determined that there were six material promises under the Zai Collaboration Agreement: (i) an exclusive license to develop, manufacture and commercialize omadacycline in the Zai territory, (ii) the initial technology transfer (iii) a transfer of certain materials and materials know-how, (iv) optional manufacturing services, (v) optional regulatory support and (vi) optional commercialization support. The Company determined that the exclusive license and initial technology transfer were not distinct from one another, as the license has limited value without the transfer of the Company's technology, which will allow Zai to develop the manufacturing process and commercialize omadacycline in the Zai territory in the timeline anticipated under the agreement. Without the technology transfer, Zai would incur additional costs to recreate the Company's know-how. Therefore, the license and initial technology transfer are combined as a single performance obligation. The transfer of materials is a single distinct performance obligation. The Company evaluated the option rights for manufacturing services, regulatory support and commercialization support to determine whether they represent or include material rights to Zai and concluded that the options were not issued at a discount, and therefore do not represent material rights. As such, they are not considered performance obligations at the outset of the arrangement.

Based on these assessments, the Company determined that two performance obligations existed at the outset of the Zai Collaboration Agreement: (i) the exclusive license combined with the initial technology transfer and (ii) the transfer of certain materials. The Company has recognized $21.5 million in milestone revenue under the Zai Collaboration Agreement as of December 31, 2021. As the performance obligation to deliver the license was satisfied in 2007 and research and development services completed by December 2010, all milestone payments are recognized as revenue when the risk of significant reversal is resolved, generally when the milestone event occurs. Therefore, the $6.0 million milestone payment upon regulatory approval of NUZYRA in the People's Republic of China was recognized in December 2021.

There was no deferred revenue as of December 31, 2021 and December 31, 2020 under the Zai Collaboration Agreement.

Almirall, LLC

In July 2007, the Company and Warner Chilcott Company, Inc. (which became a part of Allergan plc, or Allergan), entered into a collaborative research and license agreement under which the Company granted Allergan an exclusive license to research, develop, manufacture and commercialize tetracycline products for use in the U.S. for the treatment of acne and rosacea. In September 2018, Allergan assigned to Almirall, its rights under the collaboration agreement, or the Almirall Collaboration Agreement. Since Allergan did not exercise its development option with respect to the treatment of rosacea prior to initiation of a Phase 3 trial for the product, the license grant to Allergan, which was assigned to Almirall, converted to a non-exclusive license for the treatment of rosacea as of December 2014.

Under the terms of the Almirall Collaboration Agreement, Almirall is responsible for and is obligated to use commercially reasonable efforts to develop and commercialize tetracycline compounds that are specified in the agreement for the treatment of acne. The Company has agreed during the term of the Almirall Collaboration Agreement not to directly or indirectly develop or commercialize any tetracycline compounds in the U.S. for the treatment of acne, and Almirall has agreed during the term of the Almirall Collaboration Agreement not to directly or indirectly develop or commercialize any tetracycline compound included as part of the agreement for any use other than as provided in the Almirall Collaboration Agreement.

In February 2020, the Company finalized a license agreement with Almirall granting the Company exclusive rights to develop, manufacture and commercialize sarecycline outside of the U.S., including rights of reference to Almirall's clinical data thus formalizing the Company's rights to develop, manufacture and commercialize sarecycline in the rest of the world. In connection with that license, the Company then exclusively licensed Almirall pursuant to the Almirall China License Agreement, the rights to develop, manufacture and commercialize sarecycline in the greater China region. Almirall currently holds a nonexclusive license to develop and commercialize sarecycline for the treatment of rosacea in the U.S., and in the U.S., Paratek cannot grant rights on back-up compounds, lead candidate(s), or products licensed to Almirall for rosacea.

The Almirall Collaboration Agreement contains two performance obligations: (i) an exclusive license to research, develop and commercialize tetracycline products for use in the U.S. for the treatment of acne and rosacea and (ii) research and development services. The performance obligation to deliver the license was satisfied upon execution of the Almirall Collaboration Agreement in July 2007. All research and development services were completed by December 2010. The options provided to Almirall for additional development services do not provide Almirall with a material right as these services will not be provided at a significant or incremental discount. As such, the option services are not performance obligations. As the performance obligation to deliver the license was satisfied in 2007 and research and development services were completed by December 2010, all subsequent milestone payments are recognized as revenue when the risk of significant reversal is resolved, generally when the milestone event occurs. The Company recognized all Almirall milestones in prior years. There are no milestones left to be recognized under the Almirall Collaboration Agreement.

Almirall is also obligated to pay the Company tiered royalties, ranging from the mid-single digits to the low double digits, based on net sales of tetracycline compounds developed under the Almirall Collaboration Agreement, with a standard royalty reduction post patent expiration for such product for the remainder of the royalty term.

Royalty payments are recognized when the sales occur. The Company recognized $2.0 million and $1.3 million of royalty revenue recognized for sales of SEYSARA in the U.S. by Almirall for the years ended December 31, 2021 and December 31, 2020, respectively, under the Almirall Collaboration Agreement. During the fourth quarter of 2021 and 2020, royalty revenue recognized for sales of SEYSARA in the U.S. was estimated using third-party data and an approximation of discounts and allowances to calculate net product sales, to which the Company then applied the applicable royalty percentage specified in the Almirall Collaboration Agreement. Differences between actual and estimated royalty revenues will be adjusted for in the period in which they become known, which is expected to be the following quarter.

In February 2020, we entered into (i) an ex-U.S. license agreement with Almirall, or the Ex-U.S. License, under which Almirall granted to us an exclusive license in and to certain technology owned or in-licensed by Almirall or its affiliates in order to research,

develop, manufacture and commercialize sarecycline for the treatment of acne in all countries other than the U.S. and (ii) a license agreement with Almirall that is specific to China, or the China License, under which we granted to Almirall an exclusive license in and to certain technology owned or in-licensed by us or our affiliates in order to research, develop and commercialize sarecycline for the treatment of acne in the greater China region.

Under the terms of the China License, Almirall is responsible for and is obligated to use commercially reasonable efforts to develop and commercialize sarecycline for the treatment of acne, including requirements to (i) file an Investigational New Drug Application (or analogous foreign submission) for sarecycline for the treatment of acne in the greater China region in calendar year 2020, (ii) receive regulatory approval for sarecycline for the treatment of acne in the greater China region within seven years following such submission and (iii) commercialize sarecycline for the treatment of acne in the greater China region within eighteen months after obtaining regulatory approval. If Almirall does not satisfy the diligence requirements set forth in subclauses ii or iii above, we may terminate the China License.

In connection with the Ex-U.S. License, the Company pays Almirall, on a country-by-country and product-by-product basis, (i) for eight years following the first commercial sale of a sarecycline product in a country, a royalty in the middle-single digits on its or its affiliates' nets sales of sarecycline products outside of the U.S., subject to certain standard reductions, and (ii) for fifteen years following the first commercial sale of a sarecycline product in a country, a percentage of the consideration (e.g., milestones, royalties) we receive from sublicensees in connection with developing and commercializing sarecycline outside of the U.S., which ranges from one-fifth to one-half of such consideration, subject to certain standard reductions. In connection with the China License, for fifteen years following the first commercial sale of a sarecycline product in China, Almirall pays the Company a royalty in the high-single digits on their, their affiliates' or their sublicensees' net sales of sarecycline products in the greater China region, subject to certain standard reductions.

Tufts University

In February 1997, the Company and Tufts University, or Tufts, entered into a license agreement under which the Company acquired an exclusive license to certain patent applications and other intellectual property of Tufts related to the drug resistance field to develop and commercialize products for the treatment or prevention of bacterial or microbial diseases or medical conditions in humans or animals or for agriculture. The Company subsequently entered into eleven amendments to that agreement, collectively the Tufts License Agreement, to include patent applications filed after the effective date of the original license agreement, to exclusively license additional technology from Tufts, to expand the field of the agreement to include disinfectant applications, and to change the royalty rate and percentage of sublicense income paid by the Company to Tufts under sublicense agreements with specified sublicensees. The Company is obligated under the Tufts License Agreement to provide Tufts with annual diligence reports and a business plan and to meet certain other diligence milestones. The Company has the right to grant sublicenses of the licensed rights to third parties, which will be subject to the prior approval of Tufts unless the proposed sublicensee meets a certain net worth or market capitalization threshold. The Company is primarily responsible for the preparation, filing, prosecution and maintenance of all patent applications and patents covering the intellectual property licensed under the Tufts License Agreement at its sole expense. The Company has the first right, but not the obligation, to enforce the licensed intellectual property against infringement by third parties.

The Company issued Tufts 1,024 shares of the Company's common stock on the date of execution of the original license agreement, and the Company was required to make certain payments of up to $0.3 million to Tufts upon the achievement by products developed under the agreement of specified development and regulatory approval milestones. The Company made a payment of $50,000 to Tufts for achieving the first milestone following commencement of the Phase 3 clinical trial for omadacycline and a payment of $100,000 to Tufts for achieving the second milestone following its first marketing application submitted in the U.S. The third, and final, payment of $150,000 became due upon FDA approval of omadacycline in October 2018. The Company is also obligated to pay Tufts a minimum royalty payment in the amount of $25,000 per year. In addition, the Company is obligated to pay Tufts royalties based on gross sales of products, as defined in the agreement, ranging in the low single digits depending on the applicable field of use for such product sale. If the Company enters into a sublicense under the agreement, based on the applicable field of use for such product, the Company will be obligated to pay Tufts (i) a percentage, ranging from 10% to 14% (ten percent to fourteen percent) for compounds other than omadacycline, and a percentage in the single digits for the compound omadacycline, of that portion of any sublicense issue fees or maintenance fees received by the Company that are reasonably attributable to the sublicense of the rights granted to the Company under the Tufts License Agreement and (ii) the lesser of (a) a percentage, ranging from the low tens to the high twenties based on the applicable field of use for such product, of the royalty payments made to the Company by the sublicensee or (b) the amount of royalty payments that would have been paid by the Company to Tufts if it had sold the product.

Unless terminated earlier, the Tufts License Agreement will expire at the same time as the last-to-expire patent in the patent rights licensed to the Company under the agreement and after any such expiration the Company will continue to have an exclusive, fully-paid-up license to such intellectual property licensed from Tufts. Tufts has the right to terminate the agreement upon 30 days' notice should the Company fail to make a material payment under the Tufts License Agreement or commit a material breach of the agreement and not cure such failure or breach within such 30-day period, or if, after the Company has started to commercialize a product under the Tufts License Agreement, the Company ceases to carry on its business for a period of 90 consecutive days. The Company has the right to terminate the Tufts License Agreement at any time upon 180 days' notice. Tufts has the right to convert the Company's exclusive license to a non-exclusive license if the Company does not commercialize a product licensed under the agreement within a specified time period.

The Company incurred $1.6 million and $0.6 million of royalty expense for the years ended December 31, 2021 and December 31, 2020 under the Tufts License Agreement.

Past Collaborations

Novartis Pharma AG

In September 2009, the Company and Novartis International Pharmaceutical Ltd., or Novartis, which merged into Novartis Pharma AG, a wholly owned subsidiary of Novartis AG, entered into a Collaborative Development, Manufacture and Commercialization License Agreement, or the Novartis Agreement, which provided Novartis with a global, exclusive patent and technology license for the development, manufacturing and marketing of omadacycline. The Novartis Agreement was terminated by Novartis without cause in June 2011 and the termination was effective 60 days later. The Company and Novartis subsequently entered in a letter agreement in January 2012, or the Novartis Letter Agreement, as amended, pursuant to which we reconciled shared development costs and expenses and granted Novartis a right of first negotiation with respect to commercialization rights of omadacycline following approval of omadacycline from the FDA, European Medicines Agency, or EMA, or any regulatory agency, but only to the extent the Company had not previously granted such commercialization rights related to omadacycline to another third-party as of any such approval. The Company also agreed to pay Novartis a 0.25% royalty, to be paid from net sales received by the Company in any country following the launch of omadacycline in that country and continuing until the later of expiration of the last active valid patent claim covering such product in the country of sale and 10 years from the date of first commercial sale in such country. The first royalty payment became payable as of March 31, 2019. The amended Novartis Letter Agreement resulted in a long-term liability in the amount of $2.8 million and $3.1 million as of December 31, 2021 and December 31, 2020, respectively, included within "Other Liabilities" on the Company's consolidated balance sheet. In addition, short-term liabilities included within "Other Current Liabilities" on our consolidated balance sheet as of December 31, 2021 and December 31, 2020 represent the portion of royalty payments due to Novartis within twelve months of each balance sheet date. There are no other payment obligations to Novartis under the Novartis Agreement or the amended Novartis Letter Agreement.

7. Cash and Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the consolidated statement of cash flows that sum to the total of the same such amounts shown in the consolidated statement of cash flows (in thousands):

	December 31,	
	2021	2020
Cash and cash equivalents	$ 80,367	$ 105,157
Short-term restricted cash	125	891
Long-term restricted cash	125	-
Total cash, cash equivalents and restricted cash shown on the consolidated statement of cash flows	$ 80,617	$ 106,048

Short-term restricted cash

On May 1, 2019, the Company deposited $4.0 million into an interest reserve account in conjunction with the funding of a royalty-backed loan agreement, or the Royalty-Backed Loan Agreement, executed with Healthcare Royalty Partners III, L.P. Payments of interest under the Royalty-Backed Loan Agreement are made quarterly using royalty payments received since the immediately preceding payment date under the Almirall Collaboration Agreement. On each interest payment date, if the royalty payments received do not equal the total interest due for the respective quarter, the Company covered the balance of the interest payment due from the interest reserve account. Refer to Note 16, *Long-Term Debt,* for further details. There was no restricted cash related to the Royalty-Backed Loan Agreement as of December 31, 2021. As of December 31, 2020, restricted cash of $0.6 million represents the estimated amount that is expected to be paid to Healthcare Royalty Partners III, L.P. out of the interest reserve account within the next twelve months.

The Company leases its Boston, Massachusetts office space under a non-cancelable operating lease. Refer to Note 18, *Commitments and Contingencies*, for further details. In accordance with the lease, the Company has a cash-collateralized irrevocable standby letter of credit in the amount of $0.3 million as of both December 31, 2021 and 2020, naming the landlord as beneficiary. In accordance with the amendment, the cash-collateralized irrevocable standby letter of credit was reduced to an insignificant amount during the twelve months ended December 31, 2021 and reclassified as long-term restricted cash as of December 31, 2021. The portion of the letter of credit expected to be received in the next twelve months is classified as short-term restricted cash as of December 31, 2021. Refer to Note 18, *Commitments and Contingencies*, for further details.

Long-term restricted cash

As of December 31, 2021, long-term restricted cash included the insignificant cash-collateralized irrevocable standby letter of credit described above.

8. Marketable Securities

The following is a summary of available-for-sale securities as of December 31, 2021 and 2020 (in thousands):

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
December 31, 2021				
U.S. treasury securities	$ 15,116	$ —	$ (9)	$ 15,107
Total	$ 15,116	$ —	$ (9)	$ 15,107
December 31, 2020				
U.S. treasury securities	$ 20,001	$ 4	$ —	$ 20,005
Total	$ 20,001	$ 4	$ —	$ 20,005

No available-for-sale securities held as of December 31, 2021 and 2020 had remaining maturities greater than twelve months.

9. Fixed Assets, Net

Fixed assets consist of the following (in thousands):

	Estimated In Years	December 31, 2021	December 31, 2020
Office equipment	5	$ 549	$ 866
Machinery and equipment	5	788	567
Computer equipment	3	371	412
Computer software	3	348	798
Leasehold improvements		813	920
Construction in progress		188	188
Gross fixed assets		3,057	3,751
Less: Accumulated depreciation and amortization		(2,263)	(2,787)
Net fixed assets		$ 794	$ 964

In addition, leasehold improvements are amortized over the shorter of the lease term or the estimated useful economic lives of the related assets.

Depreciation expense for the years ended December 31, 2021 and 2020 was $0.4 million and $0.5 million, respectively, which is included in selling, general and administrative and research and development expense on the accompanying consolidated statements of operations and comprehensive loss.

During the year ended December 31, 2021, $0.9 million of fully depreciated fixed assets were disposed of. No such disposals occurred during the year ended December 31, 2020.

10. Inventories, Net

The following table presents inventories (in thousands):

	December 31,	
	2021	2020
Raw materials	$ 1,082	$ 720
Work in process	24,675	12,925
Finished goods	13,030	9,638
Total inventories	$ 38,787	$ 23,283

When recorded, inventory reserves reduce the carrying value of inventories to their net realizable value. The Company reviews inventories on hand at least quarterly and records provisions for estimated excess, slow-moving and obsolete inventory, as well as inventory with a carrying value in excess of net realizable value. No inventory reserves existed as of December 31, 2021 and 2020.

Long-term inventory consists of raw materials, work in process, and finished goods.

	December 31,	
	2021	2020
Balance sheet classification:		
Inventories, net	$ 11,020	$ 14,555
Long term inventories, net	27,767	8,728
Total inventories	$ 38,787	$ 23,283

11. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	December 31,	
	2021	2020
Accrued compensation	$ 8,935	$ 7,783
Accrued sales allowances	7,012	3,429
Accrued interest	2,365	1,768
Accrued commercial	1,654	2,254
Accrued contract research	1,019	591
Accrued professional fees	781	1,209
Accrued manufacturing	670	972
Accrued legal costs	342	580
Accrued inventory	307	2,023
Accrued other	361	217
Total	$ 23,446	$ 20,826

12. Capital Stock

On June 9, 2021, the Company's shareholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock of the Company to 200,000,000 shares from 100,000,000 shares. Subsequent to such approval, on June 10, 2021, the Company filed the Certificate of Amendment to its Amended and Restated Certificate of Incorporation with the Delaware Secretary of State, giving effect to the authorized share increase.

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders and there are no cumulative rights. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by the board of directors out of funds legally available for that purpose. In the event of liquidation of the Company, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock then outstanding. The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. The outstanding shares of common stock are fully paid and non-assessable.

On May 17, 2021, the Company entered into an At-the-Market Sales Agreement, or the Sales Agreement, with BTIG, LLC, or BTIG, under which it may offer and sell its common stock having aggregate sales proceeds of up to $50.0 million from time to time through BTIG as its sales agent. Sales of the Company's common stock through BTIG, if any, will be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, including without limitation sales made directly on the Nasdaq Global Market or any other existing trading market for its common stock. BTIG will use commercially reasonable efforts to sell the Company's common stock from time to time, based upon instructions from the Company (including any price, time or size limits or other customary parameters or conditions the Company may impose). The Company will pay BTIG a commission of 3% of the gross sales proceeds of any common stock sold through BTIG under the Sales Agreement. The Company has also provided BTIG with customary indemnification rights.

The Company is not obligated to make any sales of common stock under the Sales Agreement. The offering of shares of the Company's common stock pursuant to the Sales Agreement will terminate upon the earlier of (i) the sale of all common stock subject to the Sales Agreement, or (ii) termination of the Sales Agreement in accordance with its terms.

The Company sold 3,175,657 shares of our common stock pursuant to the Sales Agreement for $18.6 million in proceeds, after deducting an insignificant amount of commissions. As of February 28, 2022, $29.5 million remains available for sale under the Sales Agreement.

On May 11, 2020, the Company filed a registration statement on Form S-3 with the SEC, as amended on June 19, 2020 and declared effective on July 9, 2020, to sell certain of its securities in an aggregate amount of up to $250.0 million. As of December 31, 2021, $230.8 million remains available on this shelf registration statement, with $30.8 million reserved for potential sales under the Sales Agreement.

Warrants to Purchase Common Stock

Warrants to purchase preferred stock with intrinsic value issued to HBM Healthcare Investments (Cayman) Ltd., Omega Fund III, L.P., and K/S Danish BioVenture, all beneficial owners of more than 5% of the Company's common stock, were exchanged for 9,614 warrants to purchase common stock in connection with the Merger. 9,614 warrants to purchase common stock have an exercise price of $0.15 per share and were exercised in 2021.

In connection with the Loan and Security Agreement, dated September 30, 2015, as subsequently amended, or the Original Hercules Loan Agreement, into which the Company entered with Hercules Technology II, L.P. and Hercules Technology III, L.P., together, Hercules, and certain other lenders and Hercules Technology Growth Capital, Inc. (as agent), the Company issued to each of Hercules Technology II, L.P. and Hercules Technology III, L.P. a warrant to purchase 16,346 shares of its common stock (32,692 shares of common stock in total) at an exercise price of $24.47 per share, or the Hercules Warrants, on September 30, 2015, which expire five years from issuance or at the consummation of a Public Acquisition, as defined in each of the Hercules Warrant agreements. The Hercules Warrants expired on September 30, 2020.

In connection with the second amendment to the Original Hercules Loan Agreement on December 12, 2016, the Company issued to each of Hercules Technology II, L.P. and Hercules Technology III, L.P. a warrant to purchase 18,574 shares of its common stock (37,148 shares of common stock in total) at an exercise price of $13.46 per share, or the Second Amendment Warrants. The Second Amendment Warrants expired in 2021.

In connection with the borrowing under the Original Hercules Loan Agreement on June 27, 2017, the Company issued an additional warrant to Hercules Capital, Inc. to purchase 5,374 shares of its common stock at an exercise price of $23.26 per share, or the Additional Warrant.

In connection with the fifth amendment to the Original Hercules Loan Agreement, on August 1, 2018, the Company issued to Hercules Capital, Inc. a warrant to purchase up to 19,627 shares of its common stock at an exercise price of $10.19 per share, or the Fifth Amendment Warrant.

In connection with the First Amendment, on August 5, 2020, the Company issued to Hercules Capital, Inc. a warrant to purchase up to 407,239 shares of its common stock at an exercise price of $4.42 per share, or the First Amendment Warrant.

The Additional Warrant, Fifth Amendment Warrant, and the First Amendment Warrant, collectively referred to as the Warrants, may be exercised on a cashless basis. The Warrants are exercisable for a term beginning on the date of issuance and ending on the earlier to occur of five years (or seven years, in the case of the Fifth Amendment Warrant and the First Amendment Warrant) from the date of issuance or the consummation of certain acquisitions of the Company as set forth in the various agreements for the Warrants.

13. Preferred Stock

The authorized capital stock of the Company consists of 5,000,000 shares of undesignated preferred stock, par value $0.001 per share, and the common stock described in Note 12, *Common Stock*.

The Company's Board of Directors has the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock, in one or more series, and to fix the rights, preferences, privileges and restrictions granted to or imposed upon the preferred stock. Any or all of these rights may be greater than the rights of the common stock.

There are no shares of preferred stock issued or outstanding as of December 31, 2021 and 2020.

14. Fair Value Measurements

Financial instruments, including cash, cash equivalents, restricted cash, money market funds, U.S. treasury securities, accounts receivable, accounts payable, and accrued expenses are carried on the consolidated financial statements at amounts that approximate fair value. The fair value of the Company's long-term debt is determined using current applicable rates for similar instruments as of the balance sheet date. The fair value of the Company's debt (including the Notes as defined in Note 16, *Long-Term Debt)*, is $238.3 million as of December 31, 2021 and $223.5 million as of December 31, 2020. The fair value of the Company's debt was determined using Level 2 inputs. Fair values are based on assumptions concerning the amount and timing of estimated future cash flows and assumed discount rates, reflecting varying degrees of perceived risk.

The following tables present information about the Company's financial assets and liabilities that have been measured at fair value as of December 31, 2021 and December 31, 2020 and indicate the fair value hierarchy of the valuation inputs utilized to determine such fair value. In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities (in thousands):

Description	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	December 31, 2021
Assets:				
U.S. treasury securities	$ 15,107	$ —	$ —	$ 15,107
Total Assets	$ 15,107	$ —	$ —	$ 15,107

Description	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	December 31, 2020
Assets:				
U.S. treasury securities	$ 20,005	$ —	$ —	$ 20,005
Total Assets	$ 20,005	$ —	$ —	$ 20,005

15. Stock-Based and Incentive Compensation

Certain employees, officers, directors, and consultants are granted options and other equity instruments to purchase common shares under plans adopted in previous years. All awards are now made under the 2015 Plan, the 2015 Inducement Plan and the 2017 Inducement Plan. All shares cancelled or forfeited during the years ended December 31, 2021 and 2020 under older plans became available for grant under the 2015 Plan.

Incentive stock and non-statutory stock options must be granted with exercise prices of not less than the fair market value of the common stock on the date of grant. Incentive stock options granted to a stockholder owning more than 10% of voting stock of the Company must have an exercise price of not less than 110% of the fair market value of the common stock on the date of grant. The Company determined the fair market value of common stock until the Company became publicly traded. Stock options are generally granted with terms of up to ten years and vest over a period of one to four years.

2015 Plans

The Company's Board of Directors adopted a 2015 Inducement Plan in accordance with Nasdaq Rule 5635(c)(4), reserving 360,000 shares of common stock solely for the grant of inducement stock options to new employees, and granting 353,500 stock options under the plan to executives and employees of the Company under the 2015 Inducement Plan with time vesting provisions ranging from one to four years.

The Company has not made any additional grants under the 2015 Inducement Plan since December 31, 2015. Although the Company does not currently anticipate the issuance of additional stock options under the 2015 Inducement Plan, 341,500 shares remain available for grant under that plan, as well as any shares underlying outstanding stock options that may become available for

grant pursuant to the plan's terms. It is therefore possible that the Company may, based on the business and recruiting needs of the Company, issue additional stock options under the 2015 Inducement Plan.

The Company's Board of Directors also adopted the 2015 Plan, which was approved by Company stockholders at the Annual Meeting held on June 9, 2015, reserving 1,200,000 shares of common stock for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other stock awards to directors, officers, employees and consultants. The 2015 Plan is intended to be the successor to and continuation of the 2006 Plan and the 2014 Plan, or collectively, the Prior Plans. When the 2015 Plan became effective, no additional stock awards were granted under the Prior Plans, although all outstanding stock awards granted under the Prior Plans will continue to be subject to the terms and conditions as set forth in the agreements evidencing such stock awards and the terms of the Prior Plans.

The number of shares available for issuance under the 2015 Plan was initially 1,200,000 shares, plus the number of shares that again become available for grant as a result of forfeited or terminated awards or shares withheld in satisfaction of the exercise price of withholding obligations associated with awards under the Prior Plans, not to exceed 2,000,000 shares. 2,585,590, 2,325,828 , and 1,991,387 shares of common stock were automatically added to the shares authorized for issuance under the 2015 Plan on January 1, 2022, January 1, 2021, and January 1, 2020, respectively, pursuant to a "Share Reserve" provision contained in the 2015 Plan. The Share Reserve will automatically increase on January 1st of each year, for the period commencing on (and including) January 1, 2016 and ending on (and including) January 1, 2025, in an amount equal to 5% of the total number of shares of common stock outstanding on December 31st of the preceding calendar year. Notwithstanding the foregoing, the Board of Directors of the Company may act prior to January 1st of a given year to provide that there will be no January 1st increase in the Share Reserve for such year or that the increase in the Share Reserve for such year will be a lesser number of shares of common stock than would otherwise occur.

During the year ended December 31, 2021, the Company's Board of Directors granted 82,617 stock options and 3,674,675 RSUs to directors, executives, and employees of the Company under the 2015 Plan. The stock option awards are subject to time-based vesting over a period of one to four years. The RSU awards granted to executives in March 2021 are subject to time-based vesting, with 1/3 of the shares vesting on December 10, 2021, and an additional 1/3 of the shares vesting on the succeeding two anniversaries of such date. The RSU awards granted to non-executive employees of the Company during March 2021 are subject to time-based vesting, with 1/3 of the shares vesting on February 18, 2022, and an additional 1/3 of the shares vesting on the succeeding two anniversaries of such date.

The March 2021 grants also included PRSUs awarded to certain executives and employees of the Company, which will vest as follows: (a) 25/55 on certain net product revenue achievements, (b) 10/55 on certain business achievements, (c) 10/55 on certain manufacturing achievements and (d) 10/55 on achievement of certain clinical milestones related to NUZYRA. Since the Company believes it is probable that milestones (a) and (b) will be achieved, the Company recognized a cumulative catch-up of $1.2 million and $0.3 million of stock-based compensation expense, respectively, during the twelve months ended December 31, 2021 using the accelerated attribution method. Milestone (c) was achieved and vested in May 2021, which resulted in a cumulative catch-up of $1.2 million of stock-based compensation expense during the twelve months ended December 31, 2021

366,106 RSUs and 42,401 stock options granted under the 2015 Plan were cancelled, forfeited or expired during the year ended December 31, 2021.

2017 Inducement Plan

In June 2017, the Company's Board of Directors adopted the 2017 Inducement Plan in accordance with Nasdaq Rule 5635(c)(4), reserving 550,000 shares of common stock solely for the grant of inducement stock options to employees entering into employment or returning to employment after a bona fide period of non-employment with the Company. In October 2018, the Company's Board of Directors adopted an amendment in accordance with Nasdaq Listing Rule 5635(c)(4) to increase the aggregate number of shares of common stock that may be issued pursuant to awards under the 2017 Inducement Plan from 550,000 shares to 1,050,000 shares.

During the year ended December 31, 2021, the Company's Board of Directors granted 201,200 stock options and 93,600 RSU awards to employees of the Company under the 2017 Inducement Plan. The stock option awards are generally subject to time-based vesting over a period of one to four years. The RSU awards are generally subject to time-based vesting, with 100% of the shares of common stock subject to the RSU award vesting three years from the grant date. 11,100 RSUs and 139,565 stock options granted under the 2017 Inducement Plan were forfeited during the year ended December 31, 2021.

Total shares available for future issuance under the 2015 Plan, 2015 Inducement Plan and 2017 Inducement Plan are 316,435, 341,500 and 284,598 shares, respectively, as of December 31, 2021.

A summary of stock option activity and related information through December 31, 2021 follows:

	Number of Shares	Weighted Average Exercise Price	Weighted–Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (in thousands)
Outstanding				
Balances at December 31, 2020	1,986,442	$ 11.93	5.63	$1,748
Granted	283,817	6.58		
Exercised	(1,809)	3.69		
Cancelled or forfeited	(212,461)	14.56		
Expired	(4,505)	13.20		
Balances at December 31, 2021	2,051,484	$ 10.92	5.12	$ 303
Exercisable				
December 31, 2021	1,741,574	$ 11.85	4.46	$ 240

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair market value of the common stock for the options that were in the money at December 31, 2021 and 2020.

During the years ended December 31, 2021 and 2020, the Company granted stock options to purchase an aggregate of 283,817 shares and 147,950 shares of its common stock, under the equity plans described above, respectively, with weighted-average grant date fair values of options granted of $3.73 and $2.46 and respectively.

The total intrinsic value of stock options exercised was insignificant for the year ended December 31, 2021 and December 31, 2020.

Restricted Stock Units

The following is a summary of restricted stock unit activity for the year ended December 31, 2021:

	Number of Shares	Weighted Average Grant Date Fair Value per Share
Unvested balance at December 31, 2020	3,393,425	$ 4.41
Granted	3,768,275	6.86
Released	(1,864,431)	5.42
Forfeited	(377,206)	5.45
Unvested balance at December 31, 2021	4,920,063	$ 5.82

During the year ended December 31, 2021 the Company granted 3,768,275 restricted stock units with a weighted-average grant date fair value per share of $6.86. During the year ended December 31, 2020 the Company granted 2,587,550 restricted stock units with a weighted-average grant date fair value per share of $3.56. The aggregate fair value of restricted shares that vested during the years ended December 31, 2021 and 2020 was $10.1 million and $10.2 million, respectively.

Stock-Based Compensation Expense

For stock options issued to employees and members of the Board of Directors, the Company estimates the grant date fair value of each option using the Black-Scholes option-pricing model. The use of the Black-Scholes option-pricing model requires management to make assumptions with respect to the expected term of the option, the expected volatility of the common stock consistent with the expected life of the option, risk-free interest rates and expected dividend yields of the common stock.

The relevant data used to determine the value of the stock option grants is as follows:

	Year Ended December 31,	
	2021	2020
Volatility	63.1%	63.1%
Weighted average risk-free interest rate	0.8%	0.9%
Expected dividend yield	0.0%	0.0%
Expected life of options (in years)	5.9	5.7

The following table presents stock-based compensation expense included in the Company's consolidated statements of operations (in thousands):

	Year Ended December 31,	
	2021	2020
Research and development expense	$ 2,436	$ 2,130
Selling, general and administrative expense	11,900	8,118
Total stock-based compensation expense	$ 14,336	$ 10,248

Total unrecognized stock-based compensation expense for all stock-based awards was $17.8 million at December 31, 2021. This amount will be recognized over a weighted-average period of 1.8 years.

2009 Employee Stock Purchase Plan

In June 2009, at the annual meeting of stockholders, the stockholders of the Company approved the 2009 Employee Stock Purchase Plan, or the 2009 ESPP. The Company's 2009 ESPP is designed to allow eligible employees of the Company to purchase shares of common stock through periodic payroll deductions and during specified offering periods under the plan. The price of common stock purchased under the 2009 ESPP is equal to 85% of the lower of the fair market value of the common stock on the commencement date of each offering period or the specified purchase date. As of December 31, 2021 and 2020, 36,539 shares were available for issuance under the 2009 ESPP. Since the Merger, the Company has not made the 2009 ESPP available to employees.

2018 Employee Stock Purchase Plan

The Company's Board of Directors adopted, and in June 2018 Company's stockholders approved, the Paratek Pharmaceuticals, Inc. 2018 Employee Stock Purchase Plan, or the 2018 ESPP. The 2018 ESPP was amended in October 2018 to change the commencement dates of the offering periods. The maximum aggregate number of shares of the Company's common stock that may be purchased under the 2018 ESPP is 943,294 shares, or the ESPP Share Pool, subject to adjustment as provided for in the 2018 ESPP. The ESPP Share Pool represented 3% of the total number of shares of our common stock outstanding as of March 31, 2018. The 2018 ESPP allows eligible employees to purchase shares during certain offering periods, which will be six-month periods commencing June 1 and ending November 30 and commencing December 1 and ending May 31 of each year. The first offering under the 2018 ESPP was December 1, 2018. As of December 31, 2021, 423,331 shares remained available for issuance under the 2018 ESPP. During the twelve months ended December 31, 2021, the Company recognized an insignificant amount of stock-based compensation expense related to the 2018 ESPP.

Reserved Shares

At December 31, 2021, the Company has reserved shares of common stock for future issuance as follows:

	Number of Shares
Equity plans:	
Shares subject to outstanding options and unvested restricted stock units	6,971,547
Shares available for future grants	-
Shares subject to warrants to purchase common stock	432,240
Shares issuable under employee stock purchase plan	459,870
Common stock issuable under outstanding convertible notes	10,377,361
Total	18,241,018

Revenue Performance Incentive Plan

On October 4, 2018, the Company adopted the Revenue Performance Incentive Plan, or the Plan, to grant performance-based incentive awards to key employees and consultants of the Company. The Plan provides for an incentive pool of up to $50.0 million, plus accrued interest during the period between the awards' vesting date and payment dates. Each participant will be allocated a percentage of the incentive pool.

The incentive pool will be divided into two equal tranches with the first tranche vesting upon the Company's achievement of cumulative net product revenues over $300.0 million by December 31, 2025, or Tranche 1, and the second tranche vesting upon the Company's achievement of cumulative product revenues over $600.0 million by December 31, 2026, or Tranche 2. Awards under the plan will vest annually in each tranche of a participant's award in four equal installments on December 31, 2019, December 31, 2020, December 31, 2021, and December 31, 2022, subject to their continued employment with the Company through the applicable vesting date. If a participant's employment terminates prior to December 31, 2022 due to death or disability, the participant will automatically vest in an additional 25% of each tranche of his or her award. Upon the achievement of a Tranche 1 or Tranche 2 milestone (but not a deemed achievement in connection with a change of control), each participant who has remained in continuous employment with the Company through December 31, 2022 will be 100% vested in the applicable tranche. In the event of a change of control of the Company prior to December 31, 2026, participants whose employment has terminated prior to such date will be eligible for payouts under the Plan based on the then-vested portion of their awards, and participants who have remained employed through the change of control will be deemed to have time vested in full in each tranche of their awards.

Upon the achievement of a Tranche 1 or Tranche 2 milestone (but not a deemed achievement in connection with a change of control), each participant's payout in respect of the applicable tranche of his or her award will equal (a) the participant's then-vested percentage, multiplied by (b) $25 million, multiplied by (c) the participant's individual percentage allocation of the incentive pool.

If a change of control occurs prior to December 31, 2026, and the Tranche 1 milestone was not achieved prior to the change of control, the Tranche 1 milestone will be deemed to be achieved at a percentage equal to the greater of (1) 50% and (2) the cumulative product revenues as of the change of control, divided by $300.0 million. If a change of control occurs prior to December 31, 2026, and the Tranche 2 milestone was not achieved prior to the change of control, the Tranche 2 milestone will be deemed to be achieved at a percentage equal to the greater of (1) 30% and (2) the cumulative product revenues as of the change of control, divided by $600.0 million. A participant's payout in respect of each tranche of his or her award in a change of control will equal (1) the participant's then-vested percentage of such tranche, multiplied by (2) the percentage of that tranche's milestone that has been achieved or is deemed to have been achieved, multiplied by (3) $25.0 million, multiplied by (4) the participant's individual percentage allocation of the incentive pool.

Amounts that become payable upon achievement of the Tranche 1 milestone will be paid in a lump-sum in the first quarter of 2026 and amounts that become payable upon achievement of the Tranche 2 milestone will be paid in a lump-sum in the first quarter of 2027. In the event of a change of control, any portion of the incentive pool that is earned, but unpaid, or deemed earned in connection with the change of control will be paid at the time of the change of control.

If a change of control occurs prior to the achievement of either or both of the Tranche 1 and Tranche 2 milestones, the awards will remain outstanding and the remaining unpaid portion of the incentive pool applicable to the Tranche 1 or Tranche 2 milestone, as applicable, will be paid following the achievement of either such milestone at the time or times the bonuses would otherwise be paid out. Any successor in interest to the Company upon or following a change of control will be required to assume all obligations under the Plan.

Awards may be paid out in cash or in a combination of cash and registered securities of equal value (based on the Company's 20-day trailing average closing common stock price), with the portion paid in registered securities not to exceed 50% of the aggregate payment amount with respect to each tranche; provided, however, that any amounts payable with respect to an award in connection with a change in control will be paid in cash.

The Company recognizes the compensation cost over the requisite service period, to the extent achievement of the performance condition is deemed probable relative to targeted performance. The performance condition under the first tranche of the Plan was deemed probable during 2021and, $21.8 million of compensation expense was recognized during the year ended December 31, 2021. This compensation cost is included in accrued long-term compensation in the Company's consolidated balance sheet. No such compensation expense was recognized during the year ended December 31, 2020.

16. Long-Term Debt

R-Bridge Loan Agreement

On December 31, 2020, or the Closing Date, the Company, through its wholly-owned subsidiary PRTK SPV2 LLC, a Delaware limited liability company, or the Subsidiary, entered into a royalty and revenue interest-backed loan agreement, or the R-Bridge Loan Agreement, with an affiliate of R-Bridge Healthcare Investment Advisory, Ltd., or the R-Bridge Lender. Pursuant to the terms of the R-Bridge Loan Agreement, the Subsidiary borrowed a $60.0 million term loan, secured by, and repaid with proceeds from, (i) royalties from the Zai Collaboration Agreement, and such royalties, or the Royalty Interest, and (ii) a revenue interest based on the Company's U.S. sales of NUZYRA in an initial amount of two and a half percent (2.5%), which amount may adjust under certain circumstances up to five percent (5%), of the Company's net U.S. sales, subject to an annual cap of $10.0 million, which may adjust under certain circumstances to $12.0 million, or the Revenue Interest.

Under the R-Bridge Loan Agreement, the outstanding principal balance will bear interest at an annual rate of 7.0%, increasing to an annual rate of 10% during the continuance of any event of default. Payments of the obligations outstanding under the R-Bridge Loan Agreement are made quarterly out of the Royalty Interest payments and Revenue Interest payments received by the Subsidiary during such quarter, or the Collection Amount. On each payment date, after payment of certain expenses, the Collection Amount shall be applied first to accrued interest, with any excess up to $15.0 million per annum applied to repay principal until the balance is fully repaid, and any shortfalls being capitalized and added to the principal balance of the loan. Amounts in excess of the $15.0 million annual cap shall be shared between the Company and the R-Bridge Lender based on a formula set out in the R-Bridge Loan Agreement. Following repayment in full of the loan, the first $15.0 million per annum in Collection Amount shall be paid to the Company and any amounts in excess shall be shared between the Company and the R-Bridge Lender based on a formula set out in the R-Bridge Loan Agreement.

Prior to the eighth (8th) anniversary of the Closing Date, the R-Bridge Loan Agreement will automatically terminate once the Subsidiary has paid to the R-Bridge Lender, in the form of regularly scheduled payments or as a voluntary prepayment, a capped amount of $114.0 million, less principal, interest and certain fee payments through the date of such prepayment, or the Capped Amount. From and after the eighth (8th) anniversary of the Closing Date, the Revenue Interest can be terminated by payment of the Capped Amount, but the Royalty Interest payments shall continue until maturity of the R-Bridge Loan Agreement on December 31, 2032, at which time, the outstanding principal amount of the loan, if any, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash by the Subsidiary.

The Company's subsidiary, PRTK SPV1 LLC, a Delaware limited liability company and owner of the Subsidiary's capital stock, has entered into a Pledge and Security Agreement in favor of the R-Bridge Lender, pursuant to which the Subsidiary's obligations under the R-Bridge Loan Agreement are secured by PRTK SPV1 LLC's pledge of all of the Subsidiary's capital stock.

The R-Bridge Loan Agreement contains certain customary affirmative covenants, including those relating to: use of proceeds; maintenance of books and records; financial reporting and notification; compliance with laws; and protection of Company intellectual property. The R-Bridge Loan Agreement also contains certain customary negative covenants, barring the Subsidiary from: certain fundamental transactions; issuing dividends and distributions; incurring additional indebtedness outside of the ordinary course of business; engaging in any business activity other than related to the Zai Collaboration Agreement; and permitting any additional liens on the collateral provided to the R-Bridge Lender under the R-Bridge Loan Agreement. As of December 31, 2021, the Company was in compliance with all covenants under the R-Bridge Loan Agreement.

An ancillary agreement executed by the Company and the Subsidiary in respect of the Revenue Interest, contains negative covenants applicable to the Company, including restrictions on the sale or transfer of our assets related to NUZYRA and giving rise to the Revenue Interest, each subject to the exceptions set forth therein.

The R-Bridge Loan Agreement contains customary defined events of default, upon which any outstanding principal, unpaid interest, and other obligations of the Subsidiary, shall be immediately due and payable by the Subsidiary. These include: failure to pay any principal or interest when due; failure to pay the Capped Amount when due following a non-qualified change of control of the Company, any uncured breach of a representation, warranty or covenant; any uncured failure to perform or observe covenants; any uncured breach of our representations, warranties or covenants under an ancillary agreement executed by the Company and the Subsidiary in respect of the Royalty Interest; any termination of the Zai Collaboration Agreement; and certain bankruptcy or insolvency events. No events of default had occurred under the R-Bridge Loan Agreement through December 31, 2021.

The Company raised approximately $58.3 million in net proceeds in connection with the R-Bridge Loan Agreement, comprised of the $60.0 million term loan funded at execution, net of $1.1 million in lender fees accounted for as debt discount and $0.6 million in direct and incremental third-party expenses accounted for as debt issuance costs. The net proceeds of the term loan, together with cash on hand, was used to prepay in full all obligations outstanding under our loan arrangement with Hercules Capital, Inc.

The accounting for the R-Bridge Loan Agreement requires the Company to make certain estimates and assumptions, particularly about future royalties under the Zai Collaboration Agreement and sales of NUZYRA in the U.S. Such estimates and assumptions are utilized in determining the expected repayment term, amortization period of the debt discount and issuance costs, accretion of interest expense and classification between current and long-term portions of amounts outstanding. The Company amortizes the debt discount and issuance costs to interest expense over the expected term of the arrangement using the interest method based on projected cash flows. Similarly, the Company classifies as current debt for the R-Bridge Loan Agreement, amounts that are expected to be repaid during the succeeding twelve months after the reporting period end. However, the repayment of amounts due under the R-Bridge Loan Agreement is variable because the cash flows to be utilized for periodic payments is a function of amounts received by the Company with respect to the Royalty Interest and the Revenue Interest. Accordingly, the estimates of the magnitude and timing of amounts to be available for debt service are subject to significant variability and thus, subject to significant uncertainty. Therefore, these estimates and assumptions are likely to change, which may result in future adjustments to the portion of the debt that is classified as a current liability, the amortization of debt discount and issuance costs and the accretion of interest expense.

The amount of principal to be repaid in each of the five succeeding years is not fixed and determinable.

Other amounts that may become due and payable under the R-Bridge Loan Agreement, including amounts shared between the parties with respect to cash flows received in excess of pre-defined thresholds, are recognized as additional interest expense when they become probable and estimable.

The following table summarizes the impact of the R-Bridge Loan Agreement on the Company's consolidated balance sheets at December 31, 2021 and December 31, 2020 (in thousands):

	Year Ended December 31,	
	2021	2020
Principal debt including paid-in-kind interest	$ 61,256	$ 60,000
Unamortized debt discount and issuance costs	(1,443)	(1,680)
Carrying value	$ 59,813	$ 58,320

$4.5 million of interest expense was recognized during the year ended December 31, 2021. No interest expense was recognized during the year ended December 31, 2020 due to the timing of deal effectiveness.

Convertible Senior Subordinated Notes

On April 18, 2018, the Company entered into a Purchase Agreement, or the Purchase Agreement, with several initial purchasers, or the Initial Purchasers, for whom Merrill Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC acted as representatives, relating to the sale of $135.0 million aggregate principal amount of 4.75% Convertible Senior Subordinated Notes due 2024, or the Notes, to the Initial Purchasers. The Company also granted the Initial Purchasers an option to purchase up to an additional $25.0 million aggregate principal amount of Notes, which was exercised in full on April 20, 2018.

The Purchase Agreement includes customary representations, warranties and covenants. Under the terms of the Purchase Agreement, the Company agreed to indemnify the Initial Purchasers against certain liabilities.

In addition, J. Wood Capital Advisors LLC, the Company's financial advisor, purchased $5.0 million aggregate principal amount of Notes in a separate, concurrent private placement on the same terms as other investors.

The Notes were issued by the Company on April 23, 2018, pursuant to an Indenture, dated as of such date, or the Indenture, between the Company and U.S. Bank National Association, as trustee, or the Trustee. The Notes bear cash interest at the annual rate of 4.75%, payable on November 1 and May 1 of each year, beginning on November 1, 2018, and mature on May 1, 2024 unless earlier repurchased, redeemed or converted. The Company will settle conversions of the Notes through delivery of shares of common stock of the Company, in accordance with the terms of the Indenture. The initial conversion rate for the Notes is 62.8931 shares of common stock (subject to adjustment as provided for in the Indenture) per $1,000 principal amount of the Notes, which is equal to an initial conversion price of approximately $15.90 per share, representing a conversion premium of approximately 20% above the closing price of the common stock of $13.25 per share on April 18, 2018.

Holders of the Notes may convert all or any portion of their Notes, in multiples of $1,000 principal amount, at their option at any time prior to the close of business on the second scheduled trading day immediately preceding the stated maturity date.

The Company may redeem for cash all or part of the Notes, at its option, on or after May 6, 2021 if the last reported sale price of the Company's common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

If the Company experiences a fundamental change, as described in the Indenture, prior to the maturity date of the Notes, holders of the Notes will, subject to specified conditions, have the right, at their option, to require the Company to repurchase for cash all or a portion of their Notes at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any, to, but not including, the fundamental change repurchase date. In addition, following certain corporate events that occur prior to the maturity date of the Notes and following a notice of redemption of the notes, the Company will increase the conversion rate for a holder who elects to convert its Notes in connection with such corporate event or redemption.

The Indenture provides for customary events of default. In the case of an event of default with respect to the Notes arising from specified events of bankruptcy or insolvency, all outstanding Notes will become due and payable immediately without further action or notice. If any other event of default with respect to the Notes under the Indenture occurs or is continuing, the Trustee or holders of at least 25% in aggregate principal amount of the then outstanding Notes may declare the principal amount of the Notes to be immediately due and payable.

After deducting costs incurred of $6.0 million, the Company raised net proceeds from the issuance of long-term convertible debt of $159.0 million in April 2018. All costs were deferred and are being amortized over the life of the Notes at an effective interest rate of 5.47% and recorded as additional interest expense. The following table summarizes how the issuance of the Notes is reflected in the Company's consolidated balance sheets at December 31, 2021 and 2020 (in thousands):

	Year Ended December 31,	
	2021	2020
Gross proceeds	$ 165,000	$ 165,000
Unamortized debt discount costs	(2,572)	(3,578)
Carrying value	$ 162,428	$ 161,422

Debt issuance costs are presented on the consolidated balance sheet as a direct deduction from the related debt liability rather than capitalized as an asset in accordance with ASU No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*.

The Company recognized coupon interest expense of $7.8 million and amortization expense on the debt issuance costs of $1.0 million on the Notes for each of the years ended December 31, 2021 and December 31, 2020.

Royalty-Backed Loan Agreement

On February 25, 2019, the Company, through its wholly-owned subsidiary Paratek Royalty Corporation, or the Subsidiary, entered into a royalty-backed loan agreement, or the Royalty-Backed Loan Agreement, with Healthcare Royalty Partners III, L.P., or HCRP. Pursuant to the terms of the Royalty-Backed Loan Agreement, the Subsidiary borrowed a $32.5 million loan, which was secured by, and is being repaid based upon, royalties from the Almirall Collaboration Agreement. On May 1, 2019, the Company received $27.8 million, net of $0.5 million lender discount, $0.2 million in lender expenses incurred, and $4.0 million that was deposited into an interest reserve account. The Company also paid $1.2 million in other lender fees related to the Royalty-Backed Loan Agreement.

Under the Royalty-Backed Loan Agreement, the outstanding principal balance will bear interest at an annual rate of 12.0%. Payments of interest under the Royalty-Backed Loan Agreement will be made quarterly, beginning in August 2019, using the Almirall Collaboration Agreement royalty payments received since the immediately preceding payment date. On each interest payment date, any royalty payments in excess of accrued interest on the loan will be used to repay the principal of the loan until the balance is fully repaid. In addition, the Subsidiary will make up-front payments to HCRP of (i) a 1.5% fee and (ii) up to $300,000 for HCRP's expenses. The Royalty-Backed Loan Agreement matures on May 1, 2029, at which time, if not earlier repaid in full, the outstanding principal amount of the loan, together with any accrued and unpaid interest, and all other obligations then outstanding, shall be due and payable in cash. The Company has entered into a Pledge and Security Agreement in favor of HCRP, pursuant to which the Subsidiary's obligations under the Royalty-Backed Loan Agreement are secured by a pledge of all of the Company's holdings of the Subsidiary's capital stock.

The Royalty-Backed Loan Agreement contains certain customary affirmative covenants, including those relating to: use of proceeds; maintenance of books and records; financial reporting and notification; compliance with laws; and protection of Company

intellectual property. The Royalty-Backed Loan Agreement also contains certain customary negative covenants, barring the Subsidiary from: certain fundamental transactions; issuing dividends and distributions; incurring additional indebtedness outside of the ordinary course of business; engaging in any business activity other than related to the Almirall Collaboration Agreement; and permitting any additional liens on the collateral provided to HCRP under the Royalty-Backed Loan Agreement.

The Royalty-Backed Loan Agreement contains customary defined events of default, upon which any outstanding principal and unpaid interest shall be immediately due and payable. These include: failure to pay any principal or interest when due; any uncured breach of a representation, warranty or covenant; any uncured failure to perform or observe covenants; any uncured cross default under a material contract; any uncured breach of the Company's representations, warranties or covenants under its Contribution and Servicing Agreement with the Subsidiary; any termination of the Almirall Collaboration Agreement; and certain bankruptcy or insolvency events.

The following table summarizes the impact of the Royalty-Backed Loan Agreement on the Company's consolidated balance sheets for the years ended December 31, 2021 and December 31, 2020 (in thousands):

	Year Ended December 31,	
	2021	2020
Principal debt including paid-in-kind interest	$ 33,860	$ 32,500
Unamortized debt discount costs	(1,673)	(1,768)
Carrying value	$ 32,187	$ 30,732

Debt issuance costs are presented on the consolidated balance sheet as a direct deduction from the related debt liability rather than capitalized as an asset in accordance with ASU No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*.

The Company recognized interest expense of $4.1 million and $4.0 million on the Royalty-Backed Loan for the years ended December 31, 2021 and 2020, respectively.

Long-term debt on the Company's consolidated balance sheets at December 31, 2021 and December 31, 2020 includes the carrying value of the R-Bridge Loan Agreement, the Notes and the Royalty-Backed Loan Agreement.

17. Income Taxes

Loss before income taxes consists of the following:

	Year Ended December 31,	
(in thousands)	2021	2020
United States	$ (58,484)	$ (96,541)
Foreign	—	—
Total	$ (58,484)	$ (96,541)

The components of income tax expense consist of the following:

	Year Ended December 31,	
(in thousands)	2021	2020
Foreign	$ 600	$ —
Total	$ 600	$ —

There is no provision for income taxes in the U.S. because the Company has historically incurred net operating losses and maintains a full valuation allowance against its net deferred tax assets. The provision for income taxes in foreign jurisdictions relate to withholding taxes incurred in connection with the Zai Collaboration Agreement. The reported amount of income tax expense for the years differs from the amount that would result from applying domestic federal statutory tax rates to pretax losses primarily because of changes in valuation allowance.

A reconciliation of the Company's effective tax rate to the statutory federal income tax rate is as follows:

	Year Ended December 31,	
	2021	2020
Federal statutory rate	21.00%	21.00%
Change in valuation allowance	(12.47)%	(14.95)%
Non-deductible interest	(3.18)%	(1.91)%
Stock compensation	0.40%	(2.72)%
Permanent differences	(0.05)%	(1.20)%
State taxes, net of federal benefits	5.09%	(0.86)%
162(m) compensation	(11.67)%	—
Foreign withholding taxes	(0.81)%	—
Federal tax credits	0.67%	0.64%
Other	(0.01)%	—
	(1.03)%	0.00%

Significant components of the Company's net deferred tax assets at December 31, 2021 and 2020 are as follows:

	Year Ended December 31,	
(in thousands)	2021	2020
Non-current deferred tax assets		
Net operating losses	$ 151,541	$ 147,305
Accrued expenses	5,434	2,480
Capitalized research and development	10,467	12,446
Tax credit carryforwards	14,230	13,968
Stock compensation and other	7,723	5,931
Total non-current deferred tax assets	189,395	182,130
Non-current deferred tax liabilities		
Right of use assets	(460)	(486)
Total non-current deferred tax liabilities	(460)	(486)
Net non-current deferred tax asset	188,935	181,644
Less: valuation allowance	(188,935)	(181,644)
Net deferred tax asset	$ —	$ —

As of December 31, 2021, the Company had federal and state net operating loss carryforwards of $589.2 million and $439.0 million, respectively, which begin to expire in 2024 and 2034, respectively. The Company's federal and state net operating losses include $309.4 million and $74.6 million, respectively, which can be carried forward indefinitely.

As of December 31, 2021, the Company had federal and state research and development tax credits carryforwards of $12.4 million and $1.9 million, respectively, which begin to expire in 2022. As of December 31, 2021, the Company had federal orphan drug tax credits carryforwards of $0.4 million, which begin to expire in 2041.

Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which are composed principally of net operating loss carryforwards and research and development credits. Under the applicable accounting standards, management has considered the Company's history of losses and concluded that it is more likely than not that the Company will not recognize the benefits of federal and state deferred tax assets. Accordingly, a full valuation allowance of $188.9 million and $181.6 million was established as of December 31, 2021 and 2020, respectively. A change in the Company's valuation allowance was recorded in 2021, in the amount of $7.3 million due primarily to the generation of net operating losses.

Utilization of the net operating loss and research and development credit carryforwards may be subject to a substantial annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, due to ownership change limitations that have occurred previously or that could occur in the future. These ownership changes may limit the amount of net operating loss and research and development credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively.

The Company conducted an analysis under Section 382 and 383 of the Internal Revenue Code of 1986, as amended, to determine if historical changes in ownership through December 31, 2017 would limit or otherwise restrict its ability to utilize its net operating loss and research and development credit carryforwards. As a result of that study, the Company has identified certain net operating losses that might expire unused. The Company has established a full valuation allowance against these attributes.

The Company follows the provisions of ASC 740-10, *Accounting for Uncertainty in Income Taxes—an interpretation of ASC 740*, which requires it to determine whether a tax position of the Company is more likely than not to be sustained upon examination, including resolution of any related appeals of litigation processes, based on the technical merits of the position. For tax positions meeting the more likely than not threshold, the tax amount recognized in the financial statements is reduced by the largest benefit that has a greater than fifty percent likelihood of being realized upon the ultimate settlement with the relevant taxing authority.

The Company completed a study of its research and development credits through December 31, 2017. As a result of this study the Company adjusted its deferred tax asset related to research and development credit carryforwards. The Company has not identified or recorded any uncertain tax positions related to this study. A full valuation allowance has been provided against the Company's research and development credits, and if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the consolidated balance sheets or statements of operations if an adjustment were required.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. The earliest tax years that remain subject to examination by jurisdiction is 2017 for both federal and Massachusetts. However, to the extent the Company utilizes net operating losses from years prior to 2017, the statute remains open to the extent of the net operating losses or other credits are utilized. The Company's policy is to record interest and penalties related to income taxes as part of the tax provision. There was no interest or penalties pertaining to uncertain tax positions in 2021 or 2020.

18. Commitments and Contingencies

Leases

Boston, Massachusetts and King of Prussia, Pennsylvania

The Company leases its Boston, Massachusetts and King of Prussia, Pennsylvania office spaces under non-cancelable operating leases expiring in 2023 and 2024, respectively.

The Company executed an amendment to the existing lease agreement on its Boston office space in April 2021. The amended lease agreement released 8,104 rentable square feet of office space and extended the lease term for the remaining 4,153 rentable square feet of office space through August 2023 for an additional commitment of $0.4 million. In accordance with the amendment, the Company will be refunded the insignificant security deposit paid in July 2016.

The Company executed an amended lease agreement on its King of Prussia office space in October 2016. The amended lease agreement is for 19,708 rentable square feet of office space and the Company took control of this office space during the first quarter of 2017. The total lease commitment is over a seven-year and seven-month lease term. The amended lease agreement contains rent escalation and a partial rent abatement period, which is accounted for as rent expense under the straight-line method.

CIPAN

In November 2016, the Company entered into a manufacturing and services agreement, or MSA, with CIPAN, which was later amended and restated in April of 2018, and further amended and restated in February 2019, December 2019, July 2020, December 2020, and January 2022, collectively, the CIPAN Agreements. The CIPAN Agreements provide the terms and conditions under which CIPAN will manufacture and supply to the Company increased quantities of minocycline starting material and crude omadacycline, or the CIPAN Products, for purification into omadacycline and, subsequently, for use in the Company's products that contain omadacycline tosylate as the active pharmaceutical ingredient.

Additionally, the CIPAN Agreements included an investment by the Company in a new facility area to increase the manufacturing capacity for production of crude omadacycline. The Company was required to make advance payments to CIPAN upon completion of certain milestones within the CIPAN Agreements.

The term of the CIPAN Agreements will continue throughout the term that the Company receives benefit from the new facility area. The Company may renew the CIPAN Agreements for additional periods and can terminate the CIPAN Agreements at any time by delivery, within a certain time period, of prior written notice to CIPAN. Following the first renewal term, CIPAN may terminate the MSA in its entirety by delivery, within a certain time period, of prior written notice to the Company.

Under the CIPAN Agreements, the Company will purchase product in batches from CIPAN in quantities to be set forth on purchase orders submitted to CIPAN, within a certain time period, prior to the requested date of delivery. The Company will provide CIPAN with a rolling forecast with a best estimate of the quantities that will be ordered each month. The quantities of product forecasted for each forecast are binding obligations to purchase from CIPAN. Upon execution of the CIPAN Agreements, the Company determined that the CIPAN Agreements contain an embedded lease because the Company has the right to direct the use of the facility and related equipment therein. Further, the Company determined that it did not control the facility or related equipment

during construction and, thus, the lease did not fall in the scope of "build-to-suit" accounting. The lease commenced during the fourth quarter of 2020, the point at which the new facility area and the related equipment was available for use by the Company. As of December 31, 2021, the Company recorded a right-of-use asset and lease liability of $0.3 million on its consolidated balance sheet.

For the year ended December 31, 2021, the Company recorded insignificant operating lease costs related CIPAN embedded lease. The operating lease costs of the embedded lease were included in inventories, net on the Company's consolidated balance sheet.

The following table contains a summary of the lease costs recognized under Topic 842 and other information pertaining to the Company's operating leases for year ended December 31, 2021:

Lease cost (in thousands)		
Operating lease cost	$	803
Variable lease cost		116
Total lease cost	$	919
Cash paid for amounts included in the measurement of lease liabilities:	$	1,037
Other information		
Weighted average remaining lease term (in years)		3.0
Weighted average discount rate		8.75%

Amounts above include an insignificant amount of lease costs associated with our CIPAN embedded lease arrangement for the year ended December 31, 2021, which have been capitalized into inventory as part of the cost of product being manufactured at the site.

Future minimum operating lease obligations under non-cancelable operating leases with initial terms of more than one-year as of December 31, 2021, are as follows:

Maturity of lease liabilities (in thousands)		
2022	$	730
2023		668
2024		395
2025 and thereafter		-
Total lease payments	$	1,793
Less: imputed interest		(179)
Total operating lease liabilities	$	1,614

The total operating lease liability is presented on the Company's consolidated balance sheet based on maturity dates. $0.6 million of the total operating liabilities is classified under "Other Current Liabilities" for the portion due within twelve months, and $1.0 million is classified under "Long-Term Lease Liabilities".

Commercial Supply ***Agreements***

CIPAN

In November 2016, the Company entered into a manufacturing and services agreement with CIPAN, and subsequently amended and restated such manufacturing and services agreement in April 2018 to include, among other things, an investment by the Company in a new facility area to increase the manufacturing capacity for production of crude omadacycline. The agreement, as subsequently amended, provides the terms and conditions under which CIPAN will manufacture and supply to the Company increased quantities of minocycline starting material and crude omadacycline, or the CIPAN Products, for purification into omadacycline and, subsequently, for use in the Company's products that contain omadacycline tosylate as the active pharmaceutical ingredient. Under this agreement, the Company is obligated to pay a CIPAN Product price in the four-digit U.S. dollar range per kilogram for minocycline starting material and in the four-digit or five-digit U.S. dollar range per kilogram for crude omadacycline, based on the annual volume of crude omadacycline that the Company orders, subject to adjustments as set forth in the agreement. CIPAN will also perform certain services related to development, technology transfer and manufacturing of the CIPAN Products as provided in one or more statements of work, which shall set forth the fees payable by the Company to CIPAN for such services.

The Company's agreement with CIPAN will remain in effect for an initial term, as extended, after which the agreement will continue, with respect to each CIPAN Product, for successive renewal terms unless either the Company or CIPAN have given written notice of termination within a certain period prior to the expiration of either the initial or then-current renewal term. The agreement

may also be terminated under certain other circumstances, including by either party due to a material uncured breach by the other party or the other party's insolvency.

Carbogen

On July 14, 2021, Company entered into a supply agreement with CARBOGEN AMCIS AG, or Carbogen. The agreement provides for the terms and conditions under which Carbogen will manufacture and supply to the Company the active pharmaceutical ingredient for the Company's omadacycline product in bulk quantities, or the Carbogen Product. Under the agreement, the Company is responsible for the cost and supply of crude omadacycline that Carbogen requires to manufacture Carbogen Product and perform related services. The Company is obligated to initially pay Carbogen an amount in the high six-digit U.S. dollar range per batch of Carbogen Product that the Company orders, and the price may be adjusted in accordance with the terms of the agreement. The Company may also request that Carbogen perform certain services related to the Carbogen Product, for which the Company will pay reasonable compensation to Carbogen.

The agreement will remain in effect for a fixed initial term. If neither party has provided notice of its intent to terminate the agreement prior to the end of the initial term, then the Agreement will automatically be extended for a fixed period of time. The agreement may be terminated under certain circumstances, including by either party delivering notice of termination following the initial term, or by either party due to a material uncured breach by the other party or the other party's insolvency.

Almac

In December 2016, the Company entered into a manufacturing and services agreement with Almac Pharma Services Limited, or Almac. The agreement, as subsequently amended, provides for the terms and conditions under which Almac will manufacture, package and supply to the Company omadacycline oral solid dosage tablets in bulk form, or the Almac Products. Under this agreement, the Company is required to use commercially reasonable efforts to timely provide Almac with the active pharmaceutical ingredient needed to manufacture the Almac Products and perform related services. The Company is obligated to pay a supply price in the five-digit range in Great Britain Pounds per batch of the Almac Products, subject to adjustments as provided in the agreement. The Company is also subject to an annual minimum revenue commitment in the six-digit GBP range. The Company will also negotiate with Almac, as part of each individual scope of work, the reasonable costs for the services to be performed for the Company by Almac.

Each of the Company's agreements with Almac will remain in effect for a fixed initial term, after which each agreement will continue for successive renewal terms unless either the Company or Almac have given written notice of termination within a certain period prior to the expiration of the initial or then-current renewal term. The manufacturing agreement may also be terminated under certain other circumstances, including by either party due to a material uncured breach of the other party or the other party's insolvency.

Patheon

In July 2017, the Company entered into a master manufacturing services agreement and corresponding product agreement with Patheon UK Limited, or Patheon. The agreements, as subsequently amended, provide for the terms and conditions under which Patheon will manufacture, package and supply to the Company, omadacycline in injectable form, or the Patheon Products. Under these agreements, the Company is required to deliver to Patheon the active pharmaceutical ingredient needed to manufacture the Patheon Products. The Company is obligated to pay a supply price in the six-digit dollar range per batch of the Patheon Products, subject to adjustments as provided in the agreements. Now that the Company's omadacycline product has been approved, the Company is also subject to an annual minimum purchase requirement in the six-digit U.S. dollar range. If the Company desires for Patheon to conduct additional services other than those expressly set forth in the agreements, those would be subject to additional fees.

The Company's agreements with Patheon will remain in effect for a fixed initial term, after which they will continue for successive renewal terms unless either the Company or Patheon have given written notice of termination within a certain period prior to the expiration of the applicable initial or then-current renewal term. The agreements may also be terminated under certain other circumstances, including by either party due to a material uncured breach of the other party or the other party's insolvency.

Other Legal Proceedings

From time to time the Company is involved in legal proceedings arising in the ordinary course of business. The Company believes there is no other litigation pending that could have, individually, or in the aggregate, a material adverse effect on its results of operations or financial condition. The Company does not believe that any of the above matters will result in a liability that is probable or estimable at December 31, 2021.

19. 401(k) Savings Plan

The Company maintains a defined-contribution savings plan under Section 401(k) of the Internal Revenue Code, or the 401(k) Plan. The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pretax basis. The Plan provides for matching contributions on a portion of participant contributions pursuant to the 401(k) Savings Plan's matching formula. All matching contributions and participant contributions vest immediately. Contributions totaled $1.4 million and $0.8 million for the years ended December 31, 2021 and 2020, respectively and have been recorded in the consolidated statements of operations.

20. Quarterly Results (Unaudited)

	Three Months Ended			
	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021
	(in thousands, except per share data) (unaudited)			
Revenue	$ 16,427	$ 57,492	$ 24,447	$ 31,796
Operating expenses	30,648	43,403	38,164	59,077
Loss from operations	(14,221)	14,089	(13,717)	(27,281)
Other expense, net	(4,125)	(4,372)	(4,485)	(4,372)
Provision for income tax	—	—	—	600
Net loss	$ (18,346)	$ 9,717	$ (18,202)	$ (32,253)
Net loss per share - basic and diluted	$ (0.39)	$ 0.20	$ (0.37)	$ (0.64)

	Three Months Ended			
	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020
	(in thousands, except per share data) (unaudited)			
Revenue	$ 7,920	$ 9,326	$ 13,659	$ 16,019
Operating expenses	31,498	27,772	29,606	33,552
Loss from operations	(23,578)	(18,446)	(15,947)	(17,533)
Other expense, net	(4,039)	(4,613)	(4,908)	(7,477)
Provision for income tax	—	—	—	—
Net loss	$ (27,617)	$ (23,059)	$ (20,855)	$ (25,010)
Net loss per share - basic and diluted	$ (0.66)	$ (0.53)	$ (0.46)	$ (0.54)

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

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We carried out an evaluation as of the end of the period covered by this Annual Report on Form 10-K, under the supervision and with the participation of our management, including our Chief Executive Officer and Principal Financial and Accounting Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act 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 our management, including the Chief Executive Officer and the Principal Financial and Accounting Officer, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective. Based on this evaluation, our Chief Executive Officer and Principal Financial and Accounting Officer concluded that, as of December 31, 2021, the design and operation of our disclosure controls and procedures were effective.

Internal Control Over Financial Reporting

Management's Annual Report on Internal Control over Financial Reporting

Our management, with the participation of our Chief Executive Officer and Principal Financial and Accounting Officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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 policy or procedures may deteriorate. Under the supervision and with the participation of our management, including our Chief Executive Officer and Principal Financial and Accounting Officer, management has conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2021 based upon the Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this evaluation, management, including our Chief Executive Officer and Principal Financial and Accounting Officer, has concluded that our internal control over financial reporting was effective as of December 31, 2021.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the fiscal quarter ended December 31, 2021, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

The information required by Part III is omitted from this report because we will file a definitive proxy statement within 120 days after the end of our 2021 fiscal year pursuant to Regulation 14A for our 2022 Annual Meeting of Stockholders, or the 2022 Proxy Statement, and the information to be included in the 2022 Proxy Statement is incorporated herein by reference.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be contained in the 2022 Proxy Statement and is hereby incorporated by reference.

Code of Business Conduct and Ethics

Our Board of Directors has adopted a code of business conduct and ethics. The code of business conduct and ethics applies to all of our employees, officers and directors. The full texts of our code of business conduct and ethics are posted on our website at http://www.paratekpharma.com under the Investor Relations section. We intend to disclose future amendments to our code of business conduct and ethics, or certain waivers of such provisions, at the same location on our website identified above and also in public filings. The inclusion of our website address in this report does not include or incorporate by reference the information on our website into this report.

Item 11. Executive Compensation

The information required by this item will be contained in the 2022 Proxy Statement and is hereby incorporated by reference.

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

The information required by this item will be contained in the 2022 Proxy Statement and is hereby incorporated by reference.

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

The information required by this item will be contained in the 2022 Proxy Statement and is hereby incorporated by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be contained in the 2022 Proxy Statement and is hereby incorporated by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

See Index to Financial Statements under Item 8 of Part II of this Annual Report on Form 10-K, which listing is incorporated herein by reference.

(a)(2) Financial Statement Schedules

Financial statement schedules are omitted because they are not applicable or are not required or the information required to be set forth therein is included in the Financial Statements or notes thereto.

(a)(3) Exhibits

EXHIBIT INDEX

Exhibit No.	Exhibit Description	Incorporated by Reference			
		Schedule/ Form	File Number	Exhibit	Filing Date
2.1	Agreement and Plan of Merger and Reorganization by and among Transcept Pharmaceuticals, Inc., Tigris Merger Sub, Inc., Tigris Acquisition Sub, LLC and Paratek Pharmaceuticals, Inc. dated as of June 30, 2014.	Form 8-K	001-36066	2.1	July 1, 2014
3.1	Amended and Restated Certificate of Incorporation.	Form 8-K	001-36066	3.1	October 31, 2014
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation.	Form 8-K	001-36066	3.2	October 31, 2014
3.3	Certificate of Elimination of Series A Junior Participating Preferred Stock.	Form 8-K	001-36066	3.1	July 24, 2015
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation.	Form 10-Q	001-36066	3.4	August 9, 2021
3.5	Amended and Restated Bylaws.	Form 8-K	001-36066	3.1	April 16, 2015
4.1	Specimen Common Stock Certificate.	Form S-3	333-201458	4.2	January 12, 2015
4.4	Form of Warrant Agreement issued to Hercules Capital, Inc.	Form 8-K	001-36066	4.1	June 29, 2017
4.5	Warrant Agreement issued to Hercules Capital, Inc.	Form 10-Q	001-36066	4.5	August 2, 2018
4.6	Indenture, dated as of April 23, 2018, by and between the Company and U. S. Bank National Association (including the form of the 4.75% Convertible Senior Subordinated Note due 2024).	Form 8-K	001-36066	4.1	April 23, 2018
4.7	Form of 4.75% Convertible Senior Subordinated Note due 2024 (included in Exhibit 4.9)	Form 8-K	001-36066	4.1	April 23, 2018
4.8	Description of Securities	Form 10-K	001-36066	4.11	March 10, 2020
4.9	Warrant Agreement, dated as of August 5, 2020 issued to Hercules Capital, Inc.	Form 10-Q	001-36066	4.9	August 10, 2020
10.1A+	2006 Incentive Award Plan, as amended and restated.	Form 10-K	001-36066	10.1A	March 9, 2016
2.1	Agreement and Plan of Merger and Reorganization by and among Transcept Pharmaceuticals, Inc., Tigris Merger Sub, Inc., Tigris Acquisition Sub, LLC and Paratek Pharmaceuticals, Inc. dated as of June 30, 2014.	Form 8-K	001-36066	2.1	July 1, 2014
10.1B+	Form of Stock Option Grant Notice and Stock Option Agreement under 2006 Incentive Award Plan.	Form S-8	333-172041	99.2	February 3, 2011
10.1C+	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement under the 2006 Incentive Award Plan, as amended.	Form 8-K	001-36066	10.1	February 10, 2015
10.2+	2009 Employee Stock Purchase Plan.	Form 8-K	000-51967	10.1	June 9, 2009
10.3+	2018 Employee Stock Purchase Plan, as amended.	Form 10-Q	001-36066	10.4	November 6, 2018
10.4A+	2014 Equity Incentive Plan, as amended.	Form S-8	333-201204	4.1	December 22, 2014
10.4B+	Form of Option Agreement under the 2014 Equity Incentive Plan, as amended.	Form S-8	333-201204	4.2	December 22, 2014
10.5A+	2015 Inducement Plan.	Form 8-K	001-36066	10.2	February 10, 2015
10.5B+	Form of Stock Option Grant Notice and Option Agreement under the 2015 Inducement Plan.	Form 8-K	001-36066	10.3	February 10, 2015
10.6A*+	Paratek Pharmaceuticals, Inc. 2017 Inducement Plan, as amended				

Exhibit No.	Exhibit Description	Incorporated by Reference			
		Schedule/ Form	File Number	Exhibit	Filing Date
10.6B+	Form of Stock Option Grant Notice and Option Agreement under the 2017 Inducement Plan.	Form 8-K	001-36066	10.2	June 16, 2017
10.6C+	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2017 Inducement Plan.	Form 8-K	001-36066	10.3	June 16, 2017
10.7A+	2015 Equity Incentive Plan	Form S-8	333-205482	99.5	July 2, 2015
10.7B+	Form of Stock Option Grant Notice and Option Agreement under the 2015 Equity Incentive Plan	Form S-8	333-205482	99.6	July 2, 2015
10.7C+	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2015 Equity Incentive Plan.	Form S-8	333-205482	99.7	July 2, 2015
10.7D+	Form of Leadership Team Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2015 Equity Incentive Plan.	Form 8-K	001-36066	10.1	August 4, 2017
10.7E+	Form of Director Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2015 Equity Incentive Plan.	Form 10-K	001-36066	10.6E	March 6, 2018
10.7F+	Form of Director Stock Option Grant Notice and Option Agreement under the 2015 Equity Incentive Plan.	Form 10-K	001-36066	10.6F	March 6, 2018
10.8+	Paratek Pharmaceuticals, Inc. Annual Incentive Plan.	Form 8-K	001-36066	10.4	June 16, 2017
10.9*+	Non-Employee Director Compensation Policy.				
10.10A+	Revenue Performance Incentive Plan	Form 8-K	001-36066	10.1	October 4, 2018
10.10B+	Form of Award Agreement under the Revenue Performance Incentive Plan	Form 8-K	001-36066	10.2	October 4, 2018
10.11+	Form of Indemnification Agreement between the Company, its executive officers and directors.	Form 10-K	001-36066	10.8	March 9, 2016
10.12†	Collaborative Research and License Agreement by and between the Company and Warner Chilcott, dated as of July 2, 2007.	Form 10-K	001-36066	10.16	April 2, 2015
10.13†	License and Collaboration Agreement by and between Paratek Bermuda Ltd. and Zai Lab (Shanghai) Co., Ltd., dated April 21, 2017.	Form 10-Q	001-36066	10.11	August 2, 2017
10.14^	License Agreement by and between the Company and Tufts University dated as of February 1, 1997, as amended.	Form 10-K	001-36066	10.14	March 29, 2021
10.15	Amendment No. 10, dated as of March 21, 2017, to the License Agreement by and between the Company and Tufts University	Form 10-Q	001-36066	10.1	May 4, 2017
10.16†	Amendment No. 11, dated as of November 15, 2017, to the License Agreement by and between the Company and Tufts University	Form 10-K	001-36066	10.19	March 6, 2018
10.17+	Amended and Restated Employment Agreement, by and between the Company and Michael F. Bigham, dated as of June 25, 2019.	Form 10-Q	001-36066	10.2	August 6, 2019
10.18+	Amended and Restated Employment Agreement, by and between the Company and Evan Loh, M.D., dated as of June 25, 2019.	Form 10-Q	001-36066	10.3	August 6, 2019
10.19+	Amended and Restated Employment Agreement, by and between the Company and Adam Woodrow, dated as of June 25, 2019.	Form 10-Q	001-36066	10.4	August 6, 2019
10.20	Amended and Restated Employment Agreement, by and between the Company and William M. Haskel, dated as of August 4, 2017.	Form 10-Q	001-36066	10.2	November 8, 2017
10.21	King of Prussia Lease Agreement between Paratek Pharma LLC and Atlantic American Properties Trust, dated as of January 23, 2015, as amended.	Form 10-Q	001-36066	10.2	May 4, 2017
10.22†	Manufacturing and Services Agreement by and between the Company and Almac Pharma Services Limited, dated as of December 30, 2016.	Form 10-K/A	001-36066	10.27	May 5, 2017

Exhibit No.	Exhibit Description	Incorporated by Reference			
		Schedule/ Form	File Number	Exhibit	Filing Date
10.23†	Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN - Companhia Industrial Produtora de Antibióticos, S.A., dated as of April 18, 2018.	Form 10-Q	001-36066	10.2	August 2, 2018
10.24†	First Amendment of Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN – Companhia Industrial Produtora de Antibióticos, S.A., dated as of February 18, 2019.	Form 10-K	001-36066	10.33	March 6, 2019
10.25†	Master Manufacturing Service Agreement by and between the Company and Patheon UK Limited dated as of July 28, 2017 and Product Agreement by and between the Company and Patheon UK Limited dated as of July 28, 2017.	Form 10-Q/A	001-36066	10.12	November 6, 2017
10.26^	Amendment Agreement - Amendment No. 1 to Patheon Product Agreement by and between the Company and Patheon UK Limited dated as of January 1, 2019.	Form 10-Q	001-36066	10.1	May 8, 2019
10.27	Loan Agreement by and between the Company and Healthcare Royalty Partners III, L.P. dated as of February 25, 2019.	Form 10-Q	001-36066	10.2	May 8, 2019
10.28^	Contract, dated as of December 18, 2019, between Paratek Pharmaceuticals, Inc. and the Biomedical Advanced Research and Development Authority of the United States Department of Health and Human Services.	Form 10-K	001-36066	10.35	March 10, 2020
10.29^	Modification of Contract, dated as of March 27, 2020, between Paratek Pharmaceuticals, Inc. and the Biomedical Advanced Research and Development Authority of the United States Department of Health and Human Services.	Form 10-K	001-36066	10.50	March 29, 2021
10.30^	Modification of Contract No. 2, dated July 29, 2021, between Paratek Pharmaceuticals, Inc. and the Biomedical Advanced Research and Development Authority of the United States Department of Health and Human Services.	Form 10-Q	001-36066	10.2	November 8, 2021
10.31^	Notice of Assignment to Affiliate for License and Collaboration Agreement by and between Paratek Bermuda Ltd. and Zai Lab (Shanghai) Co., Ltd., dated as of December 19, 2019.	Form 10-K	001-36066	10.36	March 10, 2020
10.32	Loan Agreement, dated as of December 31, 2020, by and between R-Bridge Healthcare Cayman AIV, L.P., as Lender, and PRTK SPV2 LLC, as Borrower.	Form 8-K	001-36066	10.1	January 4, 2021
10.33	Revenue Interest Purchase Agreement, dated as of December 31, 2020, by and between Paratek Pharmaceuticals, Inc., as Seller, and PRTK SPV2 LLC, as Company.	Form 8-K	001-36066	10.2	January 4, 2021
10.34	Contribution and Servicing Agreement, dated as of December 31, 2020, by and between Paratek Pharmaceuticals, Inc., as Contributor, and PRTK SPV2 LLC, as Company.	Form 8-K	001-36066	10.3	January 4, 2021
10.35^	First Amendment to the Manufacturing and Services Agreement, by and between the Company and Almac Pharma Services Limited, dated as of September 4, 2020.	Form 8-K	001-36066	10.4	January 4, 2021
10.36^	Second Amendment to the Manufacturing and Services Agreement, by and between the Company and Almac Pharma Services Limited, dated as of January 1, 2021.	Form 8-K	001-36066	10.5	January 4, 2021
10.37^	Second Amendment to the Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN - Companhia Industrial Produtora de Antibióticos, S.A., dated as of December 20, 2019.	Form 8-K	001-36066	10.6	January 4, 2021

Exhibit No.	Exhibit Description	Incorporated by Reference			
		Schedule/ Form	File Number	Exhibit	Filing Date
10.38^	Third Amendment to the Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN - Companhia Industrial Produtora de Antibióticos, S.A., dated as of July 28, 2020.	Form 8-K	001-36066	10.7	January 4, 2021
10.39^	Fourth Amendment to the Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN - Companhia Industrial Produtora de Antibióticos, S.A., dated as of December 16, 2020.	Form 8-K	001-36066	10.8	January 4, 2021
10.40*^	Fifth Amendment to the Amended and Restated Manufacturing and Services Agreement, by and between the Company and CIPAN - Companhia Industrial Produtora de Antibióticos, S.A., dated as of January 11, 2022.				
10.41^	First Amendment of Manufacturing and Services Agreement, by and between the Company and Patheon UK Limited, dated as of June 1, 2019.	Form 8-K	001-36066	10.9	January 4, 2021
10.42^	Second Amendment of Manufacturing and Services Agreement, by and between the Company and Patheon UK Limited, dated as of December 18, 2020.	Form 8-K	001-36066	10.10	January 4, 2021
10.43	Amendment No. 2 to the Product Agreement, by and between the Company and Patheon UK Limited, dated as of June 1, 2019.	Form 8-K	001-36066	10.11	January 4, 2021
10.44^	Amendment No. 3 to the Product Agreement, by and between the Company and Patheon UK Limited, dated as of July 1, 2020.	Form 8-K	001-36066	10.2	January 4, 2021
10.45*^	Amendment No. 4 to the Product Agreement, by and between the Company and Patheon UK Limited, dated as of November 17, 2021.				
10.46^	Supply Agreement, dated July 14, 2021, between Paratek Pharmaceuticals, Inc. and CARBOGEN AMCIS AG.	Form 10-Q	001-36066	10.4	November 8, 2021
21.1*	Subsidiaries of the Company.				
23.1*	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.				
24.1	Power of Attorney (included on signature page)				
31.1*	Certification of the Company's Chief Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act of 1934, as amended, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2*	Certification of the Company's Chief Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act of 1934, as amended, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1*	Certification of the Company's Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2*	Certification of the Company's Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				

Exhibit No.	Exhibit Description	Incorporated by Reference			
		Schedule/ Form	File Number	Exhibit	Filing Date
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.				
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.				
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.				
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.				
101.LAB*	Inline XBRL Taxonomy Extension Labels Linkbase Document.				
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.				
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)				

* Filed herewith.
† Confidential treatment has been granted as to certain portions, which portions have been omitted and submitted separately to the Securities and Exchange Commission.
^ Certain confidential information contained in this exhibit has been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.
+ Management contract or compensatory plan, contract or arrangement.

(b) Exhibits

See Exhibits listed under Item 15(a)(3) above.

(c) Financial Statement Schedules

Financial statement schedules are omitted because they are not applicable or are not required or the information required to be set forth therein is included in the Financial Statements or notes thereto.

Item 16. Form 10-K Summary

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, State of Massachusetts, on the 14th day of March 2022.

Paratek Pharmaceuticals, Inc.

By: /s/ Evan Loh, M.D.
Evan Loh, M.D.
Chief Executive Officer
(Principal Executive Officer)

By: **/s/** Sarah Higgins
Sarah Higgins
Vice President, Finance and Controller
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints each of William M. Haskel and Sarah Higgins his or her true and lawful attorney-in-fact and agent, with full power of substitution, 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 attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated opposite his name.

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

Signature	Title	Date
/s/ Evan Loh, M.D. **Evan Loh, M.D.**	Chief Executive Officer and Director *(Principal Executive Officer)*	March 14, 2022
/s/ Sarah Higgins **Sarah Higgins**	Vice President, Finance and Controller *(Principal Financial and Accounting Officer)*	March 14, 2022
/s/ Michael F. Bigham **Michael F. Bigham**	Executive Chairman of the Board of Directors	March 14, 2022
/s/ Minnie V. Baylor Henry **Minnie V. Baylor Henry**	Director	March 14, 2022
/s/ Thomas J. Dietz, Ph.D. **Thomas J. Dietz, Ph.D.**	Director	March 14, 2022
/s/ Timothy R. Franson, M.D. **Timothy R. Franson, M.D.**	Director	March 14, 2022
/s/ Rolf K. Hoffmann **Rolf K. Hoffmann**	Director	March 14, 2022
/s/ Kristine Peterson **Kristine Peterson**	Director	March 14, 2022
/s/ Robert S. Radie **Robert S. Radie**	Director	March 14, 2022
/s/ Jeffrey Stein, Ph.D. **Jeffrey Stein, Ph.D.**	Director	March 14, 2022

PARATEK PHARMACEUTICALS, INC. 2017 INDUCEMENT PLAN, AS AMENDED
ADOPTED: JUNE 15, 2017 AMENDED: OCTOBER 16, 2018
AMENDED: MARCH 9, 2022

1. GENERAL**.**

(a) **Eligible Award Recipients**. Awards under the Plan may only be granted to an individual not previously an Employee or Director of the Company, or to an individual following a bona fide period of non-employment with the Company, as an inducement material to the individual's entering into employment with the Company within the meaning of Rule 5635(c)(4) of the NASDAQ Listing Rules (each such individual, an "*Eligible Individual*").

(b) **Available Awards**. The Plan provides for the grant of the following types of Awards: (i) Nonstatutory Stock Options and (ii) Restricted Stock Unit Awards.

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

2. ADMINISTRATION**.**

(a) **Administration by Board**. The Board will administer the Plan. The Board may delegate administration of the Plan to a Committee or Committees, as provided in Section 2(c). However, the grant of Awards will be approved by the Company's independent compensation committee or a majority of the Company's independent directors (as defined in Rule 5605(a)(2) of the NASDAQ Listing Rules) in order to comply with the exemption from the stockholder approval requirement for "inducement grants" provided under Rule 5635(c)(4) of the NASDAQ Listing Rules.

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

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

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

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

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

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

(vi) To amend the Plan in any respect the Board deems necessary or advisable, provided that the Company will seek stockholder approval of any amendment to the extent required by applicable law or listing requirements, and further provided that, except as provided in the Plan (including Section 2(b)(vii)) or an Award Agreement, no amendment of the Plan will impair a Participant's rights under an outstanding Award without the Participant's written consent.

(vii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; provided however, that a Participant's rights under any Award will not be impaired by any such amendment unless (A) the Company requests the consent of the affected Participant, and (B) such Participant consents in writing. Notwithstanding the foregoing, (a) a Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights, and (b) subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent to bring the Award into compliance with Section 409A of the Code or to comply with other applicable laws or listing requirements.

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

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

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

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

(e) **Cancellation and Re-Grant of Awards**. Neither the Board nor any Committee will have the authority to: (i) reduce the exercise or strike price of any outstanding Option under the Plan, or (ii) cancel any outstanding Option that has an exercise price or strike price greater than the current Fair Market Value of the Common Stock in exchange for cash or other new Awards under the Plan, unless the stockholders of the Company have approved such an action within twelve (12) months prior to such an event.

3. SHARES SUBJECT TO THE PLAN**.**

(a) **Share Reserve.** Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate number of shares of Common Stock that may be issued pursuant to Awards from and after the Effective Date (the "*Share Reserve*") will not exceed 1,800,000 shares. For clarity, the Share Reserve in this Section 3(a) is a limitation on the number of shares of Common Stock that may be issued under the Plan. Accordingly, this Section 3(a) does not limit the granting of Awards except as provided in Section 7(a). Shares may be issued in connection with a merger or acquisition as permitted by NASDAQ Listing Rule 5635(c) or, if applicable, NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

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

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

4. ELIGIBILITY**.**

(a) **Eligibility**. Awards may only be granted under the Plan to Eligible Individuals.

(b) **Approval Requirements**. All Awards must be granted either by a majority of the Company's independent directors or by the Company's compensation committee comprised of independent directors within the meaning of Rule 5605(a)(2) of the NASDAQ Listing Rules.

5. PROVISIONS RELATING TO OPTIONS**.**

Each Option will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be Nonstatutory Stock Options. The provisions of separate Options need not be identical; provided, however, that each Option Agreement will conform to (through incorporation of provisions hereof by reference in the applicable Option Agreement or otherwise) the substance of each of the following provisions:

(a) **Term**. No Option will be exercisable after the expiration of ten (10) years from the date of its grant or such shorter period specified in the Option Agreement.

(b) **Exercise Price**. The exercise or strike price of each Option will be not less than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Option on the date the Option is granted. Notwithstanding the foregoing, an Option may be granted with an exercise or strike price lower than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Option if such Option is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Section 409A of the Code and, if applicable, Section 424(a) of the Code.

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

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

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

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

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

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

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

(i) Restrictions on Transfer. An Option will not be transferable except by will or by the laws of descent and distribution (and pursuant to Sections 5(d)(ii) and 5(d)(iii) below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of the Option in a manner that is not prohibited by applicable tax and securities laws. Except as explicitly provided in the Plan, an Option may not be transferred for consideration.

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

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

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

(f) **Termination of Continuous Service**. Except as otherwise provided in the applicable Option Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise the Participant's Option (to the extent that the Participant was entitled to exercise such Option as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date three (3) months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the applicable Option Agreement), and (ii) the expiration of the term of the Option as set forth in the Option Agreement. If, after termination of Continuous Service, the Participant does not exercise the Participant's Option within the applicable time frame, the Option will terminate.

(g) **Extension of Termination Date**. Except as otherwise provided in the applicable Option Agreement or other agreement between the Participant and the Company, if the exercise of an Option following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's death or Disability) would be prohibited at any time

solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option will terminate on the earlier of (i) the expiration of a total period of time (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the exercise of the Option would not be in violation of such registration requirements, or (ii) the expiration of the term of the Option as set forth in the applicable Option Agreement. In addition, unless otherwise provided in a Participant's Option Agreement, if the sale of any Common Stock received upon exercise of an Option following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading policy, then the Option will terminate on the earlier of (i) the expiration of a period of time (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option as set forth in the applicable Option Agreement.

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

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

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

(k) Non-Exempt Employees. If an Option is granted to an Eligible Individual who becomes a non-exempt employee of the Company for purposes of the Fair Labor Standards Act of 1938, as amended, the Option will not be first exercisable for any shares of Common Stock until at least six

(6) months following the date of grant of the Option (although the Option may vest prior to such date). Consistent with the provisions of the Worker Economic Opportunity Act, (i) if such non- exempt employee dies or suffers a Disability, (ii) upon a Corporate Transaction in which such Option is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant's retirement (as such term may be defined in the Participant's Option Agreement or in another agreement between the Participant and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options may be exercised earlier than six (6) months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option will be exempt from the employee's regular rate of pay. To the extent permitted and/or required for compliance with the Worker Economic Opportunity Act to ensure that any income derived by a non-exempt employee in connection with the exercise, vesting or issuance of any shares under any other Option will be exempt from the employee's regular rate of pay, the provisions of this Section 5(k) will apply to all Options and are hereby incorporated by reference into such Option Agreements.

6. PROVISIONS OF RESTRICTED STOCK UNIT AWARDS.

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

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

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

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

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

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

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

7. COVENANTS OF THE COMPANY**.**

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

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

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

8. MISCELLANEOUS**.**

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

(b) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action constituting the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the papering of the

Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

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

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

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

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

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

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

(i) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code. Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an Employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(j) Compliance with Section 409A of the Code. To the extent that the Board determines that any Award granted hereunder is subject to Section 409A of the Code, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code. To the extent applicable, the Plan and Award Agreements will be interpreted in accordance with Section 409A of the Code. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded and a Participant holding an Award that constitutes "deferred compensation" under Section 409A of the Code is a "specified employee" for purposes of Section 409A of the Code, no distribution or payment of any amount will be made upon a "separation from service" before a date that is six (6) months following the date of such Participant's "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) or, if earlier, the date of the Participant's death.

(k) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the

occurrence of an event constituting Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company.

(l) Section 280G. If any payment or benefit (including benefits pursuant to the Plan) that a Participant would receive in connection with a Change in Control from the Company or otherwise ("*Transaction Payment*") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "*Excise Tax*"), then the Company will cause to be determined, before any amounts of the Transaction Payment are paid to a Participant, which of the following two alternative forms of payment would result in the Participant's receipt, on an after-tax basis, of the greater amount of the Transaction Payment notwithstanding that all or some portion of the Transaction Payment may be subject to the Excise Tax: (a) payment in full of the entire amount of the Transaction Payment (a "*Full Payment*"), or (b) payment of only a part of the Transaction Payment so that the Participant receives the largest payment possible without the imposition of the Excise Tax (a "*Reduced Payment*"). For purposes of determining whether to make a Full Payment or a Reduced Payment, the Company will cause to be taken into account all applicable federal, state and local income and employment taxes and the Excise Tax (all computed at the highest applicable marginal rate, net of the maximum reduction in federal income taxes which could be obtained from a deduction of such state and local taxes). If a Reduced Payment is made, (x) the Participant will have no rights to any additional payments and/or benefits constituting the Transaction Payment, and (y) reduction in payments and/or benefits will occur in the manner that results in the greatest economic benefit to the Participant as determined in this Section 8(l). If more than one method of reduction will result in the same economic benefit, the portions of the Transaction Payment will be reduced pro rata. Unless the Participant and the Company otherwise agree in writing, any determination required under this Section 8(l) will be made in writing by the Company's independent public accountants (the "*Accountants*"), whose determination will be conclusive and binding upon the Participant and the Company for all purposes. For purposes of making the calculations required by this Section 8(l), the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Participant and the Company will furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this paragraph. The Company will bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this Section 8(l) as well as any costs incurred by the Participant with the Accountants for tax planning under Sections 280G and 4999 of the Code.

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

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), and (ii) the class(es) and number of securities and price per share of stock subject to outstanding Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) Dissolution or Liquidation. Except as otherwise provided in the Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Awards (other than Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Award is providing Continuous Service, provided, however, that the Board may, in its sole discretion, cause some or

all Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

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

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

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

(iii) accelerate the vesting, in whole or in part, of the Award (and, if applicable, the time at which the Award may be exercised) to a date prior to the effective time of such Corporate Transaction as the Board determines (or, if the Board does not determine such a date, to the date that is five (5) days prior to the effective date of the Corporate Transaction), with such Award terminating if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction; *provided*, *however*, that the Board may require Participants to complete and deliver to the Company a notice of exercise before the effective date of a Corporate Transaction, which exercise is contingent upon the effectiveness of such Corporate Transaction;

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

(v) cancel or arrange for the cancellation of the Award, to the extent not vested or not exercised prior to the effective time of the Corporate Transaction, in exchange for such cash consideration (including no consideration)as the Board, in its sole discretion, may consider appropriate; and

(vi) make a payment, in such form as may be determined by the Board equal to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Award immediately prior to the effective time of the Corporate Transaction, over (B) any exercise price payable by such holder in connection with such exercise. For clarity, this payment may be zero ($0) if the value of the property is equal to or less than the exercise price. Payments under this provision may be delayed to the same extent that payment of consideration to the holders of Common Stock in connection with the Corporate Transaction is delayed as a result of escrows, earn outs, holdbacks or any other contingencies.

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

(d) **Change in Control**. The following provisions will apply to Awards in the event of a Change in Control unless otherwise provided in the Award Agreement or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of an Award. If a Change in Control occurs and as of, or within twelve (12) months after, the effective time of such Change in Control a Participant's Continuous Service terminates due to an involuntary termination (not including death or Disability) without Cause, then, as of the date of the involuntary termination of the Participant's Continuous Service, the vesting and exercisability (if applicable) of each then outstanding Award held by the Participant shall be accelerated to the extent of fifty percent (50%) of the then unvested portion of each such outstanding Award. As a condition of a Participant's entitlement to the vesting acceleration described in this Section 9(d), the Participant may be required to execute a release of claims and/or other related termination agreements with the Company.

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

(a) **Plan Term**. The Board may suspend or terminate the Plan at any time. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

(b) **No Impairment of Rights**. Suspension or termination of the Plan will not impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant or as otherwise permitted in the Plan.

11. EFFECTIVE DATE OF THE PLAN**.**

The Plan will become effective on the Effective Date.

12. CHOICE OF LAW**.**

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

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

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

(b) "***Award***" means any right to receive Common Stock granted under the Plan, including a Nonstatutory Stock Option or a Restricted Stock Unit Award.

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

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

(e) ***"Capitalization Adjustment"*** means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or

any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(f) ***"Cause"*** will have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any crime involving fraud, dishonesty or moral turpitude; (ii) such Participant's attempted commission of or participation in a fraud or act of dishonesty against the Company that results in (or might have reasonably resulted in) material harm to the business of the Company; (iii) such Participant's intentional, material violation of any contract or agreement between Participant and the Company or any statutory duty Participant owes to the Company; or (iv) such Participant's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or might have reasonably resulted in) material harm to the business of the Company; provided, however, that the action or conduct described in clauses (iii) and (iv) above will constitute "Cause" only if such action or conduct continues after the Company has provided such Participant with written notice thereof and not less than five business days to cure the same. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause will be made by the Company, in its sole discretion. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant will have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

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

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the "Subject Person") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than fifty percent (50%) of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than fifty percent (50%) of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

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

(iv) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than fifty percent (50%) of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

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

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

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

(i) ***"Committee"*** means a committee of one (1) or more Directors to whom authority has been delegated by the Board in accordance with Section 2(d) and which is comprised of a majority of the independent directors of the Company within the meaning of Rule 5605(a)(2) of the NASDAQ Listing Rules.

(j) ***"Common Stock"*** means the common stock of the Company.

(k) ***"Company"*** means Paratek Pharmaceuticals, Inc., a Delaware corporation.

(l) ***"Consultant"*** means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services.

However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person. Consultants are not eligible to receive Awards under the Plan with respect to their service in such capacity.

(m) ***"Continuous Service"*** means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; provided, however, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, in its sole discretion, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law.

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

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

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

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

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

(o) ***"Director"*** means a member of the Board. Directors are not eligible to receive Awards under the Plan with respect to their service in such capacity.

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

(q) ***"Effective Date"*** means the date this Plan document is approved by the Board.

(r) ***"Eligible Individual"*** means an individual not previously an Employee or Director of the Company, or an individual following a bona fide period of non-employment with the Company, within the meaning of Rule 5635(c)(4) of the NASDAQ Listing Rules.

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

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

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

(v) ***"Exchange Act Person"*** means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to an offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities.

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

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

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

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

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

(y) ***"Nonstatutory Stock Option"*** means any option granted pursuant to Section 5 that does not qualify as an "incentive stock option" within the meaning of Section 422 of the Code.

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

(aa) ***"Option"*** means a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

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

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

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

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

(ff) ***"Plan"*** means this Paratek Pharmaceuticals, Inc. 2017 Inducement Plan.

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

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

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

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

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

PARATEK PHARMACEUTICALS, INC.

NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

Each member of the Board of Directors (the *"Board")* who is not also serving as an employee of Paratek Pharmaceuticals, Inc. (the *"Company")* or any of its subsidiaries (each such member, an *"Eligible Director")* will receive the compensation described in this Non-Employee Director Compensation Policy for his or her Board service. This Non-Employee Director Compensation Policy is effective on January 1, 2022 (the *"Effective Date").* An Eligible Director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date for which service begins for a cash payment, or the date of grant for an equity award, as the case may be *(e.g.,* an election to decline the cash payment to be made for a quarter must be made prior to the date the quarter begins). This policy may be amended at any time in the sole discretion of the Board or the Compensation Committee of the Board, and supersedes any prior policies related to compensation of Eligible Directors.

Annual Cash Compensation

The annual cash compensation amount set forth below is payable in equal quarterly installments, payable in arrears on the last day of each fiscal quarter in which the service occurred. If an Eligible Director joins the Board or a committee of the Board at a time other than effective as of the first day of a fiscal quarter, each annual retainer set forth below will be pro-rated based on days served in the applicable fiscal year, with a pro-rated amount paid for the first fiscal quarter in which the Eligible Director provides the service, and regular full quarterly payments thereafter. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
   a. All Eligible Directors: $45,000

2. Annual Committee Chair Service Retainer:
   a. Chairman of the Audit Committee: $20,000
   b. Chairman of the Compensation Committee: $15,000
   c. Chairman of the Nominating and Corporate Governance Committee: $10,000

3. Annual Committee Member Service Retainer (other than Chairman):
   a. Member of the Audit Committee: $10,000
   b. Member of the Compensation Committee: $7,500
   c. Member of the Nominating and Corporate Governance Committee: $5,000

Equity Compensation

The stock options and restricted stock units set forth below will be granted under the Company's 2015 Equity Incentive Plan (the *"Plan").* All stock options granted under this policy will be non-statutory stock options, with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying Common Stock on the date of grant, and a term of ten years from the date of grant (subject to earlier termination in connection with a termination of service as provided in the Plan). In addition to the vesting schedules described below, in the event of a Change in Control or a Corporate Transaction (each, as defined in the Plan), any unvested portion of the stock options and restricted stock units described below will fully vest and become exercisable as of immediately prior to

the effective time of such Change in Control or Corporate Transaction, subject to the Eligible Director's Continuous Service (as defined in the Plan) on th effective date of such transaction.

1. Initial Grant: On the last trading day of the month in which an Eligible Director is initially elected or appointed to the Board (or if there is no trading day i that month on or after the date of election or appointment of the Eligible Director, then on the last trading day of the month following the month in which an Eligible Director is initially elected or appointed to the Board), the Eligible Director will be granted automatically, without further action by the Board o Compensation Committee of the Board, (i) stock options to purchase 12,800 shares of the Company's Common Stock and (ii) Restricted Stock Uni (RSUs) representing 19,200 shares of the Company's Common Stock. The shares subject to each such (i) stock option will vest as to 1/36 of the shares o the last day of the month following the month of the date of grant, and on the last day of each successive month thereafter until fully vested, and (ii) 1/3 of the RSUs will vest on each successive one-year anniversary following the grant date over a three-year period, in either case, subject to the Eligibl Director's Continuous Service (as defined in the Plan) through such vesting dates. No Initial Grant will be granted to an Eligible Director who is alread serving as a director on the Effective Date.

2. Annual Grant: At the Compensation Committee meeting held in January or February of each year for the purpose of granting executives annual equity incentive awards following the Effective Date or, if a Compensation Committee meeting is not held by the end of February of any year, on the last trading date in February of such year following the Effective Date, each Eligible Director who continues to serve as a non-employee member of the Board on suc date will be granted automatically, without further action by the Board or Compensation Committee of the Board Restricted Stock Units (RSUs representing 20,000 shares of the Company's Common Stock. The shares subject to each such RSU will vest on the one-year anniversary following th grant date, subject, in either case, to the Eligible Director's Continuous Service (as defined in the Plan) through such vesting date.

Expenses

The Company will reimburse Eligible Directors for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board and/or Committee meetings.

THIS EXHIBIT HAS BEEN REDACTED AND IS THE SUBJECT OF A CONFIDENTIAL TREATMENT REQUEST. REDACTED MATERIAL IS MARKED WITH [* * *] AND HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

FIFTH AMENDMENT TO THE AMENDED AND RESTATED MANUFACTURING AND SERVICES AGREEMENT

This Fifth Amendment to the Amended and Restated Manufacturing and Services Agreement (the "**Fifth Amendment**") is made as of January 11, 2022 (the "**Effective Date**") by and between Paratek Pharmaceuticals, Inc., a Delaware corporation with a principal business address at 1000 First Avenue, Suite 200, King of Prussia, PA 19406 ("**Paratek**") and CIPAN−Companhia Industrial Produtora de Antibióticos, S.A., a corporation organized and existing under the laws of Portugal with an address at Rua da Estação, nº42, 2600-726 Castanheira do Ribatejo, Portugal ("**CIPAN**" and together with Paratek, the "**Parties**"). Capitalized terms used, but not otherwise defined, herein shall have the meanings set forth in the Agreement.

WHEREAS, Paratek and CIPAN are parties to that certain Amended and Restated Manufacturing and Services Agreement, dated April 18, 2018, as amended by the First Amendment, dated as of February 18, 2019, the Second Amendment, dated as of December 20, 2019, the Third Amendment, dated as of July 28, 2020 and the Fourth Amendment, dated as of December 16, 2020 (the "**Agreement**"); and

WHEREAS, the Parties now desire to amend the Agreement as set forth in this Fifth Amendment.

NOW THEREFORE, the Parties agree as follows:

1. **Fifth Amendment to the Agreement**. The Agreement is amended and modified as follows:

   a. The following new definition shall be added to Section 1.1 in alphabetical order, and the numbering of the respective subsequent definitions shall be updated accordingly:

   [***] has the meaning set forth in Section 7.1.1(ii).

   b. Section 7.1 is hereby amended and restated in its entirety as follows:

   7.1 Delivery.

   7.1.1. Method of Delivery. All Products shall be delivered either (a) [***] or (b) [***]. Paratek will specify in each purchase order submitted pursuant to Section 2.3 the mode of delivery for the Product being ordered. CIPAN will notify Paratek at least [***] prior to any shipment of Product. Time is of the essence for all deliveries of Products.

   (i) For Product being delivered [***], CIPAN is responsible for the arrangement of transport of Products from the Facility to the shipping destination specified in the purchase order. CIPAN will only use carriers approved by Paratek. All Products shall be suitably prepared and packed for shipment in suitable containers in accordance with sound commercial practices to ensure that Products are delivered in an undamaged condition. CIPAN shall mark the relevant purchase order number on each container and enclose an itemized packing list with such number with the shipment. CIPAN shall hold title to and bear all risk of loss or damage to Products and Materials prior to such item's delivery to Paratek or its designee hereunder. CIPAN shall ensure that all Product held in storage is stored

in accordance with the Specifications until delivery to Paratek under this Agreement and that all storage areas meet cGMP requirements.

(ii) For Product being delivered [***], CIPAN will store, at its cost and expense, the Product in a storage area tha meets cGMP requirements and in accordance with the Specifications. CIPAN will inform Paratek on the dat when the Product is available for shipment (but, for clarity, will continue to store such Product until Paratek requests that the Product be shipped from [***]). If requested by Paratek in writing, CIPAN will arrange fo the transport (including exportation) of such Products, using a carrier approved by Paratek, from [***] to the shipping destination specified by Paratek and will invoice Paratek for the cost of such transport. All Products shall be suitably prepared and packed for shipment in suitable containers in accordance with sound commercial practices to ensure that Products can be transported in an undamaged condition after Paratek or its designee collect the Products. CIPAN shall mark the relevant purchase order number on each container and enclose an itemized packing list with such number with the shipment. CIPAN shall hold title to and bear all risk of loss or damage to Products and Materials prior to such item's delivery to Paratek or its designee hereunder. Once the Product is delivered [***], (a) title to the Products will pass to Paratek and (b) subject to CIPAN's obligations under this Agreement, including CIPAN's obligation to store the Product in a storage area that meets cGMP requirements and in accordance with the Specifications, risk of loss or damage to the Products will pass to Paratek.

7.1.2 Delays. In the event of any delay in delivery of Product from the delivery date on the applicable purchase order for such Product, if such delay is: [***], unless, in each case ((a) and (b)), such delay is due to a Force Majeure Event causing a worldwide shortage of the applicable Materials, in which case Article 17 shall apply.

c. Section 10.3.1 is hereby amended and restated in its entirety as follows:

10.3.1. Paratek shall have a period of [***] from (a) with respect to Product delivered [***] and (b) with respect to Product delivered [***] (the time period set forth in (a) and (b), as applicable based on the method of delivery, the "**Inspection Period**") to inspect, or cause to have inspected by a Third Party designated by Paratek, any shipment of Products to determine whether such shipment conforms to Specifications or otherwise breaches CIPAN's warranties set forth in this Agreement. Paratek shall give CIPAN notice of rejection (**Rejection Notice**") of any shipment of Products that, in whole or part, failed to meet Specifications or which otherwise breached CIPAN's warranties set forth in this Agreement, in each case at the time of delivery pursuant to Section 7.1.

2. **General Provisions**. Unless specifically modified or changed by the terms of the Fifth Amendment, all terms and conditions of the Agreement and the Quality Agreement, between the Parties, dated as of November 2, 2016 (as may be amended from time to time, "**Quality Agreement**") shall remain in full force and effect and shall apply fully as described and set forth in the Agreement and Quality Agreement, respectively. In the event of any express conflict or inconsistency between the Fifth Amendment, on one hand, and the Agreement or Quality Agreement on the other hand, the terms and

conditions of the Fifth Amendment shall control. This Fifth Amendment, the Quality Agreement and the Agreement constitute the entire understanding among the parties regarding subject matters contained therein and herein and supersede all prior negotiations, commitments, agreements and understandings among them on such subject matters. This Fifth Amendment may be executed in any number of counterparts, either by original or facsimile counterpart, each such counterpart shall be deemed to be an original instrument, and all such counterparts together shall constitute but one agreement. This Fifth Amendment and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the law of the [***], without regard to the conflict of laws principles thereof.

IN WITNESS WHEREOF, each Party has caused this Fifth Amendment to be executed by its duly authorized representatives as of the Effective Date.

PARATEK PHARMACEUTICALS, INC.

By: /s/ Jason Burdette

Name: Jason Burdette

Title: SVP, Technical Operations

CIPAN COMPANHIA INDUSTRIAL PRODUTORA DE ANTIBIÓTICOS, S.A.

By: /s/ Daniel Rivero

Name: Daniel Rivero

Title: Industrial Director

THIS EXHIBIT HAS BEEN REDACTED AND IS THE SUBJECT OF A CONFIDENTIAL TREATMENT REQUEST. REDACTED MATERIAL IS MARKED WITH [* * *] AND HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

AMENDMENT AGREEMENT – AMENDMENT NO.4

TO THE PRODUCT AGREEMENT DATED JULY 28, 2017

THIS FOURTH AMENDMENT AGREEMENT is dated November 17, 2021 (the "**Fourth Amendment Effective Date**")

PARTIES

1. **PATHEON UK LIMITED** (Registration No. 3764421) incorporated and registered in England whose registered office is at Kingfisher Drive, Covingham, Swindon, Wiltshire, SN3 5BZ, England ("**Patheon**"); and

2. **PARATEK PHARMACEUTICALS, INC.** a corporation existing under the laws of Delaware, whose registered office is at 75 Park Plaza Boston, MA 02116, USA ("**Client**").

RECITALS

A. The Parties entered in to a Product Agreement dated July 28, 2017, as previously amended by Amendment No. 1 dated as of January 1 2019, Amendment No. 2 dated as of June 1, 2019 and Amendment No. 3 dated July 1, 2020(the "**Product Agreement**") issued under the Master Manufacturing Services Agreement dated July 28, 2017, as amended by the First Amendment dated June 1, 2019 and the Second Amendment dated December 18, 2020 (the "**Master Agreement**"), (collectively the "**Agreement**").

IT IS AGREED as follows:

1. Definitions

1.1. Defined terms in this Fourth Amendment Agreement shall have the same meaning as those in the Agreement as applicable unless otherwise indicated.

1.2. The Parties have agreed to amend the terms of the Product Agreement to modify the Minimum Conversion Revenue Requirement fo Years 2022 and 2023.

2. Amendments

2.1. The Parties agree that, as of the Fourth Amendment Effective Date, the Product Agreement is amended as set forth in this Section 2.

2.2. [***]

2.3. The [***] pricing tables in Schedule B of the Product Agreement shall be deleted and replaced with the pricing tables set forth in **Annex 1** to this Fourth Amendment Agreement and shall apply to Product delivered on or after 01 January 2022. This includes any Firm Orders accepted by Patheon prior to 01 January 2022 where the actual Delivery Date is on or after 01 January 2022. For the avoidance of doubt the remainder of the terms set forth in Schedule B of the Product Agreement shall remain in full force and effect.

2.4. The following is added to section 13 of the Product Agreement:

[***]

2.5. All terms within the Agreement not specifically amended by this Fourth Amendment Agreement shall remain unchanged.

3. Integration

3.1. Except for the sections of the Agreement specifically amended hereunder, all terms and conditions of the Agreement remain and shall remain in full force and effect. This Fourth Amendment Agreement shall hereafter be incorporated into and deemed part of the Agreement and any future reference to the Agreement shall include the terms and conditions of this Fourth Amendment Agreement.

4. Governing Law and Jurisdiction

4.1. This Fourth Amendment Agreement and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the laws that govern the Agreement, and the Parties submit to the jurisdiction and dispute resolution provisions as set forth in the Agreement.

IN WITNESS WHEREOF, the duly authorized representatives of the Parties have executed this Fourth Amendment Agreement as of the Fourth Amendment Effective Date.

SIGNED for and on behalf of
PATHEON UK LIMITED

Signature:	/s/ Mark Newton
Title:	Director GCS
Print Name:	Mark Newton
Date:	22 November 2021 8:40 EST

SIGNED for and on behalf of
PARATEK PHARMACEUTICALS, INC.

Signature:	/s/ Jason Burdette
Title:	SVP, Technical Operations
Print Name:	Jason Burdette
Date:	22 November 2021 8:37 EST

Annex 1

SCHEDULE B

[***]

[***]	[***]	[***]	[***]	[***]
			[***]	[***]
[***]	[***]	[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]

[***]

[***]

[***]

[***]	[***]	[***]	[***]	[***]
			[***]	[***]
[***]	[***]	[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]

[***]

[***]

[***]

[***]	[***]	[***]	[***]	[***]
			[***]	[***]

[***]	[***]	[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]
		[***]	[***]	[***]

[***]

[***]

Exhibit 21.1

Paratek Pharmaceuticals, Inc.

Subsidiaries

Paratek Ireland Limited

Paratek Pharma, LLC

Paratek Royalty Corporation

Paratek Royalty Corporation II

Paratek Securities Corporation

PRTK SPV1 LLC

PRTK SPV2 LLC

Transcept Pharma, Inc.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-3 No. 333-238150) of Paratek Pharmaceuticals, Inc.,
(2) Registration Statement (Form S-8 No. 333-135506) pertaining to the Novacea, Inc. 2006 Incentive Award Plan,
(3) Registration Statement (Form S-8 No. 333-150869) pertaining to the Novacea, Inc. 2006 Incentive Award Plan,
(4) Registration Statements (Form S-8 Nos. 333-157927, 333-164468, 333-172041, 333-180517, 333-187254 and 333-194624 pertaining to the 2006 Incentive Award Plan of Transcept Pharmaceuticals, Inc.,
(5) Registration Statement (Form S-8 No. 333-160222) pertaining to the 2009 Employee Stock Purchase Plan of Transcep Pharmaceuticals, Inc.,
(6) Registration Statement (Form S-8 No. 333-201204) pertaining to the Paratek Pharmaceuticals, Inc. 2014 Equity Incentive Plan, a amended,
(7) Registration Statement (Form S-8 No. 333-205482) pertaining to the Paratek Pharmaceuticals, Inc. 2006 Incentive Award Plan, a amended and restated, the Paratek Pharmaceuticals, Inc. 2015 Equity Incentive Plan, and the Paratek Pharmaceuticals, Inc. 201 Inducement Plan,
(8) Registration Statements (Form S-8 Nos. 333-210053, 333-217660, 333-224781, 333-230097, 333-237084, and 333-254857 pertaining to the Paratek Pharmaceuticals, Inc. 2015 Equity Incentive Plan,
(9) Registration Statements (Form S-8 Nos. 333-218847 and 333-228218) pertaining to the Paratek Pharmaceuticals, Inc. 201 Inducement Plan, as amended, and
(10) Registration Statement (Form S-8 No. 333-226507) pertaining to the Paratek Pharmaceuticals, Inc. 2018 Employee Stock Purchas Plan;

of our report dated March 14, 2022, with respect to the consolidated financial statements of Paratek Pharmaceuticals, Inc. included in this Annual Repor (Form 10-K) of Paratek Pharmaceuticals, Inc. for the year ended December 31, 2021.

/s/ Ernst & Young LLP

Boston, Massachusetts
March 14, 2022

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Evan Loh, certify that:

1. I have reviewed this Annual Report on Form 10-K of Paratek Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(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 our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision; to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(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.

/s/ EVAN LOH, M.D.

Evan Loh, M.D.
Chief Executive Officer
March 14, 2022

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sarah Higgins, certify that:

1. I have reviewed this Annual Report on Form 10-K of Paratek Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(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 our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision; to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(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.

/s/ SARAH HIGGINS

Sarah Higgins
Principal Financial Officer
March 14, 2022

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

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), Evan Loh, M.D., Chief Executive Officer of Paratek Pharmaceuticals, Inc. (the "Company"), 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, 2021 (the "Annual Report"), to which this Certification is attached as Exhibit 32.1 fully complies with the requirements of Section 13(a) or Section 15(d), of the Exchange Act; and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations the Company.

In Witness Whereof, the undersigned has set his hand hereto as of the 14th day of March, 2022.

/s/ EVAN LOH, M.D.

Evan Loh, M.D.
Chief Executive 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 Paratek Pharmaceuticals, Inc. 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 this Annual Report on Form 10-K), irrespective of any general incorporation language contained in such filing.

Exhibit 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

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), Sarah Higgins, Principal Financial Officer of Paratek Pharmaceuticals, Inc. (the "Company"), hereby certifies that, to the best of her knowledge:

1. The Company's Annual Report on Form 10-K for the year ended December 31, 2021 (the "Annual Report"), to which this Certification is attached as Exhibit 32.2 fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; 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.

In Witness Whereof, the undersigned has set her hand hereto as of the 14th day of March, 2022.

/s/ SARAH HIGGINS

Sarah Higgins
Principal 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 Paratek Pharmaceuticals, Inc. 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 this Annual Report on Form 10-K), irrespective of any general incorporation language contained in such filing.