HORIZON PHARMA PUBLIC LIMITED COMPANY
(Exact name of Registrant as specified in its charter)

Ireland
(State or other jurisdiction of incorporation or organization) Not Applicable

Connaught House, 1st Floor
1 Burlington Road, Dublin 4, D04 C5Y6, Ireland
(Address of principal executive offices)

011 353 1 772 2100
(Registrant’s telephone number, including area code)

Ordinary shares, nominal value $0.0001 per share
Securities registered pursuant to Section 12(b) of the Act: The NASDAQ Global Select Market

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. Large accelerated filer ☒ Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐
Emerging growth company ☐

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

The aggregate market value of the registrant’s voting ordinary shares held by non-affiliates of the registrant, based upon the $11.87 per share closing sale price of the registrant’s ordinary shares on June 30, 2017 (the last business day of the registrant’s most recently completed second quarter), was approximately $1.9 billion. Solely for purposes of this calculation, the registrant’s directors and executive officers and holders of 10% or more of the registrant’s outstanding ordinary shares have been assumed to be affiliates and an aggregate of 1,102,129 ordinary shares held by such persons on June 30, 2017 are not included in this calculation.

As of February 22, 2018, the registrant had outstanding 164,570,004 ordinary shares.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of the registrant’s definitive Proxy Statement for the registrant’s 2018 Annual General Meeting of Shareholders are incorporated by reference into Part III of this Annual Report on Form 10-K.
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PART I
Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains “forward-looking statements” — that is, statements related to future, not past, events — as defined in Section 21E of the Securities Exchange Act of 1934, as amended, that reflect our current expectations regarding our future growth, results of operations, business strategy and plans, financial condition, cash flows, performance, business prospects, and opportunities, as well as assumptions made by, and information currently available to, our management. Forward-looking statements include any statement that does not directly relate to a current or historical fact. Forward-looking statements generally can be identified by words such as “believe,” “may,” “could,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “seek,” “plan,” “expect,” “should,” “would”, or similar expressions. These statements are based on current expectations and assumptions that are subject to risks and uncertainties inherent in our business, which could cause our actual results to differ materially from those indicated in the forward-looking statements. Factors that could cause actual results to differ materially from those indicated in the forward-looking statements include, without limitation: our ability to successfully execute our sales and marketing strategy, including continuing to successfully recruit and retain sales and marketing personnel and to successfully build the market for our medicines; our ability to continue our transition to a rare and rheumatic disease company and build a sustainable pipeline of new medicine candidates; whether we will be able to realize the expected benefits of strategic transactions, including whether and when such transactions will be accretive to our net income; the rate and degree of market acceptance of, and our ability and our distribution and marketing partners’ ability to obtain coverage and adequate reimbursement and pricing for, our medicines from government and third-party payers and risks relating to the success of our patient access programs; our ability to maintain regulatory approvals for our medicines; our ability to conduct clinical development and obtain regulatory approvals for our medicine candidates, including potential delays in initiating and completing studies and filing for and obtaining regulatory approvals and whether data from clinical studies will support regulatory approval; our need for and ability to obtain additional financing; the accuracy of our estimates regarding future financial results; our ability to successfully execute our strategy to develop or acquire additional medicines or companies, including disruption from any future acquisition or whether any acquired development programs will be successful; our ability to manage our anticipated future growth; the ability of our medicines to compete with generic medicines, especially those representing the active pharmaceutical ingredients in our medicines as well as new medicines that may be developed by our competitors; our ability and our distribution and marketing partners’ ability to comply with regulatory requirements regarding the sales, marketing and manufacturing of our medicines and medicine candidates; the performance of our third-party distribution partners, licensees and manufacturers over which we have limited control; our ability to obtain and maintain intellectual property protection for our medicines; our ability to defend our intellectual property rights with respect to our medicines; our ability to operate our business without infringing the intellectual property rights of others; the loss of key commercial or management personnel; regulatory developments in the United States and other countries, including potential changes in healthcare laws and regulations; and other risks detailed below in Part I — Item 1A. “Risk Factors”.

Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee future results, events, levels of activity, performance or achievement. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law.

Item 1. Business

Unless otherwise indicated or the context otherwise requires, references to the “Company”, “we”, “us” and “our” refer to Horizon Pharma plc and its consolidated subsidiaries.

Overview

We are a biopharmaceutical company focused on researching, developing and commercializing innovative medicines that address unmet treatment needs for rare and rheumatic diseases. By fostering a growing pipeline of medicines in development and exploring all potential uses for currently marketed medicines, we strive to make a powerful difference for patients, their caregivers and physicians.
Our Strategy

Our strategy is to continue to build a well-balanced, diversified, high-growth biopharmaceutical company that focuses on addressing unmet treatment needs for rare and rheumatic diseases. We are executing our strategy through the successful commercialization of our existing medicines, a strong commitment to patient access and support and business development efforts focused on acquisitions to accelerate our rare disease leadership with on-market medicines as well as development-stage medicines to fill out our pipeline.

We are building a sustainable biopharmaceutical company by helping ensure that patients have access to their medicines and support services, and by investing in the further development of medicines for patients with rare or underserved diseases. Our growing business is diversified across three business units: orphan, rheumatology and primary care, and is driven by a successful commercial model that focuses on differentiated, long-life medicines, innovative patient access programs and a disciplined business development strategy. Our key areas of focus are:

Business development – We have a disciplined and robust acquisition strategy, and our focus is on rapid value creation and improving the performance of each of the medicines we acquire. We have completed nine acquisitions and one divestiture over the past seven years, including our first acquisition of a development-stage medicine in 2017 and two transformative transactions in 2016 that brought us three rare disease medicines. With our May 2017 acquisition of River Vision Development Corp., or River Vision, we added the late-stage rare disease biologic medicine candidate teprotumumab to our pipeline. Teprotumumab, which successfully completed a Phase 2 clinical trial and is currently enrolling patients in a Phase 3 confirmatory trial, targets the treatment of active moderate-to-severe thyroid eye disease, a debilitating autoimmune condition that presents in patients with Graves’ disease. The River Vision acquisition further demonstrates our commitment to rare disease medicines and expands and diversifies our rare disease medicine pipeline to support sustainable longer-term growth.

Clinical development – We strive to diligently unlock the full therapeutic potential of our medicines by working closely with regulatory agencies, premier academic centers with established study consortiums, healthcare professionals and patient groups to facilitate our clinical development programs and generate data for possible new indications that may help more patients in need. We also continue to look at opportunities to augment our rare disease pipeline through development-stage acquisitions and licensing and collaboration agreements.

Revenue diversification – We have successfully diversified our portfolio of commercialized medicines from two in 2013 to eleven today. Our intent is to continue to generate organic growth, broaden our medicine portfolio to ensure net sales are not dominated by any one medicine and increase the proportion of net sales derived from our medicines for rare and rheumatic diseases.

Our strategy has evolved over three phases. When we first launched as a public company in 2011, we rapidly established our infrastructure and commercial footprint, generating earnings and cash flow through the commercialization of our first two medicines. In 2014, we began the next phase of our strategy, focusing on rapid diversification into rare disease medicines through key acquisitions that brought us ACTIMMUNE, RAVICTI, KRYSSTEXXA and PROCYSBI. In 2017, we advanced to the third stage of our evolution, building out a pipeline of differentiated and clinically meaningful development-stage medicine candidates to drive sustainable growth over the long term. At the same time, we remain focused on commercial execution and optimizing the growth of our rare disease medicines, as well as considering future commercial asset acquisitions.

As a result of our strategy, we have diversified from a company with two medicines and total net sales of $6.9 million in 2011, to a rare disease medicine focused company with eleven medicines and net sales of $1.1 billion in 2017. Of our eleven medicines, six are for the treatment of rare diseases and represented approximately sixty percent of our 2017 net sales.

Our Company

We are a public limited company formed under the laws of Ireland. We operate through a number of international and U.S. subsidiaries with principal business purposes to perform research and development or manufacturing operations, serve as distributors of our medicines, hold intellectual property assets or provide us with services and financial support.
Our principal executive offices are located at Connaught House, 1st Floor, 1 Burlington Road, Dublin 4, D04 C5Y6, Ireland and our telephone number is 011 353 1 772 2100. Our website address is www.horizonpharma.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K.

Acquisitions and Divestitures

During the years ended December 31, 2017, 2016 and 2015, we completed the following acquisitions and divestitures:

• On June 30, 2017, we completed our acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International GmbH, or Boehringer Ingelheim International, in all territories outside of the United States, Canada and Japan.

• On June 23, 2017, we sold our European subsidiary that owned the marketing rights to PROCYSBI® (cysteamine bitartrate) delayed-release capsules and QUINSAIR™ (levofloxacin inhalation solution) in Europe, the Middle East and Africa, or EMEA, regions, or the Chiesi divestiture, to Chiesi Farmaceutici S.p.A., or Chiesi.

• On May 8, 2017, we completed our acquisition of River Vision, which added the late development-stage rare disease biologic medicine candidate teprotumumab to our research and development pipeline.

• On October 25, 2016, we completed our acquisition of Raptor Pharmaceutical Corp., or Raptor, which added the rare disease medicines PROCYSBI and QUINSAIR to our medicine portfolio.

• On January 13, 2016, we completed our acquisition of Crealta Holdings LLC, or Crealta, which added the rare disease medicine KRYSTEXXA and the primary care medicine MIGERGOT to our medicine portfolio.

• On May 7, 2015, we completed our acquisition of Hyperion Therapeutics, Inc., or Hyperion, which added the rare disease medicines RAVICTI and BUPHENYL to our medicine portfolio.

The consolidated financial statements presented herein include the results of operations of the acquired Hyperion, Crealta and Raptor businesses from the applicable dates of acquisition. See Note 4 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K, for further details of our acquisitions and divestitures.
Our Medicines

We believe our medicines address unmet therapeutic needs in orphan diseases, arthritis, pain and inflammation and inflammatory diseases and provide significant advantages over existing therapies.

Our current marketed medicine portfolio consists of the following:

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Disease</th>
<th>Fiscal Year 2017 Net Sales (in millions)</th>
<th>Marketing Rights</th>
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</thead>
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<tr>
<td><strong>ORPHAN BUSINESS UNIT MEDICINES:</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RAVICTI</td>
<td>Urea cycle disorders</td>
<td>$193.9</td>
<td>Worldwide (1)</td>
</tr>
<tr>
<td>PROCYSBI</td>
<td>Nephropathic cystinosis</td>
<td>$137.7</td>
<td>United States and certain other countries (2)</td>
</tr>
<tr>
<td>ACTIMMUNE</td>
<td>Chronic granulomatous disease and severe, malignant osteopetrosis</td>
<td>$111.0</td>
<td>Worldwide (3)</td>
</tr>
<tr>
<td>BUPHENYL</td>
<td>Urea cycle disorders</td>
<td>$20.8</td>
<td>Worldwide (4)</td>
</tr>
<tr>
<td>QUINSAIR</td>
<td>Treatment of chronic pulmonary infections due to <em>Pseudomonas aeruginosa</em> in cystic fibrosis patients</td>
<td>$3.4</td>
<td>United States and certain other countries (5)</td>
</tr>
<tr>
<td><strong>RHEUMATOLOGY BUSINESS UNIT MEDICINES:</strong></td>
<td></td>
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<tr>
<td>KRYSTEXXA</td>
<td>Chronic refractory gout (“uncontrolled gout”)</td>
<td>$156.5</td>
<td>Worldwide</td>
</tr>
<tr>
<td>RAYOS/LODOTRA</td>
<td>Rheumatoid arthritis, polymyalgia rheumatic, systemic lupus erythematosus and multiple other indications</td>
<td>$57.5</td>
<td>Worldwide (6)</td>
</tr>
<tr>
<td><strong>PRIMARY CARE BUSINESS UNIT MEDICINES:</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PENNSAID 2%</td>
<td>Pain of osteoarthritis of the knee(s)</td>
<td>$191.1</td>
<td>United States</td>
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<td>DUEXIS</td>
<td>Signs and symptoms of osteoarthritis and rheumatoid arthritis</td>
<td>$121.2</td>
<td>Worldwide (7)</td>
</tr>
<tr>
<td>VIMOVO</td>
<td>Signs and symptoms of osteoarthritis, rheumatoid arthritis and ankylosing spondylitis</td>
<td>$57.7</td>
<td>United States</td>
</tr>
<tr>
<td>MIGERGOT</td>
<td>Vascular headache</td>
<td>$5.5</td>
<td>United States</td>
</tr>
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(1) RAVICTI distribution rights in the Middle East and North Africa have been granted to Swedish Orphan Biovitrum AB, or SOBI. RAVICTI is also available in Europe and Canada through exclusive distribution agreements with SOBI and Innomar Strategies Inc., or Innomar, respectively.
We market PROCYSBI in the United States, Canada and Latin America. Innomar is our exclusive distributor for PROCYSBI in Canada. We also have marketing rights to PROCYSBI in Asia.

ACTIMMUNE is known as IMUKIN outside the United States, Canada and Japan.

BUPHENYL is known as AMMONAPS in certain European countries. The distribution rights for BUPHENYL in Europe, certain Asian, Middle Eastern, North African and other countries have been granted to SOBI. Orphan Pacific, Inc. holds an exclusive distribution agreement for the distribution of AMMONAPS in Japan.

We market QUINSAIR in Canada and Latin America. Innomar is our exclusive distributor for QUINSAIR in Canada. We also have marketing rights for QUINSAIR in the United States and Asia. We have not received regulatory approval to market QUINSAIR in the United States.

Mundipharma International Corporation Limited, or Mundipharma, is our exclusive distributor for LODOTRA in Europe, Asia and Latin America. The majority of LODOTRA sales are in Germany and Italy where reimbursement has been approved.

DUEXIS rights in Latin America have been licensed to Grünenthal S.A., or Grünenthal.

Our orphan business unit consists of a stable base of rare disease medicines. The rare disease medicines in our orphan business unit are RAVICTI, PROCYSBI, ACTIMMUNE, BUPHENYL and QUINSAIR.

RAVICTI
RAVICTI is indicated for use as a nitrogen-binding agent for chronic management of adult and pediatric patients two months of age and older with urea cycle disorders, or UCDs, that cannot be managed by dietary protein restriction and/or amino acid supplementation alone. UCDs are rare, life-threatening genetic disorders. RAVICTI must be used with dietary protein restriction and, in some cases, dietary supplements (for example, essential amino acids, arginine, citrulline or protein-free calorie supplements).

UCDs are inherited metabolic diseases caused by a deficiency of one of the enzymes or transporters that constitute the urea cycle. The urea cycle involves a series of biochemical steps in which ammonia, a potent neurotoxin, is converted to urea, which is excreted in the urine. UCD patients may experience episodes during which the ammonia levels in their blood become excessively high, called hyperammonemic crises, which may result in irreversible brain damage, coma or death. We estimate that there are approximately 2,600 patients with UCDs living in the United States, including approximately 1,000 diagnosed patients.

UCD symptoms may first occur at any age depending on the severity of the disorder, with more severe defects presenting earlier in life. However, a prompt diagnosis and careful management of the disease can lead to good clinical outcomes. In February 2018, we submitted a supplemental new drug application to expand the age range for the use of RAVICTI in the chronic management of UCDs in patients from birth to two months.

RAVICTI competes with older-generation nitrogen scavenger medicines. In the United States, RAVICTI competes with generic forms of sodium phenylbutyrate, including BUPHENYL. In Europe and certain other countries, RAVICTI also competes with Pheburane, which is a sugar-coated version of sodium phenylbutyrate. However, the volume of Pheburane and generic forms of sodium phenylbutyrate that must be ingested multiple times per day is significantly greater than RAVICTI, and is a barrier to patient compliance. Additionally, RAVICTI has other advantages over older-generation medicines leading to better patient adherence and compliance rates, such as its better tolerability for patients, it is ingested by mouth and therefore requires little preparation and it has little taste and lower sodium content than its competitors.

Our strategy for RAVICTI is to drive growth through increased awareness and diagnosis of UCDs, and to drive conversion from older-generation nitrogen scavengers, such as generic forms of sodium phenylbutyrate, to RAVICTI, based on the medicine’s differentiated benefits.

PROCYSBI
PROCYSBI is indicated for nephropathic cystinosis, a rare and life-threatening metabolic disorder. PROCYSBI capsules contain cysteamine bitartrate in the form of innovative microspheronized beads that are individually coated to create delayed and extended-release properties, allowing patients to maintain consistent therapeutic systemic drug levels over a twelve-hour dosing period. The enteric-coated beads are pH sensitive and bypass the stomach for dissolution and absorption in the more alkaline environment of the proximal small intestine. Randomized controlled clinical trials and extended treatment with PROCYSBI therapy have demonstrated consistent cystine depletion as monitored by levels of the biomarker (and surrogate marker), white blood cell cystine.
PROCYSBI is differentiated by its ability to control cystine concentration continuously over twelve hours. Older therapies require administration of medicine every six hours. By taking PROCYSBI, patients have to dose only twice a day, leaving them greater control over their medication schedule and lifestyle. Additionally, because PROCYSBI can be administered through a feeding tube or mixed with approved food and beverages, the patient can choose a more flexible dosing regimen. PROCYSBI also has fewer known side effects, such as less severe body odor, than older-generation therapies.

We estimate that there are approximately 500 patients diagnosed with cystinosis living in the United States. Nephropathic cystinosis comprises ninety-five percent of known cases of cystinosis. In these patients, elevated cystine leads to cellular dysfunction and death; without treatment, the disease is usually fatal by the end of the first decade of life. Cystinosis is progressive, eventually causing irreversible tissue damage and multi-organ failure, including kidney failure, blindness, muscle wasting and premature death. Nephropathic cystinosis is usually diagnosed in infancy after children display symptoms to physicians, including markedly increased urination, thirst, dehydration, gastrointestinal distress, failure to thrive, rickets, photophobia and kidney symptoms specific to Fanconi syndrome. Management of cystinosis requires lifelong therapy.

In addition to patients who have already been identified, we believe that a number of patients with atypical phenotypic presentation and end-stage renal disease have their condition as a result of undiagnosed late-onset nephropathic cystinosis, and would benefit from treatment with PROCYSBI.

In December 2017, the United States Food and Drug Administration, or FDA, approved an expanded indication for PROCYSBI for the management of nephropathic cystinosis in patients one year and older. Previously, PROCYSBI was approved in the United States for treatment of patients two years and older. Additionally, in June 2017, we received a notice of compliance from Health Canada for PROCYSBI for the treatment of nephropathic cystinosis in adults and children two years of age and older. PROCYSBI is the only cystine-depleting agent approved in Canada for the treatment of nephropathic cystinosis.

Other than PROCYSBI, we are aware of two pharmaceutical products currently approved to treat cystinosis, Cystagon® and Cystaran®. Cystagon, an immediate-release cysteamine bitartrate capsule, is an older-generation systemic cystine-depleting therapy for cystinosis in the United States marketed by Mylan N.V., and by Orphan Europe SARL in markets outside of the United States. Cystagon is PROCYSBI’s primary competitor. Cystaran, a cysteamine ophthalmic solution, is approved in the United States for treatment of corneal crystal accumulation in patients with cystinosis and is marketed by Leadiant Biosciences, Inc.

We believe that PROCYSBI will continue to be well received in the market, and continue to expect Cystagon to be the primary competitor for PROCYSBI for the foreseeable future.

Our strategy for PROCYSBI is to drive conversion of patients from Cystagon to PROCYSBI, increase the uptake of diagnosed but untreated patients and identify previously undiagnosed patients who are suitable for treatment.

**ACTIMMUNE**

ACTIMMUNE is indicated for chronic granulomatous disease, or CGD, and severe, malignant osteopetrosis, or SMO. It is a biologically manufactured protein called interferon gamma-1b that is similar to a protein the human body makes naturally. Interferon gamma helps prevent infection in CGD patients and enhances osteoclast function in SMO patients. ACTIMMUNE is the only medicine approved by the FDA to reduce the frequency and severity of serious infections associated with CGD and for delaying disease progression in patients with SMO. ACTIMMUNE is believed to work by modifying the cellular function of various cells, including those in the immune system and those that help form bones.
CGD is a genetic disorder of the immune system. It is described as a primary immunodeficiency disorder, which means it is not caused by another disease or disorder. In people who have CGD, a type of white blood cell called a phagocyte is defective. These defective phagocytes cannot generate superoxide, leading to an inability to kill harmful microorganisms such as bacteria and fungi. As a result, the immune system is weakened. People with CGD are more likely to have certain problems, such as recurrent severe bacterial and fungal infections and chronic inflammatory conditions. These patients are prone to developing masses called granulomas, which can occur repeatedly in organs throughout the body and cause a variety of problems. CGD is considered a condition that patients can live with and manage. Studies suggest that overall survival has improved over the last decade, with more patients living well into adulthood. Approximately one out of every 100,000 to 200,000 babies in the United States is born with CGD. We estimate that there are approximately 1,600 patients with CGD in the United States.

SMO is a form of osteopetrosis and is sometimes referred to as marble bone disease or malignant infantile osteopetrosis because it occurs in very young children. While exact numbers are not known, it has been estimated that one out of 250,000 children is born with SMO. During normal bone development, existing bone material is constantly being replaced by new bone. Cells called osteoblasts cause new bone formation while other cells called osteoclasts remove old bone through a process called resorption. In people with osteopetrosis, this balance is not maintained and the resorption of old bone material decreases while the formation of new bone continues. This leads to an abnormal increase in bone mass, and osteopetrosis may cause other problems such as blood disorders, decreased ability to fight infection, bone fractures, problems with vision and hearing, and abnormal appearance of the face and head.

ACTIMMUNE currently faces limited competition. There are additional or alternative approaches used to treat patients with CGD and SMO, including the increasing trend towards the use of bone marrow transplants in patients with CGD, however, there are currently no medicines on the market that compete directly with ACTIMMUNE.

Our strategy for ACTIMMUNE includes driving growth by increasing awareness and diagnosis of CGD and increasing the length and persistence of treatment.

BUPHENYL
BUPHENYL tablets for oral administration and BUPHENYL powder for oral, nasogastric, or gastrostomy tube administration are indicated as adjunctive therapy in the chronic management of patients with UCDs involving deficiencies of carbamoyl phosphate synthetase, ornithine transcarbamylase or argininosuccinic acid synthetase.

BUPHENYL is indicated in all patients with neonatal-onset deficiency (complete enzymatic deficiency, presenting within the first twenty-eight days of life). It is also indicated in patients with late-onset disease (partial enzymatic deficiency, presenting after the first month of life) who have a history of hyperammonemic encephalopathy. It is important that the diagnosis be made early and treatment initiated immediately to improve chances of survival. BUPHENYL must be combined with dietary protein restriction and, in some cases, essential amino acid supplementation.

BUPHENYL is approved for use in the United States and Europe. We distribute BUPHENYL in the United States. The medicine is known as AMMONAPS in certain European countries, where we have granted distribution rights to SOBI through the end of 2021. We provide BUPHENYL in certain other countries through various special access programs and licensed distributors.

QUINSAIR
QUINSAIR is a formulation of the antibiotic drug levofloxacin, suitable for inhalation via a nebulizer, indicated for the management of chronic pulmonary infections due to Pseudomonas aeruginosa in adult patients with cystic fibrosis, or CF. QUINSAIR’s route of delivery allows higher concentrations of drug in the lung sputum than can be achieved via systemic (for example, oral) administration. QUINSAIR, as approved in Canada and Latin America, is administered twice daily in twenty-eight-day cycles, using a hand-held nebulizer with a disposable handset known as the Zirela® device, manufactured by our partner PARI Pharma GmbH, or PARI, and configured specifically for use with QUINSAIR. QUINSAIR is not approved in the United States.

CF is a rare, life-threatening genetic disease affecting approximately 70,000 people worldwide, and results in buildup of abnormally thick secretions that can cause chronic lung infections and progressive lung damage in many patients that eventually leads to death.
Patients with CF are highly susceptible to colonization with bacterial infections of the lung, largely because their pulmonary mucous secretions are thicker, stickier, and more difficult to expectorate than those of healthy individuals. This creates an environment in the lung that favors bacterial proliferation. As of 2014, a median of approximately thirty-five percent of all patients with CF in the European Union, or EU, were colonized with *Pseudomonas aeruginosa*, a gram-negative bacterial infection. Infection rates climb as patients age.

QUINSAIR was launched in Canada in December of 2016.

Chronic pulmonary infections due to *Pseudomonas aeruginosa* are currently treated primarily with inhaled antibiotics, including tobramycin, an aminoglycoside-class antibiotic sold by Novartis Pharmaceuticals Corporation as TOBI® or in dry-powder-inhalation format as TOBI Podhaler® and sold by others in generic form, aztreonam, a monobacter-class antibiotic which is marketed in an inhaled formulation by Gilead Sciences, Inc. under the tradename Cayston®, and colistimethate sodium, a polymixin-class antibiotic which is approved and marketed in inhaled formulations in Europe. Tobramycin, aztreonam and colistimethane are primarily effective against gram-negative bacteria such as *Pseudomonas aeruginosa*. However, the prevalence of multidrug-resistant *Pseudomonas aeruginosa* is growing. Thus, we believe there is an unmet need that might be addressed with a new class of inhaled antibiotic such as the fluoroquinolone class that levofloxacin represents.

**RHEUMATOLOGY BUSINESS UNIT**

The rare disease medicine KRYSTEXXA is the primary marketed medicine in our rheumatology business unit.

**KRYSTEXXA**

A PEGylated uric acid specific enzyme (uricase), KRYSTEXXA is the first and only FDA-approved medicine for the treatment of chronic gout in adult patients refractory to conventional therapy, or uncontrolled gout. Uncontrolled gout occurs in patients who have failed to normalize serum uric acid, or sUA, and whose signs and symptoms are inadequately controlled with conventional therapies, such as xanthine oxidase inhibitors, or XOIs, at the maximum medically appropriate dose, or for whom these drugs are contraindicated.

KRYSTEXXA has a unique mechanism of action that rapidly reverses disease progression. Unlike conventional XOI therapies, which address the over-production or under-excretion of uric acid, KRYSTEXXA converts uric acid into allantoin, a water-soluble molecule, which the body can easily eliminate through the urine. Renal excretion of allantoin is ten times more efficient than uric acid excretion.

Gout is one of the most common forms of inflammatory arthritis and can be assessed by a simple blood test for the amounts of uric acid in the blood (sUA levels). Typically in gout, when uric acid levels are greater than 6.8 milligrams per deciliter, urate will crystallize and deposit. These hard deposits are known as tophi and may occur anywhere in the body, including joints, as well as organs, such as the kidney and heart. When under-treated medically, tophi often lead to bone erosions and loss of functional ability. Gout flares, a common characteristic of uncontrolled gout, are intensely painful. They may or may not be accompanied by tophi. A systemic disease, uncontrolled gout frequently causes crippling disabilities and significant joint damage. Of the 8.3 million gout sufferers in the United States, we estimate that approximately 100,000 patients have uncontrolled gout.

KRYSTEXXA was approved by the FDA in 2010 following the results of two replicate clinical trials six months in duration involving eighty-five patients. The mean baseline sUA levels for patients in the trial were greater than 10 mg/dL, and patients could have visible or invisible tophi. The primary endpoint for the trials was the ability to maintain a low sUA for eighty percent of the samples taken at months three and six. As a result of the every-other-week dosing of KRYSTEXXA at 8 mg, forty-two percent of KRYSTEXXA patients achieved complete response versus zero percent for the placebo group; and forty-five percent of KRYSTEXXA patients achieved complete resolution of tophi versus eight percent for the placebo group over six months.

We are focused on optimizing and maximizing the peak sales potential of KRYSTEXXA by expanding our commercialization efforts, as well as investing in education, patient and physician outreach, and investigation programs that demonstrate KRYSTEXXA as an effective treatment for uncontrolled gout. We believe that KRYSTEXXA represents a significant opportunity and potential growth driver for our rheumatology business unit.
Since acquiring KRYSITEXA through the acquisition of Crealta in January 2016, we have increased the growth trajectory of the medicine through the execution of our strong commercial and clinical strategies. This included building out a highly experienced sales, marketing, patient access and medical affairs team to support the physician and patient community. As part of that support, we launched an education campaign designed to build awareness about KRYSITEXA and the systemic and progressive nature of gout. In addition, we invested in extensive re-analysis of the clinical trial data to elucidate new findings from the trials and expand awareness of KRYSITEXA as a safe and effective treatment of uncontrolled gout.

In May 2017, we announced increased investment in KRYSITEXA as part of our strategy to optimize its sales potential, nearly doubling the commercial organization by the end of 2017. In addition to selling and marketing to a larger number of rheumatologists, we are also expanding our outreach to include nephrologists, given that many chronic kidney disease, or CKD, patients have gout, and the disease tends to be more prevalent as CKD advances. While conventional XOI gout therapies can place additional burden on the kidneys and have dosing limitations, KRYSITEXA has been proven effective and safe for uncontrolled gout patients with CKD without the need to adjust dosing. We therefore believe KRYSITEXA offers a solution to a clinical need experienced by many nephrologists.

As the only FDA approved medication for the treatment of uncontrolled gout, KRYSITEXA faces limited direct competition. We believe that the complexity of manufacturing KRYSITEXA provides a barrier to potential generic competition. However, a number of competitors have medicines in Phase 1 or Phase 2 trials. Though KRYSITEXA does not have any direct competitors, because there is no other medication approved for uncontrolled gout, other therapies could be used prior to use of KRYSITEXA, and if effective, could reduce the treatable patient population for KRYSITEXA.

RAYOS/LODOTRA

RAYOS/LODOTRA is indicated for the treatment of multiple conditions: rheumatoid arthritis, or RA; ankylosing spondylitis, or AS; polymyalgia rheumatica, or PMR; primary systemic amyloidosis; asthma; chronic obstructive pulmonary disease; systemic lupus erythematosus, or SLE; and a number of other conditions. We focus our promotion of RAYOS/LODOTRA on rheumatology indications, including RA and PMR. We sell and market the medicine in the United States as RAYOS. Outside the United States, it is sold and marketed as LODOTRA, and Mundipharma is our exclusive distributor in Europe, Asia and Latin America. The majority of LODOTRA sales are in Germany and Italy, where reimbursement has been approved.

RAYOS/LODOTRA is composed of an active core containing prednisone that is encapsulated by an inactive porous shell, and acts as a barrier between the medicine’s active core and the patient’s gastrointestinal, or GI, fluids. RAYOS/LODOTRA was developed using Vectura Group plc’s, or Vectura, proprietary GeoClock™ and GeoMatrix™ technologies, for which we hold an exclusive worldwide license for the delivery of glucocorticoid, a class of corticosteroid. The delivery system enables a delayed release, synchronizing the prednisone delivery time with the patient’s elevated cytokine levels, thereby taking effect at a physiologically optimal point to inhibit cytokine production, and thus significantly reducing the signs and symptoms of RA and PMR.

RA is a chronic disease that causes pain, stiffness and swelling, primarily in the joints; PMR is an inflammatory disorder that causes significant muscle pain and stiffness; SLE is a chronic autoimmune disease that primarily affects women and causes inflammation and pain in the joints and muscles as well as overall fatigue.

RAYOS/LODOTRA competes with a number of medicines in the market to treat RA, including corticosteroids, such as prednisone; traditional disease-modifying anti-rheumatic drugs, or DMARDs, such as methotrexate; and biologic agents, such as Humira and Enbrel. The majority of RA patients are treated with DMARDs, which are typically used as initial therapy in patients with RA. Biologic agents are typically added to DMARDs as combination therapy. It is common for an RA patient to take a combination of a DMARD, an oral corticosteroid, a non-steroidal anti-inflammatory drug, or NSAID, and/or a biologic agent.

PRIMARY CARE BUSINESS UNIT

Our strategy for the primary care business unit, which includes PENNSAID 2%, DUEXIS, VIMOVO and MIGERGOT, is to educate physicians about these clinically differentiated medicines and the benefits they offer. Patients are able to fill prescriptions for these medicines through pharmacies participating in our HorizonCares patient access program, as well as other pharmacies. In addition, we have evolved our commercial strategy to enter into business arrangements with pharmacy benefit managers, or PBMs, and other payers to secure formulary status and reimbursement of our primary care medicines. The business arrangements with the PBMs generally require us to pay administrative fees and rebates to the PBMs and other payers for qualifying prescriptions.
PENNSAID 2%

PENNSAID 2% is indicated for the treatment of pain of osteoarthritis, or OA, of the knee(s). OA is a type of arthritis that is caused by the breakdown and eventual loss of the cartilage of one or more joints.

An analgesic that is easy-to-apply topically directly to the knee, PENNSAID 2% contains diclofenac sodium, a commonly prescribed NSAID to treat OA pain, and dimethyl sulfoxide, or DMSO, a penetrating agent that helps ensure that diclofenac sodium is absorbed through the skin to the site of inflammation and pain. Topical NSAIDs such as PENNSAID 2% are generally viewed as safer alternatives to oral NSAID treatment because they reduce systemic exposure to a fraction of that of an oral NSAID. PENNSAID 2% is the only topical NSAID offered with the convenience of a metered-dose pump, which ensures that the patient receives the correct amount of PENNSAID 2% solution with each use. PENNSAID 2% competes primarily with the generic version of Voltaren Gel, a market leader in the topical NSAID category.

DUEXIS

DUEXIS is indicated for the relief of signs and symptoms of RA and OA and to decrease the risk of developing upper-GI ulcers in patients who are taking ibuprofen for these indications. RA is a chronic disease that causes pain, stiffness and swelling, primarily in the joints. RA is discussed above in the Rheumatology Business Unit section.

DUEXIS provides a fixed-dose combination in tablet form of ibuprofen, the most widely prescribed NSAID, and famotidine, a well-established GI agent used to treat dyspepsia, gastroesophageal reflux disease and active ulcers.

Fixed-dose combination therapy provides significant advantages over multiple-pill regimens: fixed-dose combinations can reduce the number of pills taken; ensure that the correct dosage of each component is taken at the correct time, improving compliance; and is often associated with better treatment outcomes.

In general, DUEXIS faces competition from the separate use of NSAIDs for pain relief and GI medications to address the risk of NSAID-induced ulcers. However, the prescribing information for DUEXIS states that DUEXIS should not be substituted with the single-ingredient products of ibuprofen and famotidine. DUEXIS competes with other NSAIDs, including Celebrex®, manufactured by Pfizer Inc., and celecoxib, a generic form of the medicine supplied by other pharmaceutical companies. DUEXIS also competes with TIVORBEX™ (indomethacin) capsules, VIVLODEX® (meloxicam) capsules and ZORVOLEX® (diclofenac) capsules marketed by Iroko Pharmaceuticals, LLC.

VIMOVO

VIMOVO is indicated for the relief of signs and symptoms of OA, RA and AS and to decrease the risk of developing gastric ulcers in patients at risk of developing NSAID-associated gastric ulcers. It is a proprietary, fixed-dose, delayed-release tablet that combines enteric-coated naproxen, an NSAID, surrounded by a layer of immediate-release esomeprazole magnesium. Naproxen has proven anti-inflammatory and analgesic properties, and esomeprazole magnesium reduces the stomach acid secretions that can cause upper-GI ulcers. Both naproxen and esomeprazole magnesium have well-documented and excellent long-term safety profiles, and both medicines have been used by millions of patients worldwide. VIMOVO has been shown to decrease the risk of developing gastric ulcers in patients at risk of developing NSAID associated gastric ulcers. VIMOVO is not interchangeable with the individual components of naproxen and esomeprazole magnesium.

Similar to DUEXIS, VIMOVO faces competition from the separate use of NSAIDs for pain relief and GI medications to address the risk of NSAID-induced ulcers. However, the prescribing information for VIMOVO states that VIMOVO should not be substituted with the single-ingredient products of naproxen and esomeprazole magnesium. VIMOVO also competes with other NSAIDs, including Celebrex, TIVORBEX, VIVLODEX and ZORVOLEX.

MIGERGOT

MIGERGOT is indicated as therapy to abort or prevent vascular headaches, such as migraines, migraine variants or so- called “histaminic cephalalgia”.

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Research and Development

Our research and development programs currently include pre-clinical and clinical development of new medicine candidates, activities related to label expansions for existing medicines and the generation of additional clinical data for our existing medicines. We devote significant resources to research and development activities associated with our medicines and medicine candidates, and in 2017 added the first development-stage candidate, teprotumumab, to our pipeline. For the years ended December 31, 2017, 2016 and 2015, we incurred $225.0 million, $60.7 million and $41.9 million, respectively, in research and development, or R&D, expenses. The graphic below summarizes our significant R&D activities in order of the program stage, from post-market to pre-clinical:

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* = rare disease  § Investigator initiated trial

Orphan Pipeline Programs

We expanded our orphan pipeline programs in 2017, with the addition of teprotumumab, bringing our orphan development programs to five: HZN-001 (teprotumumab); RAVICTI label expansion; and three ACTIMMUNE oncology-combination programs.

HZN-001: Teprotumumab

Teprotumumab is a human monoclonal antibody inhibitor of insulin-like growth factor type 1 receptor being studied in a confirmatory Phase 3 clinical trial for the treatment of a rare eye disease, thyroid eye disease, or TED. There are no FDA-approved therapies for TED; therefore, there is a significant unmet need for an effective and safe treatment. We added this late-stage rare disease biologic medicine candidate to our pipeline with our acquisition of River Vision in May 2017.

Teprotumumab is in development for the treatment of TED, also referred to as Graves’ eye disease, Graves’ Orbitopathy or Thyroid-Associated Ophthalmopathy, an eye condition in which the eye muscles and fatty tissue behind the eye become inflamed. This can cause proptosis, where the eyes are pushed forward causing “staring” or “bulging” eyes and the eyes and eyelids become swollen and red. In some cases swelling and stiffness of the muscles occur that move the eyes so that they are no longer in line with each other, or the eyelids are unable to close. It is believed that teprotumumab works by blocking the specific autoimmune pathophysiology that causes active TED, which diminishes local inflammation, prevents orbital fibroblast proliferation and reduces tissue expansion, thus restoring the orbital tissue to a more normal state. We estimate that 15,000 to 20,000 patients are eligible for treatment in the United States. Teprotumumab received orphan drug, fast track and breakthrough therapy designations from the FDA in 2016.
The Phase 2 clinical trial results for teprotumumab demonstrated clinically meaningful and statistically significant results in patients with active moderate-to-severe TED. The primary endpoint of the trial was the responder rate, defined as a reduction of proptosis of ≥ 2mm and a reduction in the Clinical Activity Score, a seven-point scale that measures orbital inflammation and pain, of ≥ 2 points in the study eye at week twenty-four of the trial, without proptosis deterioration (≥ 2mm) in the fellow eye. In the trial, sixty-nine percent of teprotumumab patients achieved the primary endpoint versus twenty percent of the placebo patients (p < 0.001). The secondary endpoints were also achieved, and teprotumumab was generally well tolerated with the majority of adverse events being mild. Of note, a treatment-related adverse event was hyperglycemia in diabetic patients, which was controlled by adjusting diabetes medication. The results were published in The New England Journal of Medicine in May 2017.

During October 2017, we enrolled the first patient in the confirmatory Phase 3 clinical trial titled “Treatment of Graves’ Orbitopathy (Thyroid Eye Disease) to Reduce Proptosis with Teprotumumab Infusions in a Randomized, Placebo-Controlled, Clinical Study”, or OPTIC. OPTIC will enroll seventy-six patients across eleven centers in the United States, Germany and Italy, and those patients who meet OPTIC Phase 3 eligibility criteria will be randomized to receive eight infusions of teprotumumab or placebo every three weeks for twenty-one weeks. The primary endpoint will measure the proptosis responder rate of ≥ 2 mm reduction of proptosis in the study eye (without deterioration in the fellow eye) at week twenty-four. In addition, the OPTIC trial will measure several secondary endpoints at week twenty-four, including overall responder rate (defined as the percentage of patients with ≥ 2 point reduction in Clinical Activity Score and ≥ 2 mm reduction in proptosis, which was the primary endpoint of the Phase 2 trial), percentage of participants with a Clinical Activity Score value of 0 or 1, mean change in proptosis measurement and mean change in the Graves’ Ophthalmopathy Quality of Life questionnaire overall score. Safety will also be evaluated. We anticipate that data from the trial will be available during the second half of 2019.

RAVICTI

We are in the process of seeking FDA approval for a label expansion for RAVICTI for patients from birth to two months. There is a variable age of diagnosis in patients with UCDs (from newborn to adulthood), and the severity of the disease can be associated with the age of onset and enzymatic deficit. However, a prompt diagnosis and careful management of the disease may lead to good clinical outcomes.

ACTIMMUNE

We are supporting a number of investigator-initiated studies to evaluate ACTIMMUNE as a potential immune booster in cancer-combination studies.

A study at the H. Lee Moffitt Cancer Center and Research Institute is evaluating the optimal dosing for a combination therapy of ACTIMMUNE with Taxol® (paclitaxel), Herceptin® (trastuzumab) and Perjeta® (pertuzumab) for the treatment of patients with a certain type of advanced breast cancer. Taxol is marketed by Bristol-Meyers Squibb Company, and Herceptin and Perjeta are marketed by Genentech Inc., or Genentech. Enrollment for the dose escalation portion of the trial is complete and the study has transitioned into the Phase 2 portion. We expect to have data from the trial in 2019.

Two other cancer-combination studies are evaluating ACTIMMUNE in combination with a PD-1 inhibitor in certain cancers. Pre-clinical research has indicated that interferon gamma may enhance the effect of PD-1 inhibitors.

A trial at Fox Chase Cancer Center is evaluating ACTIMMUNE in combination with Opdivo® (nivolumab), a PD-1 inhibitor, in advanced solid tumors. Opdivo is marketed by Bristol-Meyers Squibb Company. Data from the first three cohorts of the Phase 1 dose escalation trial determined the maximum-tolerated dose of ACTIMMUNE in combination with nivolumab. A fourth cohort of patients receiving ACTIMMUNE in combination with nivolumab is still under study.

A trial sponsored by the National Cancer Institute in collaboration with the Cancer Immunotherapy Trials Network is evaluating a combination therapy of ACTIMMUNE with Keytruda® (pembrolizumab), a PD-1 inhibitor, for the treatment of mycosis fungoides and Sézary syndrome, a type of cutaneous T-cell lymphoma. Patients are currently being enrolled in the Phase 2 study. Keytruda is marketed by Merck Sharp & Dohme Corp.
We expanded our rheumatology pipeline programs in 2017 with the addition of two pre-clinical programs to enhance our market leadership position in uncontrolled gout and to augment our rheumatology portfolio. Our rheumatology pipeline is now composed of five programs: HZN-003 (optimized uricase and optimized PEGylation for uncontrolled gout); HZN-002 (next-generation dexamethasone conjugate for inflammatory diseases); TRIPLE trial for KRYSTEXXA; RECIPE trial for KRYSTEXXA; and RIFLE trial for RAYOS (each as defined below). In addition to the pipeline programs, we recently entered into a collaboration agreement with XL-protein GmbH to identify clinical-stage product candidates that could use PASylation technology to construct a next-generation gout biologic.

**HZN-003: Potential Next-Generation Biologic for Uncontrolled Gout Using Optimized Uricase and Optimized PEGylation Technology**

A biologic for uncontrolled gout, HZN-003 is a pre-clinical, genetically engineered uricase derivative with optimized uricase and optimized PEGylation technology that has the potential to improve the response rate compared to the un-optomized biologic. In addition, it has the potential for subcutaneous dosing. We licensed HZN-003 (formerly MEDI4945) from MedImmune LLC, the global biologics research and development arm of the AstraZeneca Group, late in 2017. HZN-003 is a rheumatology pipeline program with the objective of enhancing our leadership position in the uncontrolled gout market.

**HZN-002: Potential Targeted Novel Dexamethasone Conjugate for Inflammatory Diseases**

HZN-002 is a pre-clinical, novel dexamethasone conjugate. HZN-002 has the potential to augment our rheumatology portfolio by addressing inflammatory diseases through its targeted delivery technology. We have an option to license HZN-002 under a collaboration and option agreement we entered into with a privately held life-science entity in November 2016.

**KRYSTEXXA Life-Cycle Management**

KRYSTEXXA is a recombinant protein of uricase, an enzyme not found in humans, and PEGylation. As with many biologic medicines, some people treated with KRYSTEXXA develop antidrug antibodies as part of an immune response to the medicine and lose response to therapy. Our clinical strategy for KRYSTEXXA is to enhance the response rate and improve convenience of dosing.

In January 2016, following our acquisition of Crealta, we assumed responsibility for an investigator-initiated study designed to test the potential reduction of immunogenicity in KRYSTEXXA patients, known as the Tolerization Reduces Intolerance to Pegloticase and Prolongs the Urate Lowering Effect, or TRIPLE, study. The TRIPLE study is a post-market interventional, exploratory open-label, adaptive design study with multiple cohorts. Initial results from the ongoing study data from the TRIPLE trial were presented in November 2017. The data showed a notable reduction in the frequency of infusion reactions when treatment “stopping rules” were used, with infusion reactions occurring in less than one percent of infusions in the study. This compares to infusion reactions reported in twenty-six percent of patients treated with KRYSTEXXA in the Phase 3 trial, which did not incorporate stopping rules. Based on the initial TRIPLE infusion reaction data, and other post-marketing data, we submitted a proposed label update to the prescribing information for KRYSTEXXA to the FDA.

During November 2017, we announced that TRIPLE will include an additional cohort to evaluate the impact of adding the immunomodulator azathioprine for a two-week run-in period, followed by daily azathioprine and KRYSTEXXA every two weeks, for a total of thirteen doses. The immunomodulation arm of the study is expected to begin in the first quarter of 2018.

A second investigator-initiated study evaluating immunomodulation with KRSTEXXA is expected to begin in the first quarter of 2018. The Reducing Immunogenicity to Pegloticase, or RECIPE, trial will evaluate the use of the immunomodulator mycophenolate mofetil, or MMF, along with KRYSTEXXA to improve the response rate to the medicine. RECIPE is a Phase 2, double-blind, multi-site proof-of-concept trial designed to evaluate if a twelve-week course of immunomodulation therapy with daily MMF can safely and meaningfully prevent the incidence of an immune response to KRYSTEXXA. The study will also assess the incidence and types of adverse events and infusion reactions related to the medicine.
RAYOS

We are collaborating with the Lupus Research Alliance and Ampel BioSolutions on a clinical trial for patients with SLE, a chronic autoimmune disease that causes inflammation and pain in the joints and muscles, as well as overall fatigue. The trial, titled RAYOS (delayed release prednisone) Inhibits Fatigue in Lupus Erythematosus, or RIFLE, launched late in 2017 and is studying the effect of RAYOS on the fatigue experienced by SLE patients.

Distribution

We use central third-party logistics, FDA-compliant warehouses for storage and distribution of our medicines into the supply chain. Our third-party logistics providers specialize in integrated operations that include warehousing and transportation services that can be scaled and customized to our needs based on market conditions and the demands and delivery service requirements for our medicines and materials. Their services eliminate the need to build dedicated internal infrastructures that would be difficult to scale without significant capital investment. Our third-party logistics providers warehouse all medicines in controlled FDA-registered facilities. Incoming orders are prepared and shipped through an order entry system to ensure just in time delivery of the medicines.

Sales and Marketing

As of December 31, 2017, our sales force was composed of approximately 430 sales representatives consisting of approximately 25 sales representatives in our Orphan business unit, 140 sales representatives in our Rheumatology business unit and 265 sales representatives in our Primary Care business unit.

Our Orphan and Rheumatology business unit sales representatives focus on marketing our orphan and rheumatology medicines to a limited number of healthcare practitioners who specialize in fields such as pediatric immunology, allergy, infectious diseases, metabolic disorders, rheumatology and nephrology to help them understand the potential benefits of our medicines. We have entered into, and may continue to enter into, agreements with third parties for commercialization of our medicines outside the United States.

Part of our commercial strategy for RAYOS and our primary care medicines is to offer physicians the opportunity to have their patients fill prescriptions through pharmacies participating in our HorizonCares patient access program. For commercial patients who are prescribed our primary care medicines or RAYOS, the HorizonCares program offers co-pay assistance when a third-party commercial payer covers a prescription but requires an eligible patient to pay a co-pay or deductible, and offers full subsidization when a third-party commercial payer rejects coverage for an eligible patient. We have entered into business arrangements with PBMs and other payers to secure formulary status and reimbursement of our medicines, such as our arrangements with Express Scripts, Inc., CVS Caremark and Prime Therapeutics LLC. These arrangements generally require us to pay administrative and rebate payments to the PBMs and/or other payers, and regardless of our agreements with the PBMs, the extent of formulary status and reimbursement ultimately depends to a large extent upon individual healthcare plan formulary decisions.

We have a comprehensive compliance program in place to address adherence with various laws and regulations relating to our sales, marketing, and manufacturing of our medicines, as well as certain third-party relationships, including pharmacies. Specifically with respect to pharmacies, the compliance program utilizes a variety of methods and tools to monitor and audit pharmacies, including those that participate in our patient access programs, to confirm their activities, adjudication and practices are consistent with our compliance policies and guidance.

Manufacturing, Commercial and Supply Agreements

We have agreements with third parties for active pharmaceutical ingredients, or APIs, and manufacturing of our medicines, formulation and development services, fill, finish and packaging services, transportation, and distribution and logistics services for certain medicines. In most cases, we retain certain levels of safety stock or maintain alternate supply relationships that we can utilize without undue disruption of our manufacturing processes if a third party fails to perform its contractual obligations.

RAVICTI

We have clinical and commercial supplies of glycerol phenylbutyrate API manufactured for us by two alternate suppliers, Helsinn Advanced Synthesis SA (Switzerland) and DSM Fine Chemicals Austria (now Patheon Austria GmbH & Co KG) on a purchase-order basis. We have finished RAVICTI drug medicine manufactured by Lyne Laboratories, Inc. under a manufacturing agreement and we have an agreement in place for a fill/finish supplier, Halo Pharmaceuticals, Inc., for European supplies.
Ucyclyd Asset Purchase Agreement

As a result of the Hyperion acquisition, we became subject to an asset purchase agreement with Ucyclyd Pharma, Inc., or Ucyclyd, pursuant to which we are obligated to pay to Ucyclyd tiered mid-to high- single-digit royalties on our global net sales of RAVICTI. The asset purchase agreement cannot be terminated for convenience by either party. However, we have a license to certain Ucyclyd manufacturing technology, and Ucyclyd may have a license to certain of our technology. The party granting a license is permitted to terminate the license if the other party fails to comply with any payment obligations relating to the license and does not cure such failure within a defined time period.

Brusilow License Agreement

As a result of the Hyperion acquisition, we became subject to a license agreement with Saul W. Brusilow, M.D. and Brusilow Enterprises, Inc., or Brusilow, pursuant to which we license patented technology related to RAVICTI from Brusilow. Under such agreement, we are obligated to pay low-single digit royalties to Brusilow on net sales of RAVICTI that are covered by a valid claim of a licensed patent. The license agreement may be terminated for any uncured breach as well as bankruptcy. We may also terminate the agreement at any time by giving Brusilow prior written notice, in which case all rights granted to us would revert to Brusilow.

PROCYSBI

PROCYSBI drug product is comprised of enteric coated beads of cysteamine bitartrate encapsulated in gelatin capsules. PROCYSBI drug product and API, cysteamine bitartrate, are manufactured on a contract basis by third parties.

Patheon Manufacturing Services Agreement

As a result of the Raptor acquisition, we assumed a manufacturing services agreement, as amended, with Patheon Pharmaceuticals Inc., or Patheon. Pursuant to the agreement, we must provide a rolling, non-binding forecast of PROCYSBI, with a portion of the forecast being a firm written order. The agreement has a term that runs until December 31, 2019 and which automatically renews for successive two-year terms if not terminated at least eighteen months in advance.

Cambrex Profarmaco Milano Supply Agreement

As a result of the Raptor acquisition, we assumed an API supply agreement, as amended, with Cambrex Profarmaco Milano, or Cambrex. Pursuant to the agreement, we must provide rolling, non-binding forecasts, with a portion of the forecast being the minimum floor of the firm order that must be placed. The Cambrex supply agreement has an initial term that runs until November 30, 2020, and which automatically renews for successive two-year terms if not terminated at least one year in advance.

UCSD License Agreement

In May 2017, we entered into an amended and restated license agreement with The Regents of the University of California, San Diego, or UCSD. We must pay UCSD a royalty in the mid-single digits on net sales of PROCYSBI in countries where PROCYSBI is covered by a patent right, and a royalty in the low-single digits on net sales of PROCYSBI in countries where PROCYSBI is not covered by a patent right. Each such royalty is subject to reduction for sales of PROCYSBI in countries in the event a generic substitute for PROCYSBI is sold in such countries. We must pay UCSD a minimum annual royalty in an amount less than $0.1 million. Royalties terminate upon the later of (a) the expiration date of the longest-lived patent rights on a country-by-country basis; and (b) twenty years after first commercial sale of PROCYSBI. We must also pay UCSD a percentage in the mid-teens of any fees we receive from our sublicensees under the agreement that are not earned royalties. We may also be obligated to pay UCSD aggregate developmental milestone payments of $0.3 million and aggregate regulatory milestone payments of $1.8 million for each orphan indication and aggregate developmental milestone payments of $0.8 million and aggregate regulatory milestone payments of $3.5 million for each non-orphan indication. We are also subject to certain diligence obligations relating to performing activities for specified indications, including maintaining existing regulatory approvals for PROCYSBI and commercializing PROCYSBI in countries where regulatory approvals have been obtained and using commercially reasonable efforts to develop, obtain regulatory approval, and commercialize certain other licensed medicines in the United States and other countries. Under the terms of our agreement with Chiesi, royalties due to UCSD on sales of PROCYSBI in EMEA will be paid by Chiesi to us, which we will forward to UCSD unless we instruct Chiesi to make such payments directly to UCSD.
ACTIMMUNE

ACTIMMUNE is a recombinant protein that is produced by fermentation of a genetically engineered Escherichia coli bacterium containing the DNA which encodes for the human protein. Purification of the active drug substance is achieved by conventional column chromatography. The resulting active drug substance is then formulated as a highly purified sterile solution and filled in a single-use vial for subcutaneous injection, which is the ACTIMMUNE finished drug medicine. In support of its manufacturing process, we and Boehringer Ingelheim RCV GmbH & Co KG, or Boehringer Ingelheim, store multiple vials of the Escherichia coli bacterium master cell bank and working cell bank in order to ensure adequate backup should any cell bank be lost in a catastrophic event.

Boehringer Ingelheim Supply Agreement

In June 2017, we entered into an exclusive global supply agreement with Boehringer Ingelheim Biopharmaceuticals GmbH, or Boehringer Ingelheim Biopharmaceuticals, pursuant to which Boehringer Ingelheim Biopharmaceuticals is required to manufacture and supply ACTIMMUNE and IMUKIN active drug substance and commercial quantities of the ACTIMMUNE and IMUKIN finished drug medicine. Boehringer Ingelheim Biopharmaceuticals is our sole source supplier for ACTIMMUNE active drug substance and finished drug medicine. Pursuant to the agreement, we are required to purchase minimum quantities of finished drug medicine during the term of the agreement. Boehringer Ingelheim Biopharmaceuticals manufactures our commercial requirements of ACTIMMUNE based on our forecasts and the annual contractual minimum purchase quantity. The supply agreement continues for an indefinite period but can be terminated by either party upon three years notice (but, in such case, cannot be terminated sooner than June 30, 2024), for an uncured material breach by the other party, upon the other party’s bankruptcy or insolvency, or upon certain changes of control of the other party. We can terminate the supply agreement in the event we are prevented by regulatory authorities from distributing the product on the market for all indications.

License Agreements

Under a license agreement, as amended, with Genentech who was the original developer of ACTIMMUNE, we are or were obligated to pay royalties to Genentech on our net sales of ACTIMMUNE as follows:

- For the period from November 26, 2014, through May 5, 2018, a royalty in the twenty percent to thirty percent range for the first $3.7 million in net sales achieved in any calendar year and in the one percent to nine percent range for all additional net sales in any year; and
- From May 6, 2018, and for so long as we continue to commercially sell ACTIMMUNE, an annual royalty in the low single digits as a percentage of annual net sales.

Either Genentech or we may terminate the agreement if the other party becomes bankrupt or defaults, however, in the case of a default, the defaulting party has thirty days to cure the default before the license agreement may be terminated.

Under the terms of an assignment and option agreement with Connetics Corporation (which was the predecessor parent company to InterMune Pharmaceuticals Inc. and is now part of GlaxoSmithKline), or Connetics, we are obligated to pay low single-digit royalties to Connetics on our net sales of ACTIMMUNE in the United States.

BUPHENYL

When Hyperion purchased BUPHENYL, Hyperion assumed all of Ucyclyd’s rights and obligations under its manufacturing agreements for the medicine. We assumed these agreements when we acquired Hyperion. We purchase API for BUPHENYL from CU Chemie Uetikon GmbH and final manufacturing, testing and packaging of the medicine is provided by Pharmaceutics International Inc.

Under the terms of an amended and restated collaboration agreement with Ucyclyd, we are obligated to pay to Ucyclyd tiered mid to high single-digit royalties on our net sales in the United States of BUPHENYL to UCD patients outside of the FDA approved labeled age range for RAVICTI.
**QUINSAIR**

QUINSAIR drug product, its API, levofloxacin hemihydrate, and the Zirela nebulizer device are all manufactured on a contract basis by third parties. The API is exclusively supplied by TEVA API Inc. QUINSAIR drug product is manufactured by Catalent Pharma Solutions, LLC. The term of the Catalent supply agreement runs until March 10, 2019. Nebulizers are supplied by PARI in Starnberg, Germany.

**KRYSTEXXA**

KRYSTEXXA is a PEGylated (synthetic technology used to extend the half-life of uricase), recombinant protein that is produced by fermentation of a genetically engineered Escherichia coli bacterium containing the DNA which encodes for uricase. The complementary DNA coding for the uricase is based on mammalian sequences. Uricase is purified and is then PEGylated with a PEGylation agent to produce the bulk medicine, pegloticase. PEGylation and purification of the active drug substance is achieved by conventional column chromatography. The resulting highly purified sterile solution is filled in a single-use vial for intravenous infusion following dilution. In support of its manufacturing process, we store multiple vials of the Escherichia coli bacterium master cell bank and working cell bank at multiple locations in order to ensure adequate backup should any cell bank be lost in a catastrophic event.

**NOF Supply Agreement**

In August 2015, Crealta and NOF Corporation, or NOF, in Japan, entered into an exclusive supply agreement for the PEGylation agent used in the manufacture of KRYSTEXXA. Under the terms of this agreement, we are required to issue NOF forecasts of our requirements for the PEGylation agent, a portion of which are binding. The agreement expires in August 2020, however, either we or NOF may terminate the agreement for any reason upon twenty-four months’ prior notice. Either we or NOF may also terminate the agreement upon a material breach, if not cured within a specified period of time, or in the event of the other party’s insolvency. While there are no minimum purchase obligations under the agreement, we are required to use NOF as our exclusive supplier for the PEGylation agent, subject to certain exceptions if NOF is unable to supply the PEGylation agent.

**Bio-Technology General (Israel) Supply Agreement**

In March 2007, Savient Pharmaceuticals, Inc. (as predecessor in interest to Crealta), entered into a commercial supply agreement with Bio-Technology General (Israel) Ltd, or BTG Israel, for the production of the bulk KRYSTEXXA medicine, or bulk product. We assumed this agreement as part of the Crealta acquisition and amended the agreement in September 2016. Under this agreement, we have agreed to purchase certain minimum annual order quantities and are obligated to purchase at least eighty percent of our annual world-wide bulk product requirements from BTG Israel. The term of the agreement runs until December 31, 2030, and will automatically renew for successive three year periods unless earlier terminated by either party upon three years’ prior written notice. The agreement may be terminated earlier by either party in the event of a force majeure, liquidation, dissolution, bankruptcy or insolvency of the other party, uncured material breach by the other party or after January 1, 2024, upon three years’ prior written notice. Under the agreement if the manufacture of the bulk product is moved out of Israel, we may be required to obtain the approval of the Israeli Office of the Chief Scientist, or OCS, because certain KRYSTEXXA intellectual property was initially developed with a grant funded by the OCS and we may be required to pay the OCS additional amounts as a repayment for the OCS grant funding. We issue eighteen-month forecasts of the volume of KRYSTEXXA that we expect to order. The first six months of the forecast are considered binding firm orders.

**Exelead PharmaSource Supply Agreement**

In October 2008, Savient and Exelead, Inc. (formerly known as Sigma Tau PharmaSource, Inc. (as successor in interest to Enzon Pharmaceuticals, Inc.)), or Exelead, entered into a commercial supply agreement for the packaging and supply of the final drug medicine KRYSTEXXA, which we acquired as part of the Crealta acquisition. This agreement remains in effect until terminated, and either we or Exelead may terminate the agreement with three years notice, given thirty days prior to the agreement anniversary date. Either we or Exelead may also terminate the agreement upon a material default, if not cured within a specified period of time, or in the event of the other party’s insolvency or bankruptcy.
Duke University and Mountain View Pharmaceutical License Agreement

In August 1998, Savient entered into an exclusive, worldwide license agreement with Duke University, or Duke, and Mountain View Pharmaceuticals Inc., or MVP, which we acquired as part of the Crealta acquisition. Duke developed the recombinant uricase enzyme used in KRYSTEXXA and MVP developed the PEGylation technology used in the manufacture of KRYSTEXXA. Duke and MVP may terminate the agreement if we commit fraud or for our willful misconduct or illegal conduct; upon our material breach of the agreement, if not cured within a specified period of time; upon written notice if we have committed two or more material breaches under the agreement; or in the event of our bankruptcy or insolvency. Under the terms of the agreement, we are obligated to pay Duke a mid-single digit percentage royalty on our global net sales of KRYSTEXXA and a royalty of between five percent and fifteen percent on any global sublicense revenue. We are also obligated to pay MVP a mid-single digit percentage royalty on our net sales of KRYSTEXXA outside of the United States and royalty of between five percent and fifteen percent on any sublicense revenue outside of the United States. Royalties terminate upon last to expire of licensed patents on a country-by-country basis, and royalties are reduced by a mid-double digit percentage in countries that never had patents.

RAYOS/LODOTRA

We rely on well-established third-party manufacturers for the manufacture of RAYOS/LODOTRA. We purchase the API for RAYOS/LODOTRA from Tianjin Tianyao Pharmaceuticals Co., Ltd. in China and from Sanofi Chimie SA in France. We have contracted with Jagotec AG, or Jagotec, for the production of RAYOS/LODOTRA tablets through its affiliate Vectura, and we entered into an agreement with Patheon for the packaging and assembling of RAYOS/LODOTRA.

We are obligated to pay Jagotec a mid-single digit percentage royalty on our adjusted gross sales of RAYOS/LODOTRA and on any sub-licensing income, which includes any payments not calculated based on the adjusted gross sales of RAYOS/LODOTRA, such as license fees, and lump sum and milestone payments.

PENNSAID 2%

In October 2014, in connection with the acquisition of the U.S. rights to PENNSAID 2% from Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.), or Nuvo, we entered into an exclusive supply agreement with Nuvo, which was amended in February 2016, January 2017 and February 2018, under which Nuvo will manufacture and supply PENNSAID 2% to us. The term of our supply agreement is through December 31, 2029, but the agreement may be terminated earlier by either party for any uncured material breach by the other party of its obligations under the supply agreement or upon the bankruptcy or similar proceeding of the other party.

A key excipient used in PENNSAID 2% as a penetration enhancer is DMSO. We and Nuvo rely on a sole proprietary form of DMSO for which we maintain a substantial safety stock. However, should this supply become inadequate, damaged, destroyed or unusable, we and Nuvo may not be able to qualify a second source.

DUEXIS

We purchase DUEXIS in final, packaged form exclusively from Sanofi-Aventis U.S. LLC, or Sanofi, for our commercial requirements in North America. The first API in DUEXIS is ibuprofen in a direct compression blend called DC85 and is supplied to Sanofi by BASF Corporation, or BASF, in Bishop, Texas. The second API in DUEXIS is famotidine, which is available from a number of international suppliers. Famotidine is currently sourced from two manufacturers, Dr. Reddy’s in India and also from Quimica Syntetica (Chemo) in Spain. We currently receive both APIs in powder form and each is blended with a number of U.S. Pharmacopeia inactive ingredients.

BASF Contract

In July 2010, we entered into a contract with BASF for the purchase of DC85, which was subsequently amended effective as of January 2016. Pursuant to the agreement, we are obligated to source a significant majority of our commercial demand for DC85 from BASF. The contract expires in December 2018 and thereafter automatically renews for a period of three years. Either party may terminate the agreement upon twelve months’ written notice or in the event of uncured breach by the other party.

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In May 2011, we entered into a manufacturing and supply agreement with Sanofi, which was amended in September 2013. Pursuant to the agreement, Sanofi is obligated to manufacture and supply DUEXIS to us in final, packaged form, and we are obligated to purchase DUEXIS exclusively from Sanofi for our commercial requirements in North America and certain countries and territories in Europe, including the EU member states and Scandinavia, and South America. Sanofi must acquire the components necessary to manufacture DUEXIS, including the APIs, and is obligated to acquire all DC85 under the terms of our agreements with suppliers, including the current BASF contract. In order to allow Sanofi to perform its obligations under the agreement, we granted Sanofi a non-exclusive license to our related intellectual property. The agreement term extends until May 2019, and automatically extends for successive two-year terms unless terminated by either party upon two years’ prior written notice. Either party may terminate the agreement upon thirty days’ prior written notice to the other party in the event of breach by the other party that is not cured within thirty days of notice (which notice period may be longer in certain, limited situations) or in the event we lose regulatory approval to market DUEXIS in all countries worldwide, and either party may terminate the agreement without cause upon two years’ prior written notice to the other party at any time after the third anniversary of the first commercial sale of DUEXIS in any country worldwide.

**VIMOVO**

We purchase VIMOVO in final, packaged form from Patheon for our commercial requirements in North America. The first API in VIMOVO is naproxen which is supplied to Patheon by Divis Laboratories Limited in India. The second API in VIMOVO is esomeprazole magnesium trihydrate, which we source from Minakem Holding SAS in France.

Under a license agreement with Aralez Pharmaceuticals Inc., or Aralez, we are required to pay Aralez a ten percent royalty based on net sales of VIMOVO sold by us, our affiliates or sublicensees during the royalty term, subject to a minimum annual royalty obligation of $7.5 million, which minimum royalty obligations will continue for each year during which one of Aralez’s patents covers such medicines in the United States and there are no competing medicines in the United States. The royalty rate may be reduced to a mid-single digit royalty rate as a result of loss of market share to competing medicines.

**MIGERGOT**

MIGERGOT drug product is ergotamine tartrate and caffeine-containing suppositories. G&W Laboratories Inc., or G&W, performs the sourcing and procurement of the APIs, ergotamine tartrate and caffeine. MIGERGOT drug product is manufactured by G&W in South Plainfield, New Jersey under a supply agreement that expires on December 31, 2023.
Our objective is to aggressively patent the technology, inventions and improvements that we consider important to the development of our business. We have a portfolio of patents and applications based on clinical and pharmacokinetic/pharmacodynamic modeling discoveries, and our novel formulations. We intend to continue filing patent applications seeking intellectual property protection as we generate anticipated formulation refinements, new methods of manufacturing and clinical trial results.

We will only be able to protect our technologies and medicines from unauthorized use by third parties to the extent that valid and enforceable patents or trade secrets cover them. As such, our commercial success will depend in part on receiving and maintaining patent protection and trade secret protection of our technologies and medicines as well as successfully defending these patents against third-party challenges.

The patent positions of life sciences companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in such companies’ patents has emerged to date in the United States. The patent situation outside the United States is even more uncertain. Changes in either the patent laws or in interpretations of patent laws in the United States or other countries may diminish the value of our intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors 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;
- it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- our issued patents and the issued patents of our licensors may not provide a basis for commercially viable drugs, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties;
- we may not be successful in any patent litigation to enforce our patent rights, including our pending patent litigation regarding PENNSAID 2%, RAVICTI and/or VIMOVO;
- we may not develop additional proprietary technologies or medicine candidates that are patentable; or
- the patents of others may have an adverse effect on our business.

**RAVICTI**

We have ownership of U.S. and foreign patents and patent applications covering RAVICTI. If not otherwise invalidated, those patents expire between 2030 and 2032. We also have an exclusive license to U.S. and foreign patents from Brusilow covering RAVICTI which expire in the United States in 2018 and if extended, in certain countries in Europe in 2021. We continue to prosecute and pursue patent protection to obtain additional patent coverage on RAVICTI and its uses.

In the United States, RAVICTI has been granted seven years of orphan drug exclusivity, which will expire in 2020. In the EU, RAVICTI received ten years of marketing exclusivity protection, beginning with its December 2015 marketing authorization.

**PROCYSBI**

We have U.S. and foreign patents and patent applications covering PROCYSBI, as well as licenses from UCSD to U.S. and foreign patents and patent applications covering PROCYSBI. If not otherwise invalidated, those patents expire between 2027 and 2034. We continue to prosecute and pursue patent protection to obtain additional patent coverage on PROCYSBI and its uses.

PROCYSBI received marketing authorization in September 2013 from the European Communities, or the EC, for marketing in the EU as an orphan medicinal product for the management of proven nephropathic cystinosis.
PROCYSBI received seven years of market exclusivity, through 2020, for patients six years and older as an orphan drug in the United States, and ten years of market exclusivity, through 2023, as an orphan drug in Europe. PROCYSBI received seven years of market exclusivity, through 2022, for patients two years of age to less than six years of age, and seven years of market exclusivity, through 2024, for patients one year of age to less than two years of age, as an orphan drug in the United States. During December 2017, the FDA awarded pediatric exclusivity to PROCYSBI in the United States, which adds an additional six month exclusivity period to the end of each orphan exclusivity period and patent term covering PROCYSBI.

**ACTIMMUNE**

We have licenses to U.S. patents covering ACTIMMUNE. If not otherwise invalidated, those patents expire in 2022. We continue to prosecute and pursue patent protection to obtain additional patent coverage on ACTIMMUNE and its uses.

**QUINSAIR**

We have U.S. and foreign patents and patent applications covering QUINSAIR, as well as licenses from PARI to U.S. and foreign patents and patent applications covering QUINSAIR. If not otherwise invalidated, those patents expire between 2020 and 2037. We continue to prosecute and pursue patent protection to obtain additional patent coverage on QUINSAIR and its uses.

QUINSAIR received ten years of market exclusivity in the EU, beginning with its March 2015 marketing authorization.

**KRYSSTEXXA**

We have licenses to U.S. and foreign patents and applications covering KRYSSTEXXA. If not otherwise invalidated, those patents expire between 2019 and 2030. We continue to prosecute and pursue patent protection to obtain additional patent coverage on KRYSSTEXXA and its uses.

In the United States, KRYSSTEXXA has received twelve years of biologic exclusivity, expiring in 2022.

**RAYOS/LODOTRA**

We have an exclusive license to U.S. and foreign patents and patent applications from Vectura covering RAYOS/LODOTRA. If not otherwise invalidated, those in-licensed patents expire between 2024 and 2028. We continue to prosecute and pursue additional patent coverage on RAYOS/LODOTRA and its uses. However, under our settlement agreement with Teva Pharmaceuticals Industries Limited (formerly known as Actavis Laboratories FL, Inc., which itself was formerly known as Watson Laboratories, Inc. – Florida), or Teva, Teva may enter the market on December 23, 2022, or earlier under certain circumstances.

In the EU, LODOTRA has received ten years of marketing exclusivity protection, beginning with its March 2009 marketing authorization in Germany.

**PENNSAID 2%**

We have ownership of U.S. patents and patent applications covering PENNSAID 2% from Nuvo. We also co-own other U.S. patent applications with Mallinckrodt LLC. If not otherwise invalidated, those patents expire between 2027 and 2030. However, under our settlement agreements with Perrigo Company plc, or Perrigo, Taro Pharmaceuticals USA, Inc. and Taro Pharmaceutical Industries, Ltd., or collectively Taro, Amneal Pharmaceuticals LLC, or Amneal, and Teligent, Inc., or Teligent, Perrigo, Taro, Amneal, and/or Teligent may enter the market on January 10, 2029, or earlier under certain circumstances. We continue to prosecute and pursue patent protection in the United States to obtain additional patent coverage on PENNSAID 2% and its uses.

**DUEXIS**

We have multiple patents and patent applications related to DUEXIS. Unless otherwise invalidated, those patents expire in 2026. However, under a settlement agreement with Par Pharmaceutical, Inc. and Par Pharmaceutical Companies, Inc., or collectively Par, Par may enter the market on January 1, 2023, or earlier under certain circumstances.
VIMOVO

We have licenses to U.S. patents and patent applications and trademarks covering VIMOVO from Aralez and AstraZeneca AB. We co-own other U.S. patents and patent applications with Aralez. If not otherwise invalidated, those in-licensed patents expire between 2018 and 2031. We continue to prosecute and pursue patent protection in the United States to obtain additional patent coverage on VIMOVO and its uses.

For a description of our legal proceedings related to intellectual property matters, see Note 19 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

Customers and Information About Geographic Areas

Information regarding our total revenues by product, attributed to U.S and non-U.S. sources and attributed to customers who represented at least 10% of our total revenues in each of the years ended December 31, 2017, 2016 and 2015, as well as the location of our long-lived assets, is included in Note 14 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

Third-Party Coverage and Reimbursement

In both U.S. and foreign markets, our ability to commercialize our medicines successfully depends in significant part on the availability of coverage and adequate reimbursement to healthcare providers from third-party payers, including, in the United States, government payers such as the Medicare and Medicaid programs, managed care organizations and private health insurers. Third-party payers are increasingly challenging the prices charged for medicines and examining their cost effectiveness, in addition to their safety and efficacy. This is especially true in markets where over-the-counter and generic options exist. Even if coverage is made available by a third-party payer, the reimbursement rates paid for covered medicines might not be adequate. For example, third-party payers may use tiered coverage and may adversely affect demand for our medicines by not covering our medicines or by placing them in a more expensive formulary tier relative to competitive medicines (where patients have to pay relatively more out of pocket than for medicines in a lower tier). We cannot be certain that our medicines will be covered by third-party payers or that such coverage, where available, will be adequate, or that our medicines will successfully be placed on the list of drugs covered by particular health plan formularies. Many states have also created preferred drug lists and include drugs on those lists only when the manufacturers agree to pay a supplemental rebate. The industry competition to be included on such formularies and preferred drug lists often leads to downward pricing pressures on pharmaceutical companies. Also, third-party payers may refuse to include a particular branded drug on their formularies or otherwise restrict patient access to a branded drug when a less costly generic equivalent or other therapeutic alternative is available. In addition, because each third-party payer individually approves coverage and reimbursement levels, obtaining coverage and adequate reimbursement is a time-consuming and costly process. We may be required to provide scientific and clinical support for the use of any medicine to each third-party payer separately with no assurance that approval would be obtained, and we may need to conduct pharmacoeconomic studies to demonstrate the cost effectiveness of our medicines for formulary coverage and reimbursement. Even with studies, our medicines may be considered less safe, less effective or less cost-effective than competitive medicines, and third-party payers may not provide coverage and adequate reimbursement for our medicines or our medicine candidates. These pricing and reimbursement pressures may create negative perceptions to any medicine price increases, or limit the amount we may be able to increase our medicine prices, which may adversely affect our medicine sales and results of operations. Where coverage and reimbursement are not adequate, physicians may limit how much or under what circumstances they will prescribe or administer such medicines, and patients may decline to purchase them. This, in turn, could affect our ability to successfully commercialize our medicines and impact our profitability, results of operations, financial condition, and future success.

The U.S. market has seen a trend in which retail pharmacies have become increasingly involved in determining which prescriptions will be filled with the requested medicine or a substitute medicine, based on a number of factors, including potentially perceived medicine costs and benefits, as well as payer medicine substitution policies. Many states have in place requirements for prescribers to indicate “dispense as written” on their prescriptions if they do not want pharmacies to make medicine substitutions; these requirements are varied and not consistent across states. We may need to increasingly spend time and resources to ensure the prescriptions written for our medicines are filled as written, where appropriate.

Coverage policies, third-party reimbursement rates and medicine pricing regulation have been subject to significant change, and may change further at any time, particularly given recent political focus on the pharmaceutical industry. Even if favorable coverage and adequate reimbursement status is attained for one or more medicines, less favorable coverage policies and reimbursement rates may be implemented in the future.
Government Regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose extensive requirements upon the clinical development, pre-market approval, manufacture, labeling, marketing, promotion, pricing, import, export, storage and distribution of medicines. These agencies and other regulatory agencies regulate research and development activities and the testing, approval, manufacture, quality control, safety, effectiveness, labeling, storage, recordkeeping, advertising and promotion of drugs and biologics. Failure to comply with applicable FDA or foreign regulatory agency requirements may result in warning letters, fines, civil or criminal penalties, additional reporting obligations and/or agency oversight, suspension or delays in clinical development, recall or seizure of medicines, partial or total suspension of production or withdrawal of a medicine from the market.

In the United States, the FDA regulates drug products under the Federal Food, Drug, and Cosmetic Act and its implementing regulations and biologics additionally under the Public Health Service Act. The process required by the FDA before medicine candidates may be marketed in the United States generally involves the following:

• submission to the FDA of an investigational new drug, or IND, which must become effective before human clinical trials may begin and must be updated annually;
• completion of extensive pre-clinical laboratory tests and pre-clinical animal studies, all performed in accordance with the FDA's Good Laboratory Practice, or GLP, regulations;
• performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the medicine candidate for each proposed indication;
• submission to the FDA of a new drug application, or NDA, or biologics license application, or BLA, as appropriate, after completion of all pivotal clinical trials to demonstrate the safety, purity and potency of the medicine candidate for the indication for use;
• a determination by the FDA within sixty days of its receipt of an NDA or BLA to file the application for review;
• satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities to assess compliance with the FDA's current good manufacturing practices, or cGMPs, regulations for pharmaceuticals; and
• FDA review and approval of an NDA or BLA prior to any commercial marketing or sale of the medicine in the United States.

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

The results of pre-clinical tests (which include laboratory evaluation as well as GLP studies to evaluate toxicity in animals) for a particular medicine candidate, together with related manufacturing information and analytical data, are submitted as part of an IND to the FDA. The IND automatically becomes effective thirty days after receipt by the FDA, unless the FDA, within the thirty-day time period, raises concerns or questions about the conduct of the proposed clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. IND submissions may not result in FDA authorization to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during medicine development. Further, an independent institutional review board, or IRB, for each medical center proposing to conduct the clinical trial must review and approve the plan for any clinical trial before it commences at that center and it must monitor the study until completed. The FDA, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Clinical testing also must satisfy extensive good clinical practice regulations and regulations for informed consent and privacy of individually identifiable information. Similar requirements to the U.S. IND are required in the European Economic Area, or the EEA, and other jurisdictions in which we may conduct clinical trials.

Clinical Trials. For purposes of NDA or BLA submission and approval, clinical trials are typically conducted in the following sequential phases, which may overlap:

• Phase 1. Studies are initially conducted in a limited population to test the medicine candidate for safety, dose tolerance, absorption, distribution, metabolism, and excretion, typically in healthy humans, but in some cases in patients.
• Phase 2. Studies are generally conducted in a limited patient population to identify possible adverse effects and safety risks, explore the initial efficacy of the medicine for specific targeted indications and to determine dose range or pharmacodynamics. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
Phase 3. These are commonly referred to as pivotal studies. When Phase 2 evaluations demonstrate that a dose range of the medicine is effective and has an acceptable safety profile, Phase 3 clinical trials are undertaken in large patient populations to further evaluate dosage, provide substantial evidence of clinical efficacy and further test for safety in an expanded and diverse patient population at multiple, geographically dispersed clinical trial centers.

Phase 4. The FDA may approve an NDA or BLA for a medicine candidate, but require that the sponsor conduct additional clinical trials to further assess the medicine after approval under a post-marketing commitment or post-marketing requirement. In addition, a sponsor may decide to conduct additional clinical trials after the FDA has approved a medicine. Post-approval trials are typically referred to as Phase 4 clinical trials.

The results of drug development, pre-clinical studies and clinical trials are submitted to the FDA as part of an NDA or BLA, as appropriate. Applications also must contain extensive chemistry, manufacturing and control information. Applications must be accompanied by a significant user fee. Once the submission has been accepted for filing, the FDA's goal is to review applications within twelve months of submission or, if the application relates to an unmet medical need in a serious or life-threatening indication, eight months from submission. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA will typically conduct a pre-approval inspection of the manufacturer to ensure that the medicine can be reliably produced in compliance with cGMPs and will typically inspect certain clinical trial sites for compliance with good clinical practice, or GCP. The FDA may refer the application to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it typically follows such recommendations. The FDA may deny approval of an application by issuing a Complete Response Letter if the applicable regulatory criteria are not satisfied. A Complete Response Letter may require additional clinical data and/or trial(s), and/or other significant, expensive and time-consuming requirements related to clinical trials, pre-clinical studies or manufacturing. Data from clinical trials are not always conclusive and the FDA may interpret data differently than we or our collaborators interpret data. Approval may occur with boxed warnings on medicine labeling or Risk Evaluation and Mitigation Strategies, or REMS, which limit the labeling, distribution or promotion of a medicine. Once issued, the FDA may withdraw medicine approval if ongoing regulatory requirements are not met or if safety problems occur after the medicine reaches the market. In addition, the FDA may require testing, including Phase 4 clinical trials, and surveillance programs to monitor the safety effects of approved medicines which have been commercialized and the FDA has the power to prevent or limit further marketing of a medicine based on the results of these post-marketing programs or other information.

**Orphan Medicines.** Under the Orphan Drug Act, the FDA may designate a medicine as an “orphan drug” if it is intended to treat a rare disease or condition, meaning that it affects fewer than 200,000 individuals in the United States, or more in cases in which there is no reasonable expectation that the cost of developing and making a medicine available in the United States for treatment of the disease or condition will be recovered from sales of the medicine. A company must request orphan drug designation before submitting an NDA for the drug and rare disease or condition. If the request is granted, the FDA will disclose the identity of the therapeutic agent and its potential use. Orphan drug designation does not shorten the Prescription Drug User Fee Act, or PDUFA, goal dates for the regulatory review and approval process, although it does convey certain advantages such as tax benefits and exemption from the PDUFA application fee.

If a medicine with orphan designation receives the first FDA approval for the disease or condition for which it has such designation or for a select indication or use within the rare disease or condition for which it was designated, the medicine generally will receive orphan drug exclusivity. Orphan drug exclusivity means that the FDA may not approve another sponsor’s marketing application for the same drug for the same indication for seven years, except in certain limited circumstances. Orphan exclusivity does not block the approval of a different drug for the same rare disease or condition, nor does it block the approval of the same drug for different indications. If a drug designated as an orphan drug ultimately receives marketing approval for an indication broader than what was designated in its orphan drug application, it may not be entitled to exclusivity. Orphan exclusivity will not bar approval of another medicine under certain circumstances, including if a subsequent medicine with the same drug for the same indication is shown to be clinically superior to the approved medicine on the basis of greater efficacy or safety, or providing a major contribution to patient care, or if the company with orphan drug exclusivity is not able to meet market demand.
In the EU, Regulation (EC) No 141/2000 and Regulation (EC) No. 847/2000 provide that a medicine can be designated as an orphan medicinal product by the EC if its sponsor can establish: that the medicine is intended for the diagnosis, prevention or treatment of (1) a life-threatening or chronically debilitating condition affecting not more than five in ten thousand persons in the EU when the application is made, or (2) a life-threatening, seriously debilitating or serious and chronic condition in the EU and that without incentives the medicinal product is unlikely to be developed. For either of these conditions, the applicant must demonstrate that there exists no satisfactory method of diagnosis, prevention or treatment of the condition in question that has been authorized in the EU or, if such method exists, the medicinal product will be of significant benefit to those affected by that condition. Once authorized, orphan medicinal products are entitled to ten years of market exclusivity in all EU Member States (extendable to twelve years for medicines that have complied with an agreed pediatric investigation plan pursuant to Regulation 1901/2006) and in addition a range of other benefits during the development and regulatory review process including scientific assistance for study protocols, authorization through the centralized marketing authorization procedure covering all member countries and a reduction or elimination of registration and marketing authorization fees. However, marketing authorization may be granted to a similar medicinal product with the same orphan indication during the ten year period with the consent of the marketing authorization holder for the original orphan medicinal product or if the manufacturer of the original orphan medicinal product is unable to supply sufficient quantities. Marketing authorization may also be granted to a similar medicinal product with the same orphan indication if this medicine is safer, more effective or otherwise clinically superior to the original orphan medicinal product. The period of market exclusivity may, in addition, be reduced to six years if, at the end of the fifth year, it can be demonstrated on the basis of available evidence that the criteria for its designation as an orphan medicine are no longer satisfied, for example if the original orphan medicinal product has become sufficiently profitable not to justify maintenance of market exclusivity.

Other Regulatory Requirements. Medicines manufactured or distributed pursuant to FDA approvals are subject to continuing regulation by the FDA, including recordkeeping, annual medicine quality review, payment of program fees and reporting requirements. Adverse event experience with the medicine must be reported to the FDA in a timely fashion and pharmacovigilance programs to proactively look for these adverse events are mandated by the FDA. Our medicines may be subject to REMS requirements that affect labeling, distribution or post market reporting. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Following such inspections, the FDA may issue notices on Form 483 and Untitled Letters or warning letters that could cause us or our third-party manufacturers to modify certain activities. A Form 483 notice, if issued at the conclusion of an FDA inspection, can list conditions the FDA investigators believe may have violated cGMP or other FDA regulations or guidelines. In addition to Form 483 notices and Untitled Letters, failure to comply with the statutory and regulatory requirements can subject a manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of medicine, injunctive action, additional reporting requirements and/or oversight by the agency, import alert or possible civil penalties. The FDA may also require us to recall a drug from distribution or withdraw approval for that medicine.

The FDA closely regulates the post-approval marketing and promotion of pharmaceuticals, including standards and regulations for direct-to-consumer advertising, dissemination of off-label information, industry-sponsored scientific and educational activities and promotional activities involving the Internet, including certain social media activities. Medicines may be marketed only for the approved indications and in accordance with the provisions of the approved label. Further, if there are any modifications to the medicine, including changes in indications, labeling, or manufacturing processes or facilities, we may be required to submit and obtain FDA approval of a new or supplemental application, which may require us to develop additional data or conduct additional pre-clinical studies and clinical trials. Failure to comply with these requirements can result in adverse publicity, Untitled letters, corrective advertising and potential administrative, civil and criminal penalties, as well as damages, fines, withdrawal of regulatory approval, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs, additional reporting requirements and/or oversight by the agency, and imprisonment, any of which could adversely affect our ability to sell our medicines or operate our business and also adversely affect our financial results.
Physicians may, in their independent medical judgment, prescribe legally available pharmaceuticals for uses that are not described in the medicine’s labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, impose stringent restrictions on manufacturers’ communications regarding off-label use. Additionally, a significant number of pharmaceutical companies have been the target of inquiries and investigations by various U.S. federal and state regulatory, investigative, prosecutorial and administrative entities in connection with the promotion of medicines for off-label uses and other sales practices. These investigations have alleged violations of various U.S. federal and state laws and regulations, including claims asserting antitrust violations, violations of the Food, Drug and Cosmetic Act, false claims laws, the Prescription Drug Marketing Act, or PDMA, anti-kickback laws, and other alleged violations in connection with the promotion of medicines for unapproved uses, pricing and Medicare and/or Medicaid reimbursement. If our promotional activities, including any promotional activities that a contracted sales force may perform on our behalf, fail to comply with these regulations or guidelines, we may be subject to warnings from, or enforcement action by, these authorities. In addition, our failure to follow FDA rules and guidelines relating to promotion and advertising may cause the FDA to issue warning letters or untitled letters, suspend or withdraw an approved medicine from the market, require corrective advertising or a recall or institute fines or civil fines, additional reporting requirements and/or oversight or could result in disgorgement of money, operating restrictions, injunctions or criminal prosecution, any of which could harm our business. In addition, the distribution of prescription medicines is subject to the PDMA, which regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription medicine samples and impose requirements to ensure accountability in distribution, including a drug pedagogy which tracks the distribution of prescription drugs. Further, under the Drug Quality and Security Act, drug manufacturers are subject to a number of requirements, including, medicine identification, tracing and verification, among others, that are designed to detect and remove counterfeit, stolen, contaminated or otherwise potentially harmful drugs from the U.S. drug supply chain. These requirements will be phased in over several years and compliance will likely increase the costs of the manufacture and distribution of drug medicines.

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

The EU and the EEA consist of the twenty-eight Member States of the EU, plus Norway, Iceland and Liechtenstein which are Member States of the EEA. These Member States have all acceded to the single market rules governing the supervision of medicinal products. Under the prevailing rules, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are three procedures for an MA to be obtained:

- the Centralized MA, which is issued by the EC through the Centralized Procedure, based on the scientific opinion of the Committee for Medicinal Products for Human Use of the EMA, and which is valid throughout the entire territory of the EU/EEA. When decisions on granting of a Centralized MA are taken by the EU, the EEA Member States will take corresponding decisions on the basis the relevant acts to permit marketing of medicinal products. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, and medicinal products containing a new active substance indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, autoimmune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EU/EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.

- Decentralized Procedure MAs are available for products not falling within the mandatory scope of the Centralized Procedure. An identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State, or RMS, to lead the evaluation of the regulatory submission. The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics, or SmPC, and a draft of the labeling and package leaflet as distilled from the preliminary evaluation, which are sent to the other Member States (referred to as the Concerned Member States, or CMS) for their approval. If the CMS raise no objections, based on a potential serious risk to public health, to the assessment, SmPC, labeling, or packaging proposed by the RMS, the RMS records the agreement, closes the procedure and informs the applicant accordingly. Each Member State concerned by the procedure is required to adopt a national decision to grant a national MA in conformity with the approved assessment report, SmPC and labeling and package leaflet as approved. Where a product has already been authorized for marketing in a Member State of the EEA, the granted national MA can be used for mutual recognition in other Member States through the Mutual Recognition Procedure, or MRP, resulting in progressive national approval of the product in the EU/EEA.
• National MAs, which are issued by a single competent authority of the Member States of the EEA and only covers their respective territory, are also available for products not falling within the mandatory scope of the Centralized Procedure. Once a product has been authorized for marketing in a Member State of the EEA through the Centralized Procedure, this National MA can also be recognized in other Member States through the MRP.

Under the procedures described above, before granting the MA, the EMA or the competent authority(ies) of the Member State(s) of the EEA prepare an assessment of the risk-benefit balance of the product against the scientific criteria concerning its quality, safety and efficacy.

Under Regulation (EC) No 726/2004/EC and Directive 2001/83/EC (each as amended), the EU has adopted a harmonized approach to data and market protection or exclusivity (known as the 8 + 2 + 1 formula). The data exclusivity period begins to run on the date when the first MA is granted in the EU. It confers on the MA holder of the reference medicinal product eight years of data protection and ten years of market protection. A reference medicinal product is defined to mean a medicinal product authorized based on a full dossier consisting of pharmaceutical and pre-clinical testing results and clinical trial data, such as a medicinal product containing a new active substance. The ten-year market protection can be extended cumulatively to a maximum period of eleven years if during the first eight years of those ten years of protection period, the MA holder obtains an authorization for one or more new therapeutic indications that are deemed to bring a significant clinical benefit compared to existing therapies.

The protection period means that an applicant for a generic medicinal product is not permitted to rely on pre-clinical pharmacological, toxicological, and clinical data contained in the file of the reference medicinal product of the originator until the first eight years of data protection have expired. Thereafter, a generic product application may be submitted and generic companies may rely on the pre-clinical and clinical data relating to the reference medicinal product to support approval of the generic product. However, a generic cannot market until ten years have elapsed from the initial authorization of the reference medicinal product or eleven years if the protection period is extended, based on the formula of 8+2+1.

In addition to the above, where an application is made for a new indication for a well-established substance, a non-cumulative period of one year of data exclusivity shall be granted, provided that significant pre-clinical or clinical studies were carried out in relation to the new indication. Finally, where a change of classification of a medicinal product has been authorized on the basis of significant pre-clinical tests or clinical trials, the competent authority shall not refer to the results of those tests or trials when examining an application by another applicant for or holder of marketing authorization for a change of classification of the same substance for one year after the initial change was authorized.

The 8 + 2 + 1 exclusivity scheme applies to products that have been authorized in the EU by either the EMA through the Centralized Procedure or the competent authorities of the Member States of the EEA nationally, including through the Decentralized and Mutual Recognition procedures.

For a medicinal product which is designated as orphan under Regulation 141/2000, it will benefit from a period of ten years of orphan market exclusivity which essentially constitutes a period of market monopoly. During this period of orphan market exclusivity, no EU regulatory authority is permitted to accept or approve an application for marketing authorization for a similar medicinal product or an extension application for the same therapeutic indication. This period can be extended cumulatively to a total of twelve years if the marketing authorization holder or applicant complies with the requirements for an agreed pediatric investigation plan pursuant to Regulation 1901/2006.

The holder of a Centralized MA or National MA is subject to various obligations under the applicable EU laws, such as pharmacovigilance obligations, requiring it to, among other things, report and maintain detailed records of adverse reactions, and to submit periodic safety update reports to the competent authorities. The holder must also ensure that the manufacturing and batch release of its product is in compliance with the applicable requirements. The MA holder is further obligated to ensure that the advertising and promotion of its products complies with applicable EU laws and industry code of practice as implemented in the domestic laws of the Member States of the EU/EEA. The advertising and promotional rules are enforced nationally by the EU/EEA Member States.
Healthcare Fraud and Abuse Laws. As a pharmaceutical company, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients’ rights are and will be applicable to our business. We may be subject to various federal and state laws targeting fraud and abuse in the healthcare industry. For example, in the United States, there are federal and state anti-kickback laws that prohibit the payment or receipt of kickbacks, bribes or other remuneration intended to induce the purchase or recommendation of healthcare products and services or reward past purchases or recommendations. Violations of these laws can lead to civil and criminal penalties, including fines, imprisonment, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement, and exclusion from participation in federal healthcare programs. These laws are applicable to manufacturers of products regulated by the FDA, such as us, and pharmacies, hospitals, physicians and other potential purchasers of such products.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal healthcare program, such as the Medicare and Medicaid programs. The term “remuneration” is defined as any remuneration, direct or indirect, overt or covert, in cash or in kind, and has been broadly interpreted to include anything of value, including for example, gifts, discounts, the furnishing of supplies or equipment, credit arrangements, payments of cash, waivers of payment, ownership interests and providing anything at less than its fair market value. Several courts have interpreted the statute’s intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute may have been violated, and enforcement will depend on the relevant facts and circumstances. The Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, among other things, amended the intent requirement of the federal Anti-Kickback Statute to state that a person or entity need not have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act (discussed below) or the civil monetary penalties statute, which imposes penalties against any person who is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. The federal False Claims Act is broad, and despite a series of narrow safe harbors, prohibits many arrangements and practices that are lawful in businesses outside of the healthcare industry. Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs, and do not contain identical safe harbors. In addition, where such activities involve foreign government officials, they may also potentially be subject to the Foreign Corrupt Practices Act. Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities, including our activities with physician customers, pharmacies, and patients, as well as our activities pursuant to partnerships with other companies and pursuant to contracts with contract research organizations, could be subject to challenge under one or more of such laws.

The federal False Claims Act prohibits any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes “any request or demand” for money or property presented to the U.S. government. In addition, the ACA specified that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. The federal False Claims Act has been the basis for numerous enforcement actions and settlements by pharmaceutical and other healthcare companies in connection with various alleged financial relationships with customers. In addition, a number of pharmaceutical manufacturers have reached substantial financial settlements in connection with allegedly causing false claims to be submitted because of the companies’ marketing of products for unapproved, and thus non-reimbursable, uses. Certain marketing practices, including off-label promotion, may also violate false claims laws, as might violations of the federal physician self-referral laws, such as the Stark laws, which prohibit a physician from making a referral to certain designated health care providers based on which the physician or the physician’s family member has a financial interest and prohibit submission of a claim for reimbursement pursuant to the prohibited referral. The “qui tam” provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In addition, various states have enacted similar fraud and abuse statutes or regulations, including, without limitation, false claims laws analogous to the False Claims Act, and laws analogous to the federal Anti-Kickback Statute, that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer, and there are also federal criminal false claims laws.
Separately, there are a number of other fraud and abuse laws that pharmaceutical manufacturers must be mindful of, particularly after a medicine candidate has been approved for marketing in the United States. For example, a federal criminal law enacted as part of the Health Insurance Portability and Accountability Act of 1996, or HIPAA, prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payers. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. There are also federal civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payers that are false or fraudulent, as well as federal and state consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

**Healthcare Privacy and Security Laws.** We may be subject to, or our marketing activities may be limited by, HIPAA, as amended by the Health Information Technology and Clinical Health Act and their respective implementing regulations, which established uniform standards for certain “covered entities” (healthcare providers, health plans and healthcare clearinghouses) governing the conduct of certain electronic healthcare transactions and protecting the security and privacy of protected health information. Among other things, HIPAA's privacy and security standards are directly applicable to “business associates” — independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. In addition to possible civil and criminal penalties for violations, state attorneys general are authorized to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney’s fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. In the EU/EEA, Directive 95/46/EC (as amended) applies to identified or identifiable personal data processed by automated means (for example, a computer database of customers) and data contained in, or intended to be part of, non-automated filing systems (traditional paper files) as well as transfer of such data to a country outside of the EU/EEA. Effective as of May 25, 2018, Directive 95/46/EC will be replaced by the EU General Data Protection Regulation (2016/679), or GDPR. Under the GDPR, fines of up to €20.0 million or up to 4% of the annual global turnover of the infringer, whichever is greater, could be imposed for significant non-compliance.

“Sunshine” and Marketing Disclosure Laws. There are an increasing number of federal and state “sunshine” laws that require pharmaceutical manufacturers to make reports to states on pricing and marketing information. Several states have enacted legislation requiring pharmaceutical companies to, among other things, establish marketing compliance programs, file periodic reports with the state, and make periodic public disclosures on sales and marketing activities, and prohibiting certain other sales and marketing practices. In addition, a similar federal requirement requires manufacturers, including pharmaceutical manufacturers, to track and report to the federal government certain payments and other transfers of value made to physicians and other healthcare professionals and teaching hospitals and ownership or investment interests held by physicians and their immediate family members. The federal government began disclosing the reported information on a publicly available website in 2014. Certain states, such as Massachusetts, also make the reported information publicly available. In addition, there are state and local laws that require pharmaceutical representatives to be licensed and comply with codes of conduct, transparency reporting, and other obligations. These laws may adversely affect our sales, marketing, and other activities with respect to our medicines in the United States by imposing administrative and compliance burdens on us. If we fail to track and report as required by these laws or otherwise comply with these laws, we could be subject to the penalty provisions of the pertinent state and federal authorities. In the EU/EEA, declaration of transfers of value to healthcare professionals is subject to the requirements under the voluntary industry code of practice. France however has a statutory regime similar to the U.S. Sunshine Act.
Government Price Reporting. For those marketed medicines which are covered in the United States by the Medicaid programs, we have various obligations, including government price reporting and rebate requirements, which generally require medicines be offered at substantial rebates/discounts to Medicaid and certain purchasers (including “covered entities” purchasing under the 340B Drug Discount Program). We are also required to discount such medicines to authorized users of the Federal Supply Schedule of the General Services Administration, under which additional laws and requirements apply. These programs require submission of pricing data and calculation of discounts and rebates pursuant to complex statutory formulas, as well as the entry into government procurement contracts governed by the Federal Acquisition Regulations, and the guidance governing such calculations is not always clear. Compliance with such requirements can require significant investment in personnel, systems and resources, but failure to properly calculate our prices, or offer required discounts or rebates could subject us to substantial penalties. One component of the rebate and discount calculations under the Medicaid and 340B programs, respectively, is the “additional rebate”, a complex calculation which is based, in part, on the rate at which a branded drug price increases over time more than the rate of inflation (based on the Consumer Price Index for All Urban Consumers). This comparison is based on the baseline pricing data for the first full quarter of sales associated with a branded drug’s NDA, and baseline data cannot generally be reset, even on transfer of the NDA to another manufacturer. This “additional rebate” calculation can, in some cases where price increase have been relatively high versus the first quarter of sales of the NDA, result in Medicaid rebates up to 100 percent of a drug’s “average manufacturer price” and 340B prices of one penny. Subject to the control of Directive 89/105/EEC, pricing and reimbursement in the EU/EEA is governed by national rules and policy and may vary from Member State to Member State.

In General. Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities in the United States could be subject to challenge under one or more of such laws. Moreover, state governmental agencies may propose or enact laws and regulations that extend or contradict federal requirements. If we or our operations are found to be in violation of any of the state or federal laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including significant civil and criminal penalties, damages, fines, imprisonment, exclusion from participation in U.S. federal or state healthcare programs, additional reporting requirements and/or oversight and the curtailment or restructuring of our operations. To the extent that any medicine we make is sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals. Any penalties, damages, fines, curtailment or restructuring of our operations could materially adversely affect our ability to operate our business and our financial results.

Although compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be entirely eliminated. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management’s attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal, state and foreign privacy, security, sunshine, government price reporting, and fraud laws may prove costly.

Impact of Healthcare Reform and Recent Public Scrutiny of Specialty Drug Pricing on Coverage, Reimbursement, and Pricing. In the United States and other potentially significant markets for our medicines, federal and state authorities as well as third-party payers are increasingly attempting to limit or regulate the price of medical products and services, particularly for new and innovative medicines and therapies, which has resulted in lower average net selling prices. Further, there is increased scrutiny of prescription drug pricing practices by federal and state lawmakers and enforcement authorities. In addition, there is an emphasis on managed healthcare in the United States and on country-specific and regional pricing and reimbursement controls in the EU, both of which will put additional pressure on medicine pricing, reimbursement and usage, which may adversely affect our future medicine sales and results of operations. These pressures can arise from rules and practices of managed care groups, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, pharmaceutical reimbursement policies and pricing in general.
The U.S. and some foreign jurisdictions are considering or have enacted a number of additional legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our medicines profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs (including a number of proposals pertaining to prescription drugs, specifically), improving quality and/or expanding access. At the federal level, the Trump administration’s budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid and to eliminate cost sharing for generics for low-income patients. While any proposed measures will require Congress to pass legislation to become effective, these provisions reinforce the administration’s focus on controlling drug prices. At the state level, in Massachusetts, the MassHealth program has requested permission from the federal government to use commercial tools, such as a closed formulary, to negotiate more favorable rebate agreements from drug manufacturers. There also has been particular and increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices over the course of 2016 and 2017, particularly with respect to drugs that have been subject to relatively large price increases over relatively short time periods. There have been several recent state and federal lawmaker inquiries and proposed legislation as was the case in California designed to, among other things, bring more transparency to drug pricing, by requiring drug companies to notify insurers and government regulators of price increases and provide an explanation of the reasons for the increase. There have also been actions to review the relationship between pricing and manufacturer patient assistance programs, and reform government program reimbursement methodologies for drugs. In the United States, the pharmaceutical industry has already been significantly affected by major legislative initiatives, including, for example, the ACA. The ACA, among other things, imposes a significant annual fee on companies that manufacture or import branded prescription drug medicines. It also contains substantial provisions intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, and impose additional health policy reforms, any or all of which may affect our business. Since its enactment, there have been judicial and Congressional challenges to numerous provisions of the ACA. In January 2017, the United States House of Representatives and Senate passed legislation, the concurrent budget resolution for fiscal year 2017, which initiates actions that would repeal certain aspects of the ACA. Further, on January 20, 2017, U.S. President Donald Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA, to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. In May 2017, following the passage of the budget resolution for fiscal year 2017, the U.S. House of Representatives passed legislation known as the American Health Care Act, which, if enacted, would have amended and repealed significant portions of the ACA. The U.S. Senate considered but did not adopt other legislation to amend and/or replace elements of the ACA and authority to act under the fiscal year 2017 budget resolution expired on September 30, 2017. However, on October 12, 2017, U.S. President Donald Trump signed another Executive Order directing certain federal agencies to propose regulations or guidelines to permit small businesses to form association health plans, expand the availability of short-term, limited duration insurance, and expand the use of health reimbursement arrangements, which may circumvent some of the requirements for health insurance mandated by the ACA. In addition, citing legal guidance from the U.S. Department of Justice and the U.S. Department of Health and Human Services, or HHS, the Trump administration has concluded that cost-sharing reduction, or CSR, payments to insurance companies required under the ACA have not received necessary appropriations from Congress and announced that it will discontinue these payments immediately until such appropriations are made. The loss of the CSR payments is expected to increase premiums on certain policies issued by qualified health plans under the ACA. Finally, while Congress has not passed comprehensive ACA repeal or replace legislation, the federal income tax legislation signed into law on December 22, 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate”. We continue to evaluate the effect that the ACA and additional actions by Congress to possibly repeal and replace it has on our business.
Other legislative changes have also been proposed and adopted since the ACA was enacted. For example, the Budget Control Act of 2011 resulted in aggregate reductions in Medicare payments to providers of up to two percent per fiscal year, starting in 2013, and the American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Such laws, and others that may affect our business that have been recently enacted or may in the future be enacted, may result in additional reductions in Medicare and other healthcare funding. In the future, there will likely continue to be additional proposals relating to the reform of the U.S. healthcare system, some of which could further limit coverage and reimbursement of medicines, including our candidate medicines. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payers. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans (also known as the Medicare “Donut Hole”), and also increases in 2019 the percentage that a drug manufacturer must discount the cost of prescription drugs from 50 percent under current law to 70 percent. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our medicines.

Irish Law Matters

As we are an Irish-incorporated company, the following matters of Irish law are relevant to the holders of our ordinary shares.

Irish Restrictions on Import and Export of Capital. Except as indicated below, there are no restrictions imposed specifically on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act 1992 gives power to the Minister for Finance of Ireland to restrict financial transfers between Ireland and other countries and persons. Financial transfers are broadly defined and include all transfers that would be movements of capital or payments within the meaning of the treaties governing the member states of the EU. The acquisition or disposal of interests in shares issued by an Irish incorporated company and associated payments falls within this definition. In addition, dividends or payments on redemption or purchase of shares and payments on a liquidation of an Irish incorporated company would fall within this definition. The Criminal Justice (Terrorist Offences) Act 2005 also gives the Minister of Finance of Ireland the power to take various measures, including the freezing or seizure of assets, in order to combat terrorism. At present the Financial Transfers Act 1992, certain EU regulations (as implemented into Irish law) and the Criminal Justice (Terrorist Offences) Act 2005 prohibit financial transfers involving certain persons and entities associated with the ISIL (Da’esh) and Al-Qaida organizations, the late Slobodan Milosevic and associated persons, Republic of Guinea-Bissau, Myanmar/Burma, Belarus, certain persons indicted by the International Criminal Tribunal for the former Yugoslavia, the late Osama bin Laden, Al-Qaida, the Taliban of Afghanistan, Democratic Republic of Congo, Democratic People’s Republic of Korea (North Korea), Iran, Iraq, Côte d’Ivoire, Lebanon, Liberia, Zimbabwe, South Sudan, Sudan, Somalia, Republic of Guinea, Afghanistan, Egypt, Eritrea, Libya, Syria, Tunisia, Burundi, the Central African Republic, Ukraine, Yemen, Bosnia and Herzegovina, certain known terrorists and terrorist groups, and countries that harbor certain terrorist groups, without the prior permission of the Central Bank of Ireland or the Minister of Finance (as applicable).

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations or EU sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Withholding Tax on Dividends. While we have no current plans to pay dividends, dividends on our ordinary shares would generally be subject to Irish Dividend Withholding Tax, or DWT, at the standard rate of income tax (currently twenty percent), unless an exemption applies.

Dividends on our ordinary shares that are owned by residents of the United States and held beneficially through the Depositary Trust Company, or DTC, will not be subject to DWT provided that the address of the beneficial owner of the ordinary shares in the records of the broker is in the United States.
Dividends on our ordinary shares that are owned by residents of the United States and held directly (outside of DTC) will not be subject to DWT provided that the shareholder has completed the appropriate Irish DWT form and this form remains valid. Such shareholders must provide the appropriate Irish DWT form to our transfer agent at least seven business days before the record date for the first dividend payment to which they are entitled.

If any shareholder who is resident in the United States receives a dividend subject to DWT, he or she should generally be able to make an application for a refund from the Irish Revenue Commissioners on the prescribed form (DWT Claim Form 1).

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding tax, due to the wide scope of the exemptions from DWT available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

**Income Tax on Dividends.** A shareholder who is neither resident nor ordinarily resident in Ireland and who is entitled to an exemption from DWT generally has no additional liability to Irish income tax or to the universal social charge on a dividend from us unless that shareholder holds our ordinary shares through a branch or agency in Ireland through which a trade is carried on.

A shareholder who is neither resident nor ordinarily resident in Ireland and who is not entitled to an exemption from DWT generally has no additional liability to Irish income tax or to the universal social charge on a dividend from us. The DWT deducted by us discharges the liability to Irish income tax and to the universal social charge. This however is not the case where the shareholder holds the ordinary shares through a branch or agency in Ireland through which a trade is carried on.

**Irish Tax on Capital Gains.** A shareholder who is neither resident nor ordinarily resident in Ireland and does not hold our ordinary shares in connection with a trade or business carried on by such shareholder in Ireland through a branch or agency should not be within the charge to Irish tax on capital gains on a disposal of our ordinary shares.

**Capital Acquisitions Tax.** Irish capital acquisitions tax, or CAT, is composed principally of gift tax and inheritance tax. CAT could apply to a gift or inheritance of our ordinary shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our ordinary shares are regarded as property situated in Ireland as our share register must be held in Ireland. The person who receives the gift or inheritance has primary liability for CAT.

CAT is levied at a rate of 33 percent above certain tax-free thresholds. The appropriate tax-free threshold is dependent upon (i) the relationship between the donor and the donee and (ii) the aggregation of the values of previous gifts and inheritances received by the donee from persons within the same category of relationship for CAT purposes. Gifts and inheritances passing between spouses are exempt from CAT. Our shareholders should consult their own tax advisers as to whether CAT is creditable or deductible in computing any domestic tax liabilities.

**Stamp Duty.** Irish stamp duty (if any) may become payable in respect of ordinary share transfers. However, a transfer of our ordinary shares from a seller who holds shares through DTC to a buyer who holds the acquired shares through DTC will not be subject to Irish stamp duty. A transfer of our ordinary shares (i) by a seller who holds ordinary shares outside of DTC to any buyer, or (ii) by a seller who holds the ordinary shares through DTC to a buyer who holds the acquired ordinary shares outside of DTC, may be subject to Irish stamp duty (currently at the rate of one percent of the price paid or the market value of the ordinary shares acquired, if greater). The person accountable for payment of stamp duty is the buyer or, in the case of a transfer by way of a gift or for less than market value, all parties to the transfer.
A shareholder who holds ordinary shares outside of DTC may transfer those ordinary shares into DTC without giving rise to Irish stamp duty provided that the shareholder would be the beneficial owner of the related book-entry interest in those ordinary shares recorded in the systems of DTC (and in exactly the same proportions) as a result of the transfer and at the time of the transfer into DTC there is no sale of those book-entry interests to a third party being contemplated by the shareholder. Similarly, a shareholder who holds ordinary shares through DTC may transfer those ordinary shares out of DTC without giving rise to Irish stamp duty provided that the shareholder would be the beneficial owner of the ordinary shares (and in exactly the same proportions) as a result of the transfer, and at the time of the transfer out of DTC there is no sale of those ordinary shares to a third party being contemplated by the shareholder. In order for the share registrar to be satisfied as to the application of this Irish stamp duty treatment where relevant, the shareholder must confirm to us that the shareholder would be the beneficial owner of the related book-entry interest in those ordinary shares recorded in the systems of DTC (and in exactly the same proportions) as a result of the transfer and there is no agreement for the sale of the related book-entry interest or the ordinary shares or an interest in the ordinary shares, in the case as may be, by the shareholder to a third party being contemplated.

Employees

As of December 31, 2017, we had approximately 1,010 full-time employees. Of our employees as of December 31, 2017, approximately 185 were engaged in development, regulatory and manufacturing activities, approximately 610 were engaged in sales and marketing and approximately 215 were engaged in administration, including business development, finance, legal, information systems, facilities and human resources. None of our employees is subject to a collective bargaining agreement. We consider our employee relations to be satisfactory.

Available Information

We make available free of charge on or through our internet website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. We also regularly post copies of our press releases as well as copies of presentations and other updates about our business on our website. Our website address is www.horizonpharma.com. The information contained in or that can be accessed through our website is not part of this Annual Report on Form 10-K. Information is also available through the Securities and Exchange Commission’s website at www.sec.gov or is available at the Securities and Exchange Commission’s Public Reference Room located at 100 F Street, NE, Washington DC, 20549. Information on the operation of the Public Reference Room is available by calling the Securities and Exchange Commission at 800-SEC-0330.

Item 1A. Risk Factors

Certain factors may have a material adverse effect on our business, financial condition and results of operations, and you should carefully consider them. Accordingly, in evaluating our business, we encourage you to consider the following discussion of risk factors in its entirety, in addition to other information contained in this report as well as our other public filings with the Securities and Exchange Commission, or SEC.

Risks Related to Our Business and Industry

Our ability to generate revenues from our medicines is subject to attaining significant market acceptance among physicians, patients and healthcare payers.

Our current medicines, and other medicines or medicine candidates that we may develop or acquire, may not attain market acceptance among physicians, patients, healthcare payers or the medical community. We have a limited history of commercializing medicines and most of our medicines have not been on the market for an extensive period of time, which subjects us to numerous risks as we attempt to increase our market share. We believe that the degree of market acceptance and our ability to generate revenues from our medicines will depend on a number of factors, including:

- timing of market introduction of our medicines as well as competitive medicines;
- efficacy and safety of our medicines;
- continued projected growth of the markets in which our medicines compete;
- prevalence and severity of any side effects;
if and when we are able to obtain regulatory approvals for additional indications for our medicines;

• acceptance by patients, primary care physicians and key specialists;

• availability of coverage and adequate reimbursement and pricing from government and other third-party payers;

• potential or perceived advantages or disadvantages of our medicines over alternative treatments, including cost of treatment and relative convenience and ease of administration;

• strength of sales, marketing and distribution support;

• the price of our medicines, both in absolute terms and relative to alternative treatments;

• impact of past and limitation of future medicine price increases;

• our ability to maintain a continuous supply of medicine for commercial sale;

• the effect of current and future healthcare laws;

• the performance of third-party distribution partners, over which we have limited control; and

• medicine labeling or medicine insert requirements of the U.S. Food and Drug Administration, or FDA, or other regulatory authorities.

With respect to RAVICTI, which is approved to treat a very limited patient population, our ability to grow sales will depend in large part on our ability to transition urea cycle disorder, or UCD, patients from BUPHENYL or generic equivalents, which are comparatively much less expensive, to RAVICTI and to encourage patients and physicians to continue RAVICTI therapy once initiated. With respect to PROCYSBI, which is also approved to treat a very limited patient population, our ability to grow sales will depend in large part on our ability to transition patients from the first-generation immediate-release cysteamine therapy to PROCYSBI, to identify additional patients with nephropathic cystinosis and to encourage patients and physicians to continue therapy once initiated. With respect to ACTIMMUNE, while it is the only FDA-approved treatment for chronic granulomatous disease, or CGD, and severe, malignant osteopetrosis, or SMO, they are very rare conditions and, as a result, our ability to grow ACTIMMUNE sales will depend on our ability to access a wider patient population, obtain marketing approval for additional indications and encourage patients and physicians to continue treatment once initiated. Unless QUINSAIR is approved for marketing in additional countries, our ability to drive growth of this medicine will largely depend on expanding its use in Canada. With respect to KRYSTEXXA, our ability to grow sales will be affected by the success of our sales and marketing strategies, including our marketing efforts in nephrology, and life cycle management, including studies designed to improve the response rate to KRYSTEXXA, our proposed label update submission to the FDA relating to additional data based on post-marketing studies and investigator-initiated trials evaluating new approaches to the clinical use of KRYSTEXXA that are expected to begin enrolling patients in the first quarter of 2018, which could expand the patient population and usage of KRYSTEXXA. With respect to each of BUPHENYL, RAYOS/LODOTRA, PENNSAID 2% w/w, or PENNSAID 2%, DUEXIS and VIMOVO their higher cost compared to the generic or branded forms of their active ingredients alone may limit adoption by physicians, patients and healthcare payers. With respect to DUEXIS and VIMOVO, studies indicate that physicians do not commonly co-prescribe gastrointestinal, or GI, protective agents to high-risk patients taking nonsteroidal anti-inflammatory drugs, or NSAIDs. We believe this is due in part to a lack of awareness among physicians prescribing NSAIDs regarding the risk of NSAID-induced upper GI ulcers, in addition to the inconvenience of prescribing two separate medications and patient compliance issues associated with multiple prescriptions. If physicians remain unaware of, or do not otherwise believe in, the benefits of combining GI protective agents with NSAIDs, our market opportunity for DUEXIS and VIMOVO will be limited. Some physicians may also be reluctant to prescribe DUEXIS or VIMOVO due to the inability to vary the dose of ibuprofen and naproxen, respectively, or if they believe treatment with NSAIDs or GI protective agents other than those contained in DUEXIS and VIMOVO, including those of its competitors, would be more effective for their patients. If our current medicines or any other medicine that we may seek approval for, or acquire, fail to attain market acceptance, we may not be able to generate significant revenue to achieve or sustain profitability, which would have a material adverse effect on our business, results of operations, financial condition and prospects (including, possibly, the value of our ordinary shares).
Our future prospects are highly dependent on our ability to successfully formulate and execute commercialization strategies for each of our medicines. Failure to do so would adversely impact our financial condition and prospects.

A substantial majority of our resources are focused on the commercialization of our current medicines. Our ability to generate significant medicine revenues and to achieve commercial success in the near-term will initially depend almost entirely on our ability to successfully commercialize these medicines in the United States.

With respect to our rare disease medicines, RAVICTI, PROCYSBI, ACTIMMUNE, BUPHENYL, QUINSAIR and KRYSSEXNA, our commercialization strategy includes efforts to increase awareness of the rare conditions that each medicine is designed to treat, enhancing efforts to identify target patients and in certain cases pursue opportunities for label expansion and more effective use through clinical trials. With respect to RAVICTI and PROCYSBI, our strategy includes accelerating the transition of patients from first-generation therapies, and increasing the diagnosis of the associated rare conditions through patient and physician outreach. In addition, our strategy with respect to ACTIMMUNE includes pursuing label expansion for additional indications, such as for advanced urethelial carcinoma and renal cell carcinoma, and price increases, but we cannot be certain that our pricing strategy will not result in downward pressure on sales or that we or others will be able to successfully complete clinical trials and obtain regulatory approvals in additional indications. Our strategy with respect to KRYSSEXNA includes the continued enhancement of the marketing campaign with improved immunogenicity data, continued volume growth and pricing optimization.

With respect to our primary care medicines PENNSAID 2%, DUEXIS, and VIMOVO, our strategy has more recently included entering into rebate agreements with pharmacy benefit managers, or PBMs, for certain of our primary care medicines where we believe the rebates and costs justify expanded formulary access for patients. However, we cannot guarantee that we will be able to secure additional rebate agreements on commercially reasonable terms, that expected volume growth will sufficiently offset the rebates and fees paid to PBMs or that our existing agreements with PBMs will have the intended impact on formulary access. Net pricing for PENNSAID 2%, DUEXIS and VIMOVO was significantly below expectations during the year ended December 31, 2017 as a result of higher patient assistance costs, which were due to lower-than-anticipated adoption rates of our primary care medicines onto certain healthcare plan formularies, and higher commercial rebate levels compared to our expectations. In addition, the mix of PBM healthcare plans that adopted our primary care medicines onto their formulary was more heavily weighted towards those plans for which we pay a higher commercial rebate, which resulted in higher commercial rebate costs to us than we anticipated. If we are unable to realize the expected benefits of our contractual arrangements with the PBMs we may continue to experience reductions in net sales from our primary care business unit. Also, we experienced a higher rate of managed care control in our non-contracted business during the year ended December 31, 2017, which resulted in significantly lower net pricing. For each of our primary care medicines, we expect that our commercial success will depend on our sales and marketing efforts in the United States and the impact of numerous efforts at federal, state and local levels to further reduce reimbursement and net pricing of primary care medicines.

Our strategy for RAYOS in the United States is to focus on the rheumatology indications approved for RAYOS, including our collaboration with the Alliance for Lupus Research, or ALR, to study the effect of RAYOS on the fatigue experienced by systemic lupus erythematosus, or SLE, patients. Our overall commercialization strategy also includes plans to expand sales in Europe and other countries outside the United States directly or through distributors for certain of our orphan and rheumatology medicines. In November 2015, we received approval of the Committee for Medicinal Products for Human Use of the European Medicines Agency, or EMA, for RAVICTI for use as an adjunctive therapy for chronic management of adult and pediatric UCD patients greater than two months of age. RAVICTI became available in Europe in the fourth quarter of 2017 through an exclusive distribution agreement with Swedish Orphan Biovitrum AB, or SOBI, however we cannot guarantee we will be able to successfully implement our commercial plans for RAVICTI in Europe. Although LODOTRA is approved for marketing in countries outside the United States, to date it has only been marketed in a limited number of countries.

If any of our commercial strategies are unsuccessful or we fail to successfully modify our strategies over time due to changing market conditions, our ability to increase market share for our medicines, grow revenues and to achieve and sustain profitability will be harmed.
In order to increase adoption and sales of our medicines, we will need to continue developing our commercial organization as well as recruit and retain qualified sales representatives.

Part of our strategy is to continue to build a biopharmaceutical company to successfully execute the commercialization of our medicines in the U.S. market, and in selected markets outside the United States where we have commercial rights. We may not be able to successfully commercialize our medicines in the United States or in any other territories where we have commercial rights. In order to commercialize any approved medicines, we must continue to build our sales, marketing, distribution, managerial and other non-technical capabilities. During the second quarter of 2017, we effected a workforce reduction in the primary care business unit. As of December 31, 2017, we had approximately 430 sales representatives in the field, consisting of approximately 25 orphan disease sales representatives, 140 rheumatology sales specialists and 265 primary care sales representatives. We cannot be certain that we will be able to adequately market our primary care medicines following the reduction in our sales force or that we will be able to continue retaining the current members of our primary care sales force. We currently have limited resources compared to some of our competitors, and the continued development of our own commercial organization to market our medicines and any additional medicines we may acquire will be expensive and time-consuming. We also cannot be certain that we will be able to continue to successfully develop this capability.

As a result of the evolving role of various constituents in the prescription decision making process, we focus on hiring sales representatives for our primary care business unit and RAYOS with successful business to business experience. For example, we have faced challenges due to pharmacists increasingly switching a patient’s intended prescription from DUEXIS and VIMOVO to a generic or over-the-counter brand of their active ingredients, despite such substitution being off-label in the case of DUEXIS and VIMOVO. We have faced similar challenges for BUPHENYL, RAYOS and PENNSAID 2% with respect to generic brands. While we believe the profile of our representatives is better suited for this evolving environment, we cannot be certain that our representatives will be able to successfully protect our market for BUPHENYL, RAYOS, PENNSAID 2%, DUEXIS and VIMOVO or that we will be able to continue attracting and retaining sales representatives with our desired profile and skills. We will also have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain commercial personnel. To the extent we rely on additional third parties to commercialize any approved medicines, we may receive less revenue than if we commercialized these medicines ourselves. In addition, we may have little or no control over the sales efforts of any third parties involved in our commercialization efforts. In the event we are unable to successfully develop and maintain our own commercial organization or collaborate with a third-party sales and marketing organization, we may not be able to commercialize our medicines and medicine candidates and execute on our business plan.

If we are unable to effectively train and equip our sales force, our ability to successfully commercialize our medicines will be harmed.

As we continue to acquire additional medicines through acquisition transactions, the members of our sales force may have limited experience promoting certain of our medicines. To the extent we employ an acquired entity’s original sales forces to promote acquired medicines, we may not be successful in continuing to retain these employees and we otherwise will have limited experience marketing these medicines under our commercial organization. As a result, we are required to expend significant time and resources to train our sales force to be credible and persuasive in convincing physicians to prescribe and pharmacists to dispense our medicines. In addition, we must train our sales force to ensure that a consistent and appropriate message about our medicines is being delivered to our potential customers. Our sales representatives may also experience challenges promoting multiple medicines when we call on physicians and their office staff. We have experienced, and may continue to experience, turnover of the sales representatives that we hired or will hire, requiring us to train new sales representatives. If we are unable to effectively train our sales force and equip them with effective materials, including medical and sales literature to help them inform and educate physicians about the benefits of our medicines and their proper administration and label indication, as well as our patient access programs, our efforts to successfully commercialize our medicines could be put in jeopardy, which could have a material adverse effect on our financial condition, share price and operations.
If we cannot successfully implement our patient access programs or increase formulary access and reimbursement for our medicines in the face of increasing pressure to reduce the price of medications, the adoption of our medicines by physicians, patients and payers may decline.

There continues to be immense pressure from healthcare payers, PBMs and others to use less expensive generics or over-the-counter brands instead of branded medicines. For example, some of the largest PBMs previously placed DUEXIS and VIMOVO on their formulary exclusion lists. Additional healthcare plans, including those that contract with these PBMs but use different formularies, may also choose to exclude our medicines from their formularies or restrict coverage to situations where a generic or over-the-counter medicine has been tried first. Many payers and PBMs also require patients to make co-payments for branded medicines, including many of our medicines, in order to incentivize the use of generic or other lower-priced alternatives instead. Legislation enacted in most states in the United States allows, or in some instances mandates, that a pharmacist dispenses an available generic equivalent when filling a prescription for a branded medicine, in the absence of specific instructions from the prescribing physician. Because our medicines (other than BUPHENYL) do not currently have FDA-approved generic equivalents in the United States, we do not believe our medicines should be subject to mandatory generic substitution laws. However, we understand that some pharmacies may attempt to obtain physician authorization to switch prescriptions for DUEXIS or VIMOVO to prescriptions for multiple generic medicines with similar active pharmaceutical ingredients, or APIs, to ensure payment for the medicine if the physician’s prescription for the branded medicine is not immediately covered by the payer, despite such substitution being off-label in the case of DUEXIS and VIMOVO. If these limitations in coverage and other incentives result in patients refusing to fill prescriptions or being dissatisfied with the out-of-pocket costs of their medications, or if pharmacies otherwise seek and receive physician authorization to switch prescriptions, not only would we lose sales on prescriptions that are ultimately not filled, but physicians may be dissuaded from writing prescriptions for our medicines in the first place in order to avoid potential patient non-compliance or dissatisfaction over medication costs, or to avoid spending the time and effort of responding to pharmacy requests to switch prescriptions.

Part of our commercial strategy to increase adoption and access to our medicines in the face of these incentives to use generic alternatives is to offer physicians the opportunity to have patients fill prescriptions through independent pharmacies participating in our HorizonCares patient access program. Through HorizonCares, financial assistance may be available to reduce eligible patients’ out-of-pocket costs for prescriptions filled. Because of this assistance, eligible patients’ out-of-pocket cost for our medicines when dispensed through HorizonCares may be significantly lower than such costs when our medicines are dispensed outside of the HorizonCares program. However, to the extent physicians do not direct prescriptions currently filled through traditional pharmacies, including those associated with or controlled by PBMs, to pharmacies participating in our HorizonCares program, we may experience a significant decline in PENNSAID 2%, DUEXIS and VIMOVO prescriptions. Our ability to increase utilization of our patient access programs will depend on physician and patient awareness and comfort with the programs, and we have limited ability to influence whether physicians use our patient access programs to prescribe our medicines or whether patients will agree to receive our medicines through our HorizonCares program. In addition, the HorizonCares program is not available to federal health care program (such as Medicare and Medicaid) beneficiaries. We have also contracted with certain PBMs and other payers to secure formulary status and reimbursement for certain of our primary care medicines, which generally require us to pay administrative fees and rebates to the PBMs and other payers for qualifying prescriptions. While we have business relationships with two of the largest PBMs, Express Scripts and CVS Caremark, that have resulted in DUEXIS and VIMOVO being removed from the Express Scripts and CVS Caremark exclusion lists starting in 2017, as well as a rebate agreement with another PBM, Prime Therapeutics LLC, and we believe these agreements will secure formulary status for certain of our medicines, we cannot guarantee that we will be able to agree to terms with other PBMs and other payers, or that such terms will be commercially reasonable to us. Despite our agreements with PBMs, the extent of formulary status and reimbursement will ultimately depend to a large extent upon individual healthcare plan formulary decisions. If healthcare plans that contract with PBMs with which we have agreements do not adopt formulary changes recommended by the PBMs with respect to our medicines, we may not realize the expected access and reimbursement benefits from these agreements. In addition, we generally pay higher rebates for prescriptions covered under plans that adopt a PBM-chosen formulary than for plans that adopt custom formularies. Consequently, the success of our PBM contracting strategy will depend not only on our ability to expand formulary adoption among healthcare plans, but also upon the relative mix of healthcare plans that have PBM-chosen formularies versus custom formularies. During the year ended December 31, 2017, the adoption rates of our primary care medicines onto certain healthcare plan formularies were lower than we had anticipated and as a result, we incurred higher patient assistance costs than we expected, and the mix of healthcare plans adopting our primary care medicines onto their formularies was more heavily weighted towards plans that use PBM-chosen formularies, which resulted in higher rebate costs than we expected. If we are unable to realize the expected benefits of our contractual arrangements with the PBMs we may continue to experience reductions in net sales from our primary care business unit. If we are unable to increase adoption of HorizonCares for filling prescriptions of our medicines or to secure formulary status and reimbursement through arrangements with PBMs and other payers, particularly with healthcare plans that use custom formularies, our ability to achieve net sales growth for our primary care business unit would be impaired.
There has been negative publicity and inquiries from Congress and enforcement authorities regarding the use of specialty pharmacies and drug pricing. Our patient access programs are not involved in the prescribing of medicines and are solely to assist in ensuring that when a physician determines one of our medicines offers a potential clinical benefit to their patients and they prescribe one for an eligible patient, financial assistance may be available to reduce the patient’s out-of-pocket costs. In addition, all pharmacies that fill prescriptions for our medicines are fully independent, including those that participate in HorizonCares. We do not own or possess any option to purchase an ownership stake in any pharmacy that distributes our medicines, and our relationship with each pharmacy is non-exclusive and arm’s length. All of our sales are processed through pharmacies independent of us. Despite this, the negative publicity and interest from Congress and enforcement authorities regarding specialty pharmacies may result in physicians being less willing to participate in our patient access programs and thereby limit our ability to increase patient access and adoption of our medicines.

We may also encounter difficulty in forming and maintaining relationships with pharmacies that participate in our patient access programs. We currently depend on a limited number of pharmacies participating in HorizonCares to fulfill patient prescriptions under the HorizonCares program. If these HorizonCares participating pharmacies are unable to process and fulfill the volume of patient prescriptions directed to them under the HorizonCares program, our ability to maintain or increase prescriptions for our medicines will be impaired. The commercialization of our medicines and our operating results could be affected should any of the HorizonCares participating pharmacies choose not to continue participation in our HorizonCares program or by any adverse events at any of those HorizonCares participating pharmacies. For example, pharmacies that dispense our medicines could lose contracts that they currently maintain with managed care organizations, or MCOs, including PBMs. Pharmacies often enter into agreements with MCOs. They may be required to abide by certain terms and conditions to maintain access to MCO networks, including terms and conditions that could limit their ability to participate in patient access programs like ours. Failure to comply with the terms of their agreements with MCOs could result in a variety of penalties, including termination of their agreement, which could negatively impact the ability of those pharmacies to dispense our medicines and collect reimbursement from MCOs for such medicines.

The HorizonCares program may implicate certain federal and state laws related to, among other things, unlawful schemes to defraud, excessive fees for services, tortious interference with patient contracts and statutory or common law fraud. We have a comprehensive compliance program in place to address adherence with various laws and regulations relating to the selling, marketing and manufacturing of our medicines, as well as certain third-party relationships, including pharmacies. Specifically with respect to pharmacies, the compliance program utilizes a variety of methods and tools to monitor and audit pharmacies, including those that participate in the HorizonCares program, to confirm their activities, adjudication and practices are consistent with our compliance policies and guidance. Despite our compliance efforts, to the extent the HorizonCares program is found to be inconsistent with applicable laws or the pharmacies that participate in our patient access programs do not comply with applicable laws, we may be required to restructure or discontinue such programs, terminate our relationship with certain pharmacies, or be subject to other significant penalties. In November 2015, we received a subpoena from the U.S. Attorney’s Office for the Southern District of New York requesting documents and information related to our patient access programs and other aspects of our marketing and commercialization activities. We are unable to predict how long this investigation will continue or its outcome, but we have incurred and anticipate that we may continue to incur significant costs in connection with the investigation, regardless of the outcome. We may also become subject to similar investigations by other governmental agencies or Congress. The investigation by the U.S. Attorney’s Office and any additional investigations of our patient access programs and sales and marketing activities may result in damages, fines, penalties, exclusion, additional reporting requirements and/or oversight or other administrative sanctions against us.

If the cost of maintaining our patient access programs increases relative to our sales revenues, we could be forced to reduce the amount of patient financial assistance that we offer or otherwise scale back or eliminate such programs, which could in turn have a negative impact on physicians’ willingness to prescribe and patients’ willingness to fill prescriptions of our medicines. While we believe that our arrangements with PBMs will result in broader inclusion of certain of our primary care medicines on healthcare plan formularies, and therefore increase payer reimbursement and lower our cost of providing patient access programs, these arrangements generally require us to pay administrative and rebate payments to the PBMs and/or other payers and their effectiveness will ultimately depend to a large extent upon individual healthcare plan formulary decisions that are beyond the control of the PBMs. If our arrangements with PBMs and other payers do not result in increased prescriptions and reductions in our costs to provide our patient access programs that are sufficient to offset the administrative fees and rebate payments to the PBMs and/or other payers, our financial results may continue to be harmed.

If we are unable to successfully implement our commercial plans and facilitate adoption by patients and physicians of any approved medicines through our sales, marketing and commercialization efforts, then we will not be able to generate sustainable revenues from medicine sales which will have a material adverse effect on our business and prospects.
Coverage and reimbursement may not be available, or reimbursement may be available at only limited levels, for our medicines, which could make it difficult for us to sell our medicines profitably or to successfully execute planned medicine price increases.

Market acceptance and sales of our medicines will depend in large part on global coverage and reimbursement policies and may be affected by future healthcare reform measures, both in the United States and other key international markets. Successful commercialization of our medicines will depend in part on the availability of governmental and third-party payer reimbursement for the cost of our medicines. Government health administration authorities, private health insurers and other organizations generally provide reimbursement for healthcare. In particular, in the United States, private health insurers and other third-party payers often provide reimbursement for medicines and services based on the level at which the government (through the Medicare or Medicaid programs) provides reimbursement for such treatments. In the United States, the EU and other significant or potentially significant markets for our medicines and medicine candidates, government authorities and third-party payers are increasingly attempting to limit or regulate the price of medicines and services, particularly for new and innovative medicines and therapies, which has resulted in lower average selling prices. Further, the increased scrutiny of prescription drug pricing practices and emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the EU will put additional pressure on medicine pricing, reimbursement and usage, which may adversely affect our medicine sales and results of operations. These pressures can arise from rules and practices of managed care groups, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, pharmaceutical reimbursement policies and pricing in general. These pressures may create negative reactions to any medicine price increases, or limit the amount by which we may be able to increase our medicine prices, which may adversely affect our medicine sales and results of operations.

Patients are unlikely to use our medicines unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our medicines. Third-party payers may limit coverage to specific medicines on an approved list, also known as a formulary, which might not include all of the FDA-approved medicines for a particular indication. Moreover, a third-party payer’s decision to provide coverage for a medicine does not imply that an adequate reimbursement rate will be approved. Additionally, one third-party payer’s decision to cover a particular medicine does not ensure that other payers will also provide coverage for the medicine, or will provide coverage at an adequate reimbursement rate. Even though we have contracts with some PBMs in the United States, that does not guarantee that they will perform in accordance with the contracts, nor does that preclude them from taking adverse actions against us, which could materially adversely affect our operating results. In addition, the existence of such PBM contracts does not guarantee coverage by such PBM’s contracted health plans or adequate reimbursement to their respective providers for our medicines. For example, two significant PBMs placed DUEXIS and VIMOVO on their exclusion lists beginning in 2015, which has resulted in a loss of coverage for patients whose healthcare plans have adopted these PBM lists. While DUEXIS and VIMOVO were removed from the Express Scripts and CVS Caremark exclusion lists starting in 2017, we cannot guarantee that Express Scripts or CVS Caremark will not later add these medicines back to their exclusion lists or that we will be able to otherwise expand formulary access for DUEXIS and VIMOVO under health plans that contract with Express Scripts and/or CVS Caremark. Additional healthcare plan formularies may also exclude our medicines from coverage due to the actions of certain PBMs, future price increases we may implement, our use of the HorizonCares program or any other co-pay programs, or other reasons. If our strategies to mitigate formulary exclusions are not effective, these events may reduce the likelihood that physicians prescribe our medicines and increase the likelihood that prescriptions for our medicines are not filled.

Outside of the United States, the success of our medicines, including RAVICTI, PROCYSBI, QUINSAIR, LODOTRA and IMUKIN, will depend largely on obtaining and maintaining government coverage, because in many countries patients are unlikely to use prescription drugs that are not covered by their government healthcare programs. We launched RAVICTI in Canada in November 2016 and RAVICTI became available in Europe in the fourth quarter of 2017 through our partnership with SOBI. PROCYSBI was launched in Canada in October 2017 and QUINSAIR was launched in Canada in December 2016. We cannot be certain that existing reimbursement in such countries will be maintained or that we will be able to secure reimbursement in additional countries. The majority of LODOTRA sales are in Germany and Italy where reimbursement has been approved. Negotiating coverage and reimbursement with governmental authorities can delay commercialization by 12 months or more. Coverage and reimbursement policies may adversely affect our ability to sell our medicines on a profitable basis. In many international markets, governments control the prices of prescription pharmaceuticals, including through the implementation of reference pricing, price cuts, rebates, revenue-related taxes and profit control, and we expect prices of prescription pharmaceuticals to decline over the life of the medicine or as volumes increase. Many countries in the EU have increased the amount of discounts required on medicines, and we expect these discounts to continue as countries attempt to manage healthcare expenditures, especially in light of current economic conditions. As a result of these pricing practices, it may become difficult to achieve or sustain profitability or expected rates of growth in revenue or results of operations. Any shortfalls in revenue could adversely affect our business, financial condition and results of operations.
In light of such policies and the uncertainty surrounding proposed regulations and changes in the coverage and reimbursement policies of governments and third-party payers, we cannot be sure that coverage and reimbursement will be available for any of our medicines in any additional markets or for any other medicine candidates that we may develop. Also, we cannot be sure that reimbursement amounts will not reduce the demand for, or the price of, our medicines. If coverage and reimbursement are not available or are available only at limited levels, we may not be able to successfully commercialize our medicines.

We expect to experience pricing pressures in connection with the sale of our medicines due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals relating to outcomes and quality. For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, increased the mandated Medicaid rebate from 15.1% to 23.1%, expanded the rebate to Medicaid managed care utilization and increased the types of entities eligible for the federal 340B drug discount program. On January 30, 2017, the White House Office of Management and Budget withdrew the draft August 2015 Omnibus Guidance document that was issued by the Department of Health and Human Services, or HHS, Health Resources and Services Administration, or HRSA, that addressed a broad range of topics including, among other items, the definition of a patient’s eligibility for 340B drug pricing. However, as concerns continue to grow over the need for tighter oversight, there remains the possibility that HRSA or another agency under the HHS will propose a similar regulation or that Congress will explore changes to the 340B program through legislation. For example, the Centers for Medicare & Medicaid Services has issued a final rule that would revise the Medicare hospital outpatient prospective payment system for calendar year 2018, including a new reimbursement methodology for drugs purchased under the 340B program for Medicare patients. In addition, HHS has currently set July 1, 2018, for implementation of the final rule setting forth the calculation of the ceiling price and application of civil monetary penalties under the 340B program. A material portion of KRYSEXXA prescriptions are written by healthcare providers that are eligible for 340B drug pricing and therefore any reduction in 340B pricing, whether in the form of the final rule or otherwise, or an expansion of healthcare providers eligible for 340B drug pricing, would likely have a negative impact on our net sales from KRYSTEXXA.

There may be additional pressure by payers, healthcare providers, state governments, federal regulators and Congress, to use generic drugs that contain the active ingredients found in our medicines or any other medicine candidates that we may develop or acquire. If we fail to successfully secure and maintain coverage and adequate reimbursement for our medicines or are significantly delayed in doing so, we will have difficulty achieving market acceptance of our medicines and expected revenue and profitability which would have a material adverse effect on our business, results of operations, financial condition and prospects.

We may also experience pressure from payers as well as state and federal government authorities concerning certain promotional approaches that we may implement such as our HorizonCares program or any other co-pay or free medicine programs whereby we assist qualified patients with certain out-of-pocket expenditures for our medicine. Certain enforcement authorities and members of Congress have initiated inquiries about co-pay assistance programs. Some state legislatures have been considering proposals that would restrict or ban co-pay coupons. For example, legislation was recently signed into law in California that would limit the use of co-pay coupons in cases where a lower cost generic drug is available and if individual ingredients in combination therapies are available over the counter at a lower cost. It is possible that similar legislation could be proposed and enacted in additional states. If we are unsuccessful with our HorizonCares program or any other co-pay initiatives or free medicine programs, or we alternatively are unable to secure expanded formulary access through additional arrangements with PBMs or other payers, we would be at a competitive disadvantage in terms of pricing versus preferred branded and generic competitors. We may also experience financial pressure in the future which would make it difficult to support investment levels in areas such as managed care contract rebates, HorizonCares and other access tools.

We are solely dependent on third parties to commercialize certain of our medicines outside the United States. Failure of these third parties or any other third parties to successfully commercialize our medicines and medicine candidates in the applicable jurisdictions could have a material adverse effect on our business.

SOBI is our exclusive distributor for RAVICTI in Europe. Innomar Strategies Inc., or Innomar, is our exclusive distributor for RAVICTI, PROCYSBI and QUINSAIR in Canada. We rely on other third-party distributors for commercialization of BUPHENYL (known as AMMONAPS in certain European countries) in certain territories outside the United States for which we currently have rights. Mundipharma International Corporation Limited, or Mundipharma, is our exclusive distributor for LODOTRA in Europe, Asia and Latin America. We have limited contractual rights to force these third parties to invest significantly in commercialization of these medicines in our markets. In the event that SOBI, Innomar, our current ex-U.S. distributors for BUPHENYL, Mundipharma, or any other third party with any future commercialization rights.
rights to any of our medicines or medicine candidates fail to adequately commercialize those medicines or medicine candidates because they lack adequate financial or other resources, decide to focus on other initiatives or otherwise, our ability to successfully commercialize our medicines or medicine candidates in the applicable jurisdictions would be limited, which would adversely affect our business, financial condition, results of operations and prospects. We have had disagreements with Mundipharma under our European agreements and may continue to have disagreements, which could harm commercialization of LODOTRA in Europe or result in the termination of our agreements with Mundipharma. In addition, our agreements with SOBI, Innomar, our current ex-U.S. distributors for BUPHENYL and Mundipharma, may be terminated by either party in the event of a bankruptcy of the other party or upon an uncured material breach by the other party. If these third parties terminated their agreements, we may not be able to secure an alternative distributor in the applicable territory on a timely basis or at all, in which case our ability to generate revenues from the sale of RAVICTI, PROCYSBI, BUPHENYL, QUINSAIR or LODOTRA, outside the United States would be materially harmed.

Our medicines are subject to extensive regulation, and we may not obtain additional regulatory approvals for our medicines.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, marketing and distribution and other possible activities relating to our medicines and our medicine candidates are, and will be, subject to extensive regulation by the FDA and other regulatory agencies. Failure to comply with FDA and other applicable regulatory requirements may, either before or after medicine approval, subject us to administrative or judicially imposed sanctions.

To market any drugs or biologics outside of the United States, we and current or future collaborators must comply with numerous and varying regulatory and compliance related requirements of other countries. Approval procedures vary among countries and can involve additional medicine testing and additional administrative review periods, including obtaining reimbursement and pricing approval in select markets. The time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks associated with FDA approval as well as additional, presently unanticipated, risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others.

Applications for regulatory approval, including a marketing authorization application, or MAA, for marketing new drugs in Europe, must be supported by extensive clinical and pre-clinical data, as well as extensive information regarding chemistry, manufacturing and controls, or CMC, to demonstrate the safety and effectiveness of the applicable medicine candidate. The number and types of pre-clinical studies and clinical trials that will be required for regulatory approval varies depending on the medicine candidate, the disease or the condition that the medicine candidate is designed to target and the regulations applicable to any particular medicine candidate. Despite the time and expense associated with pre-clinical and clinical studies, failure can occur at any stage, and we could encounter problems that cause us to repeat or perform additional pre-clinical studies, CMC studies or clinical trials. Regulatory authorities could delay, limit or deny approval of a medicine candidate for many reasons, including because they:

- may not deem a medicine candidate to be adequately safe and effective;
- may not find the data from pre-clinical studies, CMC studies and clinical trials to be sufficient to support a claim of safety and efficacy;
- may interpret data from pre-clinical studies, CMC studies and clinical trials significantly differently than we do;
- may not approve the manufacturing processes or facilities associated with our medicine candidates;
- may conclude that we have not sufficiently demonstrated long-term stability of the formulation for which we are seeking marketing approval;
- may change approval policies (including with respect to our medicine candidates’ class of drugs) or adopt new regulations; or
- may not accept a submission due to, among other reasons, the content or formatting of the submission.
Even if we believe that data collected from our pre-clinical studies, CMC studies and clinical trials of our medicine candidates are promising and that our information and procedures regarding CMC are sufficient, our data may not be sufficient to support marketing approval by regulatory authorities, or regulatory interpretation of these data and procedures may be unfavorable. Even if approved, medicine candidates may not be approved for all indications requested and such approval may be subject to limitations on the indicated uses for which the medicine may be marketed, restricted distribution methods or other limitations. Our business and reputation may be harmed by any failure or significant delay in obtaining regulatory approval for the sale of any of our medicine candidates. We cannot predict when or whether regulatory approval will be obtained for any medicine candidate we develop.

With respect to QUINSAIR, the FDA indicated in previous written and verbal communications with Raptor Pharmaceutical Corp., or Raptor, and with the drug’s previous sponsor, that it believed the data submitted in connection with EMA's subsequent approval of QUINSAIR for the management of chronic pulmonary infections due to Pseudomonas aeruginosa in adults with cystic fibrosis, or CF, did not provide substantial evidence of efficacy and safety to support FDA approval of QUINSAIR for treatment of patients with CF. In October 2016, the FDA expressed its recommendation that an additional clinical trial should be conducted, and noted that if Raptor submitted a new drug application, or NDA, without conducting an additional clinical trial, the FDA would review the submission to determine whether it is acceptable for filing.

Prior to our acquisition of Raptor, Raptor planned to pursue the development of QUINSAIR for use in the indication of bronchiectasis, or BE, not associated with CF. Raptor submitted a protocol to the FDA in August 2016 for a Phase 2, placebo-controlled study of QUINSAIR in adults with BE. Feedback from the FDA was received in October 2016 requesting additional information and changes to the proposed study protocol. Raptor was also exploring further clinical development of QUINSAIR for the treatment of pulmonary nontuberculous mycobacteria, or NTM infection, based on third-party data generated pertaining to the susceptibility of certain pathogens to treatment with levofloxacin and other fluoroquinolone molecules. No clinical data has been generated with QUINSAIR in patients with BE or with NTM infections, either by Raptor, subsequently by Horizon or by other parties. This creates uncertainty regarding the potential efficacy of QUINSAIR in these indications.

We will evaluate all development opportunities, including all obligations to use commercial reasonable efforts to further develop QUINSAIR. However, we may determine not to pursue such further development.

The ultimate approval and commercial marketing of any of our medicines in additional indications or geographies is subject to substantial uncertainty. Failure to gain additional regulatory approvals would limit the potential revenues and value of our medicines and could cause our share price to decline.

The amount of our medicine sales in the Member States of the European Economic Area, or EEA, is dependent in part upon the pricing and reimbursement decisions adopted in each of the EEA countries, which may not be at acceptable levels to us.

One or more EEA countries may not support pricing within our target pricing and reimbursement range for our medicines due to budgetary decisions made by regional, national and local health authorities and third-party payers in the EEA, which would negatively affect our revenues. The pricing and reimbursement process in EEA countries can be lengthy, involved and difficult to predict. Failure to timely complete the pricing and reimbursement process in the EEA countries will delay our ability to market our medicines in the EEA and to derive revenues from those countries.

We may be subject to penalties and litigation and large incremental expenses if we fail to comply with regulatory requirements or experience problems with our medicines.

Even after we achieve regulatory approvals, we are subject to ongoing obligations and continued regulatory review with respect to many operational aspects including our manufacturing processes, labeling, packaging, distribution, storage, adverse event monitoring and reporting, dispensation, advertising, promotion and recordkeeping. These requirements include submissions of safety and other post-marketing information and reports, ongoing maintenance of medicine registration and continued compliance with current good manufacturing practices, or cGMPs, good clinical practices, or GCPs, good pharmacovigilance practice, good distribution practices and good laboratory practices, or GLPs. If we, our medicines or medicine candidates, or the third-party manufacturing facilities for our medicines or medicine candidates fail to comply with applicable regulatory requirements, a regulatory agency may:

- impose injunctions or restrictions on the marketing, manufacturing or distribution of a medicine, suspend or withdraw medicine approvals, revoke necessary licenses or suspend medicine reimbursement;
- issue warning letters, show cause notices or untitled letters describing alleged violations, which may be publicly available;
• suspend any ongoing clinical trials or delay or prevent the initiation of clinical trials;
• delay or refuse to approve pending applications or supplements to approved applications we have filed;
• refuse to permit drugs or precursor or intermediary chemicals to be imported or exported to or from the United States;
• suspend or impose restrictions or additional requirements on operations, including costly new manufacturing quality or pharmacovigilance requirements;
• seize or detain medicines or require us to initiate a medicine recall; and/or
• commence criminal investigations and prosecutions.

Moreover, existing regulatory approvals and any future regulatory approvals that we obtain will be subject to limitations on the approved indicated uses and patient populations for which our medicines may be marketed, the conditions of approval, requirements for potentially costly, post-market testing and requirements for surveillance to monitor the safety and efficacy of the medicines. In the EEA, the advertising and promotion of pharmaceuticals is strictly regulated. The direct-to-consumer promotion of prescription pharmaceuticals is not permitted, and some countries in the EEA require the notification and/or prior authorization of promotional or advertising materials directed at healthcare professionals. The FDA, EMA and other authorities in the EEA countries strictly regulate the promotional claims that may be made about prescription medicines, and our medicine labeling, advertising and promotion are subject to continuing regulatory review. Physicians nevertheless may prescribe our medicines to their patients in a manner that is inconsistent with the approved label or that is off-label. Positive clinical trial results in any of our medicine development programs increase the risk that approved pharmaceutical forms of the same APIs may be used off-label in those indications. If we are found to have improperly promoted off-label uses of approved medicines, we may be subject to significant sanctions, civil and criminal fines and injunctions prohibiting us from engaging in specified promotional conduct.

In addition, engaging in improper promotion of our medicines for off-label uses in the United States can subject us to false claims litigation under federal and state statutes. These false claims statutes in the United States include the federal False Claims Act, which allows any individual to bring a lawsuit against a pharmaceutical company on behalf of the federal government alleging submission of false or fraudulent claims or causing to present such false or fraudulent claims for payment by a federal program such as Medicare or Medicaid. Growth in false claims litigation has increased the risk that a pharmaceutical company will have to defend a false claim action, pay civil money penalties, settlement fines or restitution, agree to comply with burdensome reporting and compliance obligations and be excluded from Medicare, Medicaid and other federal and state healthcare programs.

The regulations, policies or guidance of regulatory agencies may change and new or additional statutes or government regulations may be enacted that could prevent or delay regulatory approval of our medicine candidates or further restrict or regulate post-approval activities. For example, the Food and Drug Administration Safety and Innovation Act requires the FDA to issue new guidance describing its policy regarding internet and social media promotion of regulated medical products, and the FDA may soon specify new restrictions on this type of promotion. In January 2014, the FDA released draft guidance on how drug companies can fulfill their regulatory requirements for post-marketing submission of interactive promotional media, and though the guidance provided insight into how the FDA views a company’s responsibility for certain types of social media promotion, there remains a substantial amount of uncertainty. We cannot predict the likelihood, nature or extent of adverse government regulation that may arise from pending or future legislation or administrative action, either in the United States or abroad. If we are unable to achieve and maintain regulatory compliance, we will not be permitted to market our drugs, which would materially adversely affect our business, results of operations and financial condition.
Our limited history of commercial operations makes evaluating our business and future prospects difficult and may increase the risk of any investment in our ordinary shares.

We face considerable risks and difficulties as a company with limited commercial operating history, particularly as a global consolidated entity with operating subsidiaries that also have limited operating histories. If we do not successfully address these risks, our business, prospects, operating results and financial condition will be materially and adversely harmed. Our limited commercial operating history, including our limited history commercializing our current medicines, makes it particularly difficult for us to predict our future operating results and appropriately budget for our expenses. In the event that actual results differ from our estimates or we adjust our estimates in future periods, our operating results and financial position could be materially affected. For example, we may underestimate the resources we will require to successfully integrate recent or future medicine or company acquisitions, or to commercialize our medicines, or not realize the benefits we expect to derive from our recent or future acquisitions. In addition, we have a limited history implementing our commercialization strategy focused on patient access, and we cannot guarantee that we will be able to successfully implement this strategy or that it will represent a viable strategy over the long term.

We have rights to medicines in certain jurisdictions but have no control over third parties that have rights to commercialize those medicines in other jurisdictions, which could adversely affect our commercialization of these medicines.

Following our sale of the rights to PROCYSBI and QUINSAIR in the Europe, Middle East and Africa, or EMEA, regions to Chiesi Farmaceutici S.p.A, or Chiesi, in June 2017, or the Chiesi divestiture, Chiesi has marketing and distribution rights to PROCYSBI and QUINSAIR in EMEA. Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.), or Nuvo, has retained its rights to PENNSAID 2% in territories outside of the United States and in March 2017, Nuvo announced that it had entered into an exclusive license agreement with Sayre Therapeutics PVT Ltd. to distribute, market and sell PENNSAID 2% in India, Sri Lanka, Bangladesh and Nepal. Nuvo also announced that it expects to complete PENNSAID 2% out-licensing agreements for other territories throughout 2018. Similarly, AstraZeneca AB, or AstraZeneca, has retained its existing rights to VIMOVO, in territories outside of the United States, including the right to use the VIMOVO name and related trademark. We have little or no control over Chiesi’s activities with respect to PROCYSBI and QUINSAIR in EMEA, over Nuvo’s or its existing and future commercial partners’ activities with respect to PENNSAID 2% outside of the United States, or over AstraZeneca’s activities with respect to VIMOVO outside the United States or even though those activities could impact our ability to successfully commercialize these medicines. For example, Chiesi or its assignees, Nuvo or its assignees or AstraZeneca or its assignees can make statements or use promotional materials with respect to PROCYSBI, QUINSAIR, PENNSAID 2% or VIMOVO, respectively, outside of the United States that are inconsistent with our positioning of the medicines in the United States, and could sell PROCYSBI, QUINSAIR, PENNSAID 2% or VIMOVO, respectively, in foreign countries at prices that are dramatically lower than the prices we charge in the United States. These activities and decisions, while occurring outside of the United States, could harm our commercialization strategy in the United States, in particular because AstraZeneca is continuing to market VIMOVO outside the United States under the same VIMOVO brand name that we are using in the United States. In addition, medicine recalls or safety issues with these medicines outside the United States, even if not related to the commercial medicine we sell in the United States, could result in serious damage to the brand in the United States and impair our ability to successfully market them. We also rely on Chiesi, Nuvo and AstraZeneca or their assignees to provide us with timely and accurate safety information regarding the use of these medicines outside of the United States, as we have or will have limited access to this information ourselves.

We rely on third parties to manufacture commercial supplies of all of our medicines, and we currently intend to rely on third parties to manufacture commercial supplies of any other approved medicines. The commercialization of any of our medicines could be stopped, delayed or made less profitable if those third parties fail to provide us with sufficient quantities of medicine or fail to do so at acceptable quality levels or prices or fail to maintain or achieve satisfactory regulatory compliance.

The facilities used by our third-party manufacturers to manufacture our medicines and medicine candidates must be approved by the applicable regulatory authorities. We do not control the manufacturing processes of third-party manufacturers and are currently completely dependent on our third-party manufacturing partners. In addition, we are required to obtain AstraZeneca’s consent prior to engaging any third-party manufacturers for esomeprazole, one of the APIs in VIMOVO, other than the third-party manufacturer(s) used by AstraZeneca or its affiliates or licensees. To the extent such manufacturers are unwilling or unable to manufacture esomeprazole for us on commercially acceptable terms, we cannot guarantee that AstraZeneca would consent to our use of alternate sources of supply.
We rely on an exclusive supply agreement with Boehringer Ingelheim Biopharmaceuticals GmbH, or Boehringer Ingelheim Biopharmaceuticals, for manufacturing and supply of ACTIMMUNE. ACTIMMUNE is manufactured by starting with cells from working cell bank samples which are derived from a master cell bank. We and Boehringer Ingelheim Biopharmaceuticals separately store multiple vials of the master cell bank. In the event of a catastrophic loss at our or Boehringer Ingelheim Biopharmaceuticals’ storage facility, it is possible that we could lose multiple cell banks and have the manufacturing capacity of ACTIMMUNE severely impacted by the need to substitute or replace the cell banks. We rely on NOF Corporation, or NOF, as our exclusive supplier of the PEGylation agent that is a critical raw material in the manufacture of KRYSTEXXA. If NOF failed to supply such PEGylation agent, it may lead to KRYSTEXXA supply constraints. In addition, a key excipient used in PENNSAID 2% as a penetration enhancer is dimethyl sulfoxide, or DMSO. We and Nuvo, our exclusive supplier of PENNSAID 2%, rely on a sole proprietary form of DMSO for which we maintain a substantial safety stock. However, should this supply become inadequate, damaged, destroyed or unusable, we and Nuvo may not be able to qualify a second source.

If any of our third-party manufacturers cannot successfully manufacture material that conforms to our specifications and the applicable regulatory authorities’ strict regulatory requirements, or pass regulatory inspection, they will not be able to secure or maintain regulatory approval for the manufacturing facilities. For example, Pharmaceutics International, Inc., or PII, our manufacturer of BUPHENYL, was found to be non-compliant for cGMPs by the Medicines and Healthcare Products Regulatory Agency, or the MHRA, which could restrict PII from supplying BUPHENYL in the EU. However, BUPHENYL was considered to be critical to public health and as a result, the MHRA issued a certificate of cGMP compliance for PII, which is valid until June 30, 2018. Additionally, we provided PII with a notice of termination of our supply agreement for BUPHENYL, and are in the process of negotiating a new supply agreement with them. We consider our BUPHENYL inventory on hand to be sufficient to meet current and future commercial requirements.

Although we have entered into supply agreements for the manufacture and packaging of our medicines, our manufacturers may not perform as agreed or may terminate their agreements with us. We currently rely on single source suppliers for certain of our medicines. If our manufacturers terminate their agreements with us, we may have to qualify new back-up manufacturers. We rely on safety stock to mitigate the risk of our current suppliers electing to cease producing bulk drug medicine or ceasing to do so at acceptable prices and quality. However, we can provide no assurance that such safety stocks would be sufficient to avoid supply shortfalls in the event we have to identify and qualify new contract manufacturers.

Any delay or interruption in our ability to meet commercial demand for our medicines will result in the loss of potential revenues and could adversely affect our ability to gain market acceptance for these medicines. In addition, any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely.
Failures or difficulties faced at any level of our supply chain could materially adversely affect our business and delay or impede the development and commercialization of any of our medicines or medicine candidates and could have a material adverse effect on our business, results of operations, financial condition and prospects.

We have experienced growth and expanded the size of our organization substantially in connection with our acquisition transactions, and we may experience difficulties in managing this growth as well as potential additional growth in connection with future medicine, development program or company acquisitions.

As of December 31, 2013, we employed approximately 300 full-time employees as a consolidated entity. As of December 31, 2017, we employed approximately 1,010 full-time employees, including approximately 430 sales representatives, representing a substantial change to the size of our organization. We have also experienced, and may continue to experience, turnover of the sales representatives that we hired or will hire in connection with the commercialization of our medicines, requiring us to hire and train new sales representatives. Our management, personnel, systems and facilities currently in place may not be adequate to support this recent and anticipated growth, and we may not be able to retain or recruit qualified personnel in the future due to competition for personnel among pharmaceutical businesses.

As our commercialization plans and strategies continue to develop, we will need to continue to recruit and train sales and marketing personnel. Our ability to manage any future growth effectively may require us to, among other things:

- continue to manage and expand the sales and marketing efforts for our existing medicines;
- enhance our operational, financial and management controls, reporting systems and procedures;
- expand our international resources;
- successfully identify, recruit, hire, train, maintain, motivate and integrate additional employees;
- establish and increase our access to commercial supplies of our medicines and medicine candidates;
- expand our facilities and equipment; and
- manage our internal development efforts effectively while complying with our contractual obligations to licensors, licensees, contractors, collaborators, distributors and other third parties.

Our acquisitions have resulted in many changes, including significant changes in the corporate business and legal entity structure, the integration of other companies and their personnel with us, and changes in systems. We are currently undertaking numerous complex transition activities associated with our acquisitions, and we may encounter unexpected difficulties or incur unexpected costs, including:

- difficulties in achieving growth prospects from combining third-party businesses with our business;
- difficulties in the integration of operations and systems;
- difficulties in the assimilation of employees and corporate cultures;
- challenges in preparing financial statements and reporting timely results at both a statutory level for multiple entities and jurisdictions and at a consolidated level for public reporting;
- challenges in keeping existing physician prescribers and patients and increasing adoption of acquired medicines;
- difficulties in achieving anticipated cost savings, synergies, business opportunities and growth prospects from the combination;
- potential unknown liabilities, adverse consequences and unforeseen increased expenses associated with the transaction; and
- challenges in attracting and retaining key personnel.

If any of these factors impair our ability to continue to integrate our operations with those of any companies or businesses we acquire, we may not be able to realize the business opportunities, growth prospects and anticipated tax synergies from combining the businesses. In addition, we may be required to spend additional time or money on integration that otherwise would be spent on the development and expansion of our business.
We may not be successful in growing our commercial operations outside the United States, and could encounter other challenges in growing our commercial presence in Europe, including due to risks associated with political and economic instability, operating under different legal requirements and tax complexities. If we are unable to manage our commercial growth outside of the United States, our opportunities to expand sales in other countries will be limited or we may experience greater costs with respect to our ex-U.S. commercial operations.

We are also broadening our acquisition strategy to potentially include development-stage assets or programs, which entails additional risk to us. For example, if we are unable to identify programs that ultimately result in approved medicines, we may spend material amounts of our capital and other resources evaluating, acquiring and developing medicines that ultimately do not provide a return on our investment. We have less experience evaluating development-stage assets and may be at a disadvantage compared to other entities pursuing similar opportunities. Regardless, development-stage programs generally have a high rate of failure and we cannot guarantee that any such programs will ultimately be successful. We will also need to enhance our clinical development and regulatory functions to properly evaluate and develop earlier-stage opportunities, which may include recruiting personnel that are knowledgeable in therapeutic areas we have not yet pursued. If we are unable to acquire promising development-stage assets or eventually obtain marketing approval for them, we may not be able to create a meaningful pipeline of new medicines and eventually realize a return on our investments.

Our management may also have to divert a disproportionate amount of its attention away from day-to-day activities and toward managing these growth and integration activities. Our future financial performance and our ability to execute on our business plan will depend, in part, on our ability to effectively manage any future growth and our failure to effectively manage growth could have a material adverse effect on our business, results of operations, financial condition and prospects.

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

The biotechnology and pharmaceutical industries are intensely competitive. We have competitors both in the United States and international markets, including major multinational pharmaceutical companies, biotechnology companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff, experienced marketing and manufacturing organizations and well-established sales forces. Additional consolidations in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors and we will have to find new ways to compete and may have to potentially merge with or acquire other businesses to stay competitive. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors may succeed in developing, acquiring or in-licensing on an exclusive basis, medicines that are more effective and/or less costly than our medicines.

RAVICTI and BUPHENYL face competition from generic NaPBA tablets and powder in treating UCD. Lucane Pharma, or Lucane, is seeking approval via an Abbreviated New Drug Application, or ANDA, in the United States for taste-masked NaPBA. If this ANDA is approved, this formulation may also compete with RAVICTI and BUPHENYL in treating UCD in the United States. PROCYSBI faces competition from Cystagon (immediate-release cysteamine bitartrate capsules) for the treatment of cystinosis and Cystaran (cysteamine ophthalmic solution) for treatment of corneal crystal accumulation in patients with cystinosis. QUINSAIR faces competition from Tobramycin solution, which is available as a generic medicine for treatment of chronic Pseudomonas aeruginosa lung infections in patients with CF, TOBI Podhaler, Cayston and colistimethate. While KRYSTEXXA faces limited direct competition, a number of competitors have drugs in Phase 1 or Phase 2 trials. On December 22, 2015, AstraZeneca secured approval from the FDA for ZURAMPIC (lesinurad) 200mg tablets in combination with a xanthine oxidase inhibitor, or XOI, for the treatment of hyperuricemia associated with gout in patients who have not achieved target serum uric acid levels with an XOI alone. In April 2016, the U.S. rights to ZURAMPIC were licensed to Ironwood Pharmaceuticals Inc. Although ZURAMPIC is not a direct competitor because it has not been approved for refractory gout, this therapy could be used prior to use of KRYSTEXXA and if effective, could reduce the target patient population for KRYSTEXXA. PENNSAID 2% faces competition from generic versions of diclofenac sodium topical solutions that are priced significantly less than the price we charge for PENNSAID 2%. The generic version of Voltaren Gel is the market leader in the topical NSAID category. Legislation enacted in most states in the United States allows, or in some instances mandates, that a pharmacist dispense an available generic equivalent when filling a prescription for a branded medicine, in the absence of specific instructions from the prescribing physician. DUEXIS and VIMOVO face competition from other NSAIDs, including Celebrex®, marketed by Pfizer Inc., and celecoxib, a generic form of the medicine marketed by other pharmaceutical companies. DUEXIS and VIMOVO also face significant competition from the separate use of NSAIDs for pain relief and GI protective medications to reduce the risk of NSAID-induced upper GI ulcers. Both NSAIDs and GI protective medications are available in generic form and may be less expensive to use separately than DUEXIS or VIMOVO, despite such substitution being off-label in the case of DUEXIS and VIMOVO. Because pharmacists often have economic and other incentives to prescribe lower-cost generics, if physicians prescribe PENNSAID 2%, DUEXIS,
or VIMOVO, those prescriptions may not result in sales. If physicians do not complete prescriptions through our HorizonCares program or otherwise provide prescribing instructions prohibiting generic diclofenac sodium topical solutions as a substitute for PENNSAID 2%, the substitution of generic ibuprofen and famotidine separately as a substitution for DUEXIS or generic naproxen and branded Nexium® (esomeprazole) as a substitute for VIMOVO, sales of PENNSAID 2%, DUEXIS and VIMOVO may suffer despite any success we may have in promoting PENNSAID 2%, DUEXIS or VIMOVO to physicians. In addition, other medicine candidates that contain ibuprofen and famotidine in combination or naproxen and esomeprazole in combination, while not currently known or FDA approved, may be developed and compete with DUEXIS or VIMOVO, respectively, in the future.

We have also entered into settlement and license agreements that may allow certain of our competitors to sell generic versions of certain of our medicines in the United States, subject to the terms of such agreements. We granted (i) a non-exclusive license (that is only royalty-bearing in some circumstances) to manufacture and commercialize a generic version of DUEXIS in the United States after January 1, 2023, (ii) non-exclusive licenses to manufacture and commercialize generic versions of PENNSAID 2% in the United States after January 10, 2029, and (iii) a non-exclusive license to manufacture and commercialize a generic version of RAVICTI in the United States after December 23, 2022, or each earlier under certain circumstances.

Patent litigation is currently pending in the United States District Court for the Eastern District of Texas against Par Pharmaceutical, Inc., or Par Pharmaceutical, and in the United States District Court for the District of New Jersey against Par Pharmaceutical and against Lupin Limited and Lupin Pharmaceuticals, Inc., or collectively Lupin, who are each intending to market generic versions of RAVICTI prior to the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the RAVICTI cases and arise from Paragraph IV Patent Certification notice letters from each of Par Pharmaceutical and Lupin advising each had filed an ANDA with the FDA seeking approval to market a generic version of RAVICTI before the expiration of the patents-in-suit.

Patent litigation is currently pending in the United States District Court for the District of New Jersey against several companies intending to market a generic version of PENNSAID 2% prior to the expiration of certain of our patents listed in the Orange Book, or the Orange Book. These cases are collectively known as the PENNSAID 2% cases, and involve the following sets of defendants: (i) Actavis Laboratories UT, Inc., formerly known as Watson Laboratories, Inc., Actavis, Inc. and Actavis plc, or collectively Actavis; and (ii) Lupin. These cases arise from Paragraph IV Patent Certification notice letters from each of Actavis and Lupin advising each had filed an ANDA with the FDA seeking approval to market a generic version of PENNSAID 2% before the expiration of the patents-in-suit.

Patent litigation is currently pending in the United States District Court for the District of New Jersey against several companies intending to market a generic version of VIMOVO before the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the VIMOVO cases, and involve the following sets of defendants: (i) Dr. Reddy’s Laboratories Inc. and Dr. Reddy’s Laboratories Ltd., or collectively Dr. Reddy’s; (ii) Lupin; and (iii) Mylan Pharmaceuticals Inc., Mylan Laboratories Limited, and Mylan Inc., or collectively Mylan. Patent litigation is currently pending before the Court of Appeals for the Federal Circuit against a fourth generic company, Teva Pharmaceuticals Industries Limited (formerly known as Actavis Laboratories FL, Inc., which itself was formerly known as Watson Laboratories, Inc. – Florida) and Actavis Pharma, Inc., or collectively Actavis Pharma. The cases arise from Paragraph IV Patent Certification notice letters from each of Dr. Reddy’s, Lupin, Mylan and Actavis Pharma advising each had filed an ANDA with the FDA seeking approval to market generic versions of VIMOVO before the expiration of the patents-in-suit.

If we are unsuccessful in any of the VIMOVO cases or PENNSAID 2% cases, we will likely face generic competition with respect to VIMOVO and/or PENNSAID 2% and sales of VIMOVO and/or PENNSAID 2% will be substantially harmed. If we are unsuccessful in any of the RAVICTI cases, RAVICTI would likely face generic competition in the United States when its orphan exclusivity expires (currently scheduled to occur in February 2020), and its sales would likely materially decline.

ACTIMMUNE is the only medicine currently approved by the FDA specifically for the treatment of CGD and SMO. While there are additional or alternative approaches used to treat patients with CGD and SMO, there are currently no medicines on the market that compete directly with ACTIMMUNE. A widely accepted protocol to treat CGD in the United States is the use of concomitant “triple prophylactic therapy” comprising ACTIMMUNE, an oral antibiotic agent and an oral antifungal agent. However, the FDA-approved labeling for ACTIMMUNE does not discuss this “triple prophylactic therapy,” and physicians may choose to prescribe one or both of the other modalities in the absence of ACTIMMUNE. Because of the immediate and life-threatening nature of SMO, the preferred treatment option for SMO is often to have the
patient undergo a bone marrow transplant which, if successful, will likely obviate the need for further use of ACTIMMUNE in that patient. Likewise, the use of bone marrow transplants in the treatment of patients with CGD is becoming more prevalent, which could have a material adverse effect on sales of ACTIMMUNE and its profitability. We are aware of a number of research programs investigating the potential of gene therapy as a possible cure for CGD. Additionally, other companies may be pursuing the development of medicines and treatments that target the same diseases and conditions which ACTIMMUNE is currently approved to treat. As a result, it is possible that our competitors may develop new medicines that manage CGD or SMO more effectively, cost less or possibly even cure CGD or SMO. In addition, U.S. healthcare legislation passed in March 2010 authorized the FDA to approve biological products, known as biosimilars, that are similar to or interchangeable with previously approved biological products, like ACTIMMUNE, based upon potentially abbreviated data packages. Biosimilars are likely to be sold at substantially lower prices than branded medicines because the biosimilar manufacturer would not have to recoup the research and development and marketing costs associated with the branded medicine. Though we are not currently aware of any biosimilar under development, the development and commercialization of any competing medicines or the discovery of any new alternative treatment for CGD or SMO could have a material adverse effect on sales of ACTIMMUNE and its profitability.

BUPHENYL’s composition of matter patent protection and orphan drug exclusivity have expired. Because BUPHENYL has no regulatory exclusivity or listed patents, there is nothing to prevent a competitor from submitting an ANDA for a generic version of BUPHENYL and receiving FDA approval. Generic versions of BUPHENYL to date have been priced at a discount relative to BUPHENYL or RAVICTI, and physicians, patients, or payers may decide that this less expensive alternative is preferable to BUPHENYL and RAVICTI. If this occurs, sales of BUPHENYL and/or RAVICTI could be materially reduced, but we would nevertheless be required to make royalty payments to Ucyclyd Pharma, Inc., or Ucyclyd, and another external party, at the same royalty rates. While Ucyclyd and its affiliates are generally contractually prohibited from developing or commercializing new medicines, anywhere in the world, for the treatment of UCD or hepatic encephalopathy, or HE, which are chemically similar to RAVICTI, they may still develop and commercialize medicines that compete with RAVICTI. For example, medicines approved for indications other than UCD and HE may still compete with RAVICTI if physicians prescribe such medicines off-label for UCD or HE. We are also aware that Orphan Europe SARL, or Orphan Europe, is conducting a clinical trial of caramisic acid to treat some of the UCD enzyme deficiencies for which RAVICTI was approved. Promethera Biosciences SA has successfully completed Phase I/II trials of its cell-based therapy for the treatment of UCD and plans to conduct a Phase IIb/III clinical trial. Carglumic acid is approved for maintenance therapy for chronic hyperammonemia and to treat hyperammonemic crises in N-acetylglutamate synthase deficiency, a rare UCD subtype, and is sold under the name Carbavil. If the results of this trial are successful and Orphan Europe is able to complete development and obtain approval of Carbavil to treat additional UCD enzyme deficiencies, RAVICTI would face additional competition from this compound.

The availability and price of our competitors’ medicines could limit the demand, and the price we are able to charge, for our medicines. We will not successfully execute on our business objectives if the market acceptance of our medicines is inhibited by price competition, if physicians are reluctant to switch from existing medicines to our medicines, or if physicians switch to other new medicines or choose to reserve our medicines for use in limited patient populations.

In addition, established pharmaceutical companies may invest heavily to accelerate discovery and development of novel compounds or to acquire novel compounds that could make our medicines obsolete. Our ability to compete successfully with these companies and other potential competitors will depend largely on our ability to leverage our experience in clinical, regulatory and commercial development to:

- develop and acquire medicines that are superior to other medicines in the market;
- attract qualified clinical, regulatory, and sales and marketing personnel;
- obtain patent and/or other proprietary protection for our medicines and technologies;
- obtain required regulatory approvals; and
- successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new medicine candidates.
If we are unable to maintain or realize the benefits of orphan drug exclusivity, we may face increased competition with respect to certain of our medicines.

Under the Orphan Drug Act of 1983, the FDA may designate a medicine as an orphan drug if it is a drug intended to treat a rare disease or condition affecting fewer than 200,000 people in the United States. A company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years from the date of its approval. RAVICTI and PROCYSBI have been granted orphan drug exclusivity by the FDA, which we expect will provide orphan drug marketing exclusivity in the United States until February 2020 and December 2020, respectively, with exclusivity for PROCYSBI extending to 2022 for patients ages one to six years. In addition, teprotumumab has been granted orphan drug designation and, if approved by the FDA, would be eligible for seven years of marketing exclusivity in the United States following such approval. However, despite orphan drug exclusivity, the FDA can still approve another drug containing the same active ingredient and used for the same orphan indication if it determines that a subsequent drug is safer, more effective or makes a major contribution to patient care, and orphan exclusivity can be lost if the orphan drug manufacturer is unable to ensure that a sufficient quantity of the orphan drug is available to meet the needs of patients with the rare disease or condition. Orphan drug exclusivity may also be lost if the FDA later determines that the initial request for designation was materially defective. In addition, orphan drug exclusivity does not prevent the FDA from approving competing drugs for the same or similar indication containing a different active ingredient. If orphan drug exclusivity is lost and we were unable to successfully enforce any remaining patents covering RAVICTI or PROCYSBI, we could be subject to generic competition and revenues from RAVICTI or PROCYSBI could decrease materially. In addition, if a subsequent drug is approved for marketing for the same or a similar indication as RAVICTI or PROCYSBI despite orphan drug exclusivity, we may face increased competition and lose market share with respect to these medicines. RAVICTI will benefit from a period of 10 years of orphan market exclusivity in the EU, concurrently applied to each of the approved six sub-types of the UCDs. This will run concurrently with its marketing exclusivity status.

Our business operations may subject us to numerous commercial disputes, claims and/or lawsuits and such litigation may be costly and time-consuming and could materially and adversely impact our financial position and results of operations.

Operating in the pharmaceutical industry, particularly the commercialization of medicines, involves numerous commercial relationships, complex contractual arrangements, uncertain intellectual property rights, potential product liability and other aspects that create heightened risks of disputes, claims and lawsuits. In particular, we may face claims related to the safety of our medicines, intellectual property matters, employment matters, tax matters, commercial disputes, competition, sales and marketing practices, environmental matters, personal injury, insurance coverage and acquisition or divestiture-related matters. For example, the active ingredient in QUINSAIR, levofloxacin, is currently subject to product liability claims. Any commercial dispute, claim or lawsuit may divert management’s attention away from our business, we may incur significant expenses in addressing or defending any commercial dispute, claim or lawsuit, and we may be required to pay damage awards or settlements or become subject to equitable remedies that could adversely affect our operations and financial results.

We are currently in litigation with multiple generic drug manufacturers regarding intellectual property infringement. For example, we are currently involved in Hatch Waxman litigation with generic drug manufacturers related to, RAVICTI, PENNSAID 2% and VIMOVO.

Similarly, from time to time we are involved in disputes with distributors, PBMs and licensing partners regarding our rights and performance of obligations under contractual arrangements. For example, we were previously in litigation with Express Scripts related to alleged breach of contract claims.

Litigation related to these disputes may be costly and time-consuming and could materially and adversely impact our financial position and results of operations if resolved against us.
A variety of risks associated with operating our business and marketing our medicines internationally could materially adversely affect our business.

In addition to our U.S. operations, we have operations in Ireland, Bermuda, the Grand Duchy of Luxembourg, or Luxembourg, Switzerland, Germany, Canada, the Grand Cayman Islands and in Israel (through Andromeda Biotech Ltd). RAVICTI received marketing authorization from Health Canada, or HC, in March 2016 and marketing approval in the EU in November 2015. We launched RAVICTI in Canada in November 2016 and RAVICTI became available in Europe in the fourth quarter of 2017 through our partnership with SOBI. PROCYSBI received marketing authorization from HC in June 2017 and we launched PROCYSBI in Canada in October 2017. BUPHENYL is currently marketed in various territories outside the United States by third-party distributors. QUINSAIR received marketing authorization from HC in June 2015 and we launched QUINSAIR in Canada in December 2016. We face risks associated with our international operations, including possible unfavorable regulatory, pricing and reimbursement, political, tax and labor conditions, which could harm our business. We are subject to numerous risks associated with international business activities, including:

- compliance with differing or unexpected regulatory requirements for our medicines;
- compliance with Irish laws and the maintenance of our Irish tax residency with respect to our overall corporate structure and administrative operations, including the need to generally hold meetings of our board of directors and make decisions in Ireland, which may make certain corporate actions more cumbersome, costly and time-consuming;
- difficulties in staffing and managing foreign operations;
- in certain circumstances, including with respect to the commercialization of RAVICTI in select countries throughout Europe, commercialization of BUPHENYL in select countries throughout Europe, the Middle East, and the Asia-Pacific region, commercialization of LODOTRA in Europe and certain Asian, Latin American, Middle Eastern and African countries, and commercialization of DUEXIS in Latin America, increased dependence on the commercialization efforts and regulatory compliance of third-party distributors or strategic partners;
- compliance with German laws with respect to our Horizon Pharma GmbH subsidiary through which Horizon Pharma Switzerland GmbH conducts most of its European operations;
- foreign government taxes, regulations and permit requirements;
- U.S. and foreign government tariffs, trade restrictions, price and exchange controls and other regulatory requirements;
- anti-corruption laws, including the Foreign Corrupt Practices Act, or the FCPA;
- economic weakness, including inflation, natural disasters, war, events of terrorism or political instability in particular foreign countries;
- fluctuations in currency exchange rates, which could result in increased operating expenses and reduced revenues, and other obligations related to doing business in another country;
- compliance with tax, employment, immigration and labor laws, regulations and restrictions for employees living or traveling abroad;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- changes in diplomatic and trade relationships; and
- challenges in enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States.
Our business activities outside of the United States are subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate, including the United Kingdom’s Bribery Act 2010, or the U.K. Bribery Act. The FCPA and similar anti-corruption laws generally prohibit offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to non-U.S. government officials in order to improperly influence any act or decision, secure any other improper advantage, or obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the company and to devise and maintain an adequate system of internal accounting controls. The U.K. Bribery Act prohibits giving, offering, or promising bribes to any person, including non-United Kingdom, or U.K., government officials and private persons, as well as requesting, agreeing to receive, or accepting bribes from any person. In addition, under the U.K. Bribery Act, companies which carry on a business or part of a business in the U.K. may be held liable for bribes given, offered or promised to any person, including non-U.K. government officials and private persons, by employees and persons associated with the company in order to obtain or retain business or a business advantage for the company. Liability is strict, with no element of a corrupt state of mind, but a defense of having in place adequate procedures designed to prevent bribery is available. Furthermore, under the U.K. Bribery Act there is no exception for facilitation payments. As described above, our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, any dealings with these prescribers and purchasers may be subject to regulation under the FCPA. Recently the SEC and the U.S. Department of Justice have increased their FCPA enforcement activities with respect to pharmaceutical companies. In addition, under the Dodd–Frank Wall Street Reform and Consumer Protection Act, private individuals who report to the SEC original information that leads to successful enforcement actions may be eligible for a monetary award. We are engaged in ongoing efforts that are designed to ensure our compliance with these laws, including due diligence, training, policies, procedures and internal controls. However, there is no certainty that all employees and third-party business partners (including our distributors, wholesalers, agents, contractors, and other partners) will comply with anti-bribery laws. In particular, we do not control the actions of manufacturers and other third-party agents, although we may be liable for their actions. Violation of these laws may result in civil or criminal sanctions, which could include monetary fines, criminal penalties, and disgorgement of past profits, which could have a material adverse impact on our business and financial condition.

These and other risks associated with our international operations may materially adversely affect our business, financial condition and results of operations.

If we fail to develop or acquire other medicine candidates or medicines, our business and prospects would be limited.

A key element of our strategy is to develop or acquire and commercialize a portfolio of other medicines or medicine candidates in addition to our current medicines, through business or medicine acquisitions. Because we do not engage in proprietary drug discovery, the success of this strategy depends in large part upon the combination of our regulatory, development and commercial capabilities and expertise and our ability to identify, select and acquire approved or clinically enabled medicine candidates for therapeutic indications that complement or augment our current medicines, or that otherwise fit into our development or strategic plans on terms that are acceptable to us. Identifying, selecting and acquiring promising medicines or medicine candidates requires substantial technical, financial and human resources expertise. Efforts to do so may not result in the actual acquisition or license of a particular medicine or medicine candidate, potentially resulting in a diversion of our management’s time and the expenditure of our resources with no resulting benefit. If we are unable to identify, select and acquire suitable medicines or medicine candidates from third parties or acquire businesses at valuations and on other terms acceptable to us, or if we are unable to raise capital required to acquire businesses or new medicines, our business and prospects will be limited.

Moreover, any medicine candidate we acquire may require additional, time-consuming development or regulatory efforts prior to commercial sale or prior to expansion into other indications, including pre-clinical studies if applicable, and extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All medicine candidates are prone to the risk of failure that is inherent in pharmaceutical medicine development, including the possibility that the medicine candidate will not be shown to be sufficiently safe and/or effective for approval by regulatory authorities. In addition, we cannot assure that any such medicines that are approved will be manufactured or produced economically, successfully commercialized or widely accepted in the marketplace or be more effective or desired than other commercially available alternatives.
In addition, if we fail to successfully commercialize and further develop our medicines, there is a greater likelihood that we will fail to successfully develop a pipeline of other medicine candidates to follow our existing medicines or be able to acquire other medicines to expand our existing portfolio, and our business and prospects would be harmed.

Our prior medicine and company acquisitions and any other strategic transactions that we may pursue in the future could have a variety of negative consequences, and we may not realize the benefits of such transactions or attempts to engage in such transactions.

We have completed multiple medicine and company acquisitions and our strategy is to engage in additional strategic transactions with third parties, such as acquisitions of companies or divisions of companies and asset purchases of medicines, medicine candidates or technologies that we believe will complement or augment our existing business. We may also consider a variety of other business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and other investments. Any such transaction may require us to incur non-recurring and other charges, increase our near and long-term expenditures, pose significant integration challenges, create additional tax, legal, accounting and operational complexities in our business, require additional expertise, result in dilution to our existing shareholders and disrupt our management and business, which could harm our operations and financial results. For example, we assumed responsibility for the existing patent infringement litigation with respect to RAVICTI upon the closing of our acquisition of Hyperion Therapeutics, Inc., or Hyperion, and have assumed responsibility for completing post-marketing clinical trials of RAVICTI that are required by the FDA and are ongoing. We expect that the RAVICTI litigation will result in substantial on-going expenses and potential distractions to our management team.

In connection with our acquisition of Raptor, we assumed contractual obligations under agreements with Tripex Pharmaceuticals, LLC, or Tripex, and PARI Pharma GmbH, or PARI, related to QUINSAIR. Under the agreement with Tripex, we are required to pursue commercially reasonable efforts to initiate, and subsequently to complete, an additional clinical trial of QUINSAIR in a non-CF patient population within a specified period of time and an obligation to progress toward submitting an NDA for approval of QUINSAIR in the United States for use in all or part of the CF patient population. These obligations are subject to certain exceptions due to, for example, manufacturing delays not under our control, or delays caused by the FDA. If we fail to properly exercise such efforts to initiate and complete an appropriate clinical trial, or fail to submit an NDA for U.S. approval in the CF patient population, during the time periods specified in the agreement, we may be subject to various claims by Tripex and parties affiliated with Tripex. In addition, if we do not spend a minimum amount on QUINSAIR development in each of the three years following our acquisition of Raptor, we may also be obligated to pre-pay a milestone payment related to initiating a clinical trial for QUINSAIR in a non-CF indication. During October 2017, we triggered a milestone payment under this agreement, and we paid Tripex $20.0 million in November 2017. Under the license agreement with PARI, we are required to comply with diligence milestones related to development and commercialization of QUINSAIR in the United States and to spend a specified minimum amount per year on development activities in the United States until submission of the NDA for QUINSAIR in the United States. If we do not comply with these obligations, our licenses to certain intellectual property related to QUINSAIR may become non-exclusive in the United States or could be terminated. We are also subject to contractual obligations under an amended and restated license agreement with the Regents of the University of California, San Diego, or UCSD, with respect to PROCYSBI, including obligations to consider engaging in the development of PROCYSBI for the treatment of non-alcoholic steatohepatitis, or NASH, and related diligence obligations if we undertake such development. Under the amended and restated license agreement with UCSD, we also are subject to diligence obligations to identify a third party to undertake development of PROCYSBI for the treatment of Huntington’s disease. To the extent that we fail to perform the diligence obligations under the agreement, UCSD may, with respect to such indication, terminate the license or otherwise cause the license to become non-exclusive. If one or more of these licenses was terminated, we would have no further right to use or exploit the related intellectual property, which would limit our ability to develop PROCYSBI or QUINSAIR in other indications, and could impact our ability to continue commercializing PROCYSBI or QUINSAIR in their approved indications. In connection with our acquisition of the U.S. rights to VIMOVO, we assumed primary responsibility for the existing patent infringement litigation with respect to VIMOVO, and have also agreed to reimburse certain legal expenses of Aralez Pharmaceuticals Inc. with respect to its continued involvement in such litigation.

We face significant competition in seeking appropriate strategic transaction opportunities and the negotiation process for any strategic transaction can be time-consuming and complex. In addition, we may not be successful in our efforts to engage in certain strategic transactions because our financial resources may be insufficient and/or third parties may not view our commercial and development capabilities as being adequate. We may not be able to expand our business or realize our strategic goals if we do not have sufficient funding or cannot borrow or raise additional capital. There is no assurance that following any of our recent acquisition transactions or any other strategic transaction, we will achieve the anticipated revenues, net income or other benefits that we believe justify such transactions. In addition, any failures or delays in entering into strategic transactions anticipated by analysts or the investment community could seriously harm our consolidated business, financial condition, results of operations or cash flow.
We may not be able to successfully maintain our current advantageous tax status and resulting tax rates, which could adversely affect our business and financial condition, results of operations and growth prospects.

Our parent company is incorporated in Ireland and has subsidiaries maintained in multiple jurisdictions, including Ireland, the United States, Switzerland, Luxembourg, Germany, Canada, the Grand Cayman Islands and Bermuda. Prior to our merger transaction in September 2014 with Vidara Therapeutics International Public Limited Company, or Vidara, and such transaction, the Vidara Merger, Vidara was able to achieve a favorable tax rate through the performance of certain functions and ownership of certain assets in tax-efficient jurisdictions, including Ireland and Bermuda, together with intra-group service and transfer pricing agreements, each on an arm’s length basis. We are continuing a substantially similar structure and arrangements.

Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including passage of the Tax Act (as defined below), changes to the tax laws of jurisdictions that we operate in other than the United States made in response to the Tax Act, changes in the mix of our profitability from jurisdiction to jurisdiction, future changes to U.S. tax law (including for example, the enactment of new U.S. tax treaties or changes to existing tax treaties), and our inability to secure or sustain acceptable agreements with tax authorities (if applicable). Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations. Taxing authorities, such as the U.S. Internal Revenue Service, or IRS, actively audit and otherwise challenge these types of arrangements, and have done so in the pharmaceutical industry. We expect that these challenges will continue as a result of the recent increase in scrutiny and political attention on corporate tax structures. The IRS may challenge our structure and transfer pricing arrangements through an audit or lawsuit. Responding to or defending such a challenge could be expensive and consume time and other resources, and divert management’s time and focus from operating our business. We cannot predict whether taxing authorities will conduct an audit or file a lawsuit challenging this structure, the cost involved in responding to any such audit or lawsuit, or the outcome. If we are unsuccessful in defending such a challenge, we may be required to pay taxes for prior periods, interest, fines or penalties, and may be obligated to pay increased taxes in the future, any of which could require us to reduce our operating expenses, decrease efforts in support of our medicines or seek to raise additional funds, all of which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

The IRS may not agree with our conclusion that our parent company should be treated as a foreign corporation for U.S. federal income tax purposes following the combination of the businesses of Horizon Pharma, Inc., or HPI, and Vidara.

Although our parent company is incorporated in Ireland, the IRS may assert that it should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended, or the Code. A corporation is generally considered a tax resident in the jurisdiction of its organization or incorporation for U.S. federal income tax purposes. Because our parent company is an Irish incorporated entity, it would generally be classified as a foreign corporation (and, therefore, a non-U.S. tax resident) under these general rules. Section 7874 of the Code provides an exception pursuant to which a foreign incorporated entity may, in certain circumstances, be treated as a U.S. corporation for U.S. federal income tax purposes.

Under Section 7874 of the Code, a foreign corporation will be treated as a U.S. corporation for U.S. federal tax purposes if, due to an acquisition of a U.S. corporation, at least 80 percent of its stock (by vote or value) is held by former stockholders of the acquired U.S. corporation. We believe that we should be treated as a foreign corporation because the former stockholders of HPI owned (within the meaning of Section 7874 of the Code) less than 80 percent (by both vote and value) of the combined entity’s stock immediately after the Vidara Merger. However, there can be no assurance that there will not exist in the future a subsequent change in the facts or in law which might cause our parent company to be treated as a domestic corporation for U.S. federal income tax purposes, including with retroactive effect.

Further, there can be no assurance that the IRS will agree with the position that the ownership test was satisfied. If our parent company were unable to be treated as a foreign corporation for U.S. federal income tax purposes, one of our significant strategic reasons for completing the Vidara Merger would be nullified and we may not be able to recoup the significant investment in completing the transaction.

Future changes to U.S. and non-U.S. tax laws could materially adversely affect our company.

Under current law, we expect our parent company to be treated as a foreign corporation for U.S. federal income tax purposes. However, changes to the rules in Section 7874 of the Code or regulations promulgated thereunder or other guidance issued by the U.S. Department of the Treasury, or the U.S. Treasury, or the IRS could adversely affect our parent company’s status as a foreign corporation for U.S. federal income tax purposes or the taxation of transactions between members of our group, and any such changes could have prospective or retroactive application. If our parent company is treated as a domestic corporation, more of our income will be taxed by the United States which may substantially increase our effective tax rate.
On April 4, 2016, the U.S. Treasury and the IRS issued temporary regulations and in January 2017 issued final regulations that expand the scope of transactions subject to the rules designed to eliminate the U.S. tax benefits of so-called inversion transactions. Under the temporary regulations, the former stockholders of U.S. corporations acquired by a foreign corporation within thirty-six months of the signing date of the last such acquisition are aggregated for the purpose of determining whether the foreign corporation will be treated as a domestic corporation for U.S. federal tax purposes because at least 80 percent of the stock of the foreign corporation is held by former stockholders of a U.S. corporation. The requirement to aggregate the stockholders in such acquisitions for the purpose of determining whether the 80 percent threshold is met may limit our ability to use our stock to acquire U.S. corporations or their assets in the future. In April 2017, the President of the United States issued an executive order (Executive Order 13789) requesting that the Secretary of the United States Treasury review every significant regulation issued over the year and a half period beginning on January 1, 2016, including certain inversion regulations. While the Secretary of the United States Treasury completed that review in 2017 and made certain recommendations with respect to certain regulations that were deemed to impose an undue financial burden, add undue complexity, or exceed statutory authority, at present, it is unclear what actions may be taken as a result of the U.S. Treasury’s recommendations or what impact any such actions may have on us.

The U.S. Treasury and the IRS also issued proposed regulations on April 4, 2016 as well as final and temporary regulations in October 2016 that address whether an interest in a related corporation is debt or equity for United States federal income tax purposes. These regulations could result in recharacterization of inter-company debt to equity for certain of our inter-company debt and such a recharacterization could result in more of our future income being taxed by the United States and thereby increase our effective tax rate. We are continuing to evaluate the impact that these regulations may have and will reflect such impact on our financial statements as required.

In addition, the Organization for Economic Co-operation and Development released its Base Erosion and Profit Shifting project final report on October 5, 2015. This report provides the basis for international standards for corporate taxation that are designed to prevent, among other things, the artificial shifting of income to tax havens and low-tax jurisdictions, the erosion of the tax base through interest deductions on inter-company debt and the artificial avoidance of permanent establishments (i.e., tax nexus with a jurisdiction). Legislation to adopt these standards has been enacted or is currently under consideration in a number of jurisdictions. On June 7, 2017, several countries, including many countries that we operate and have subsidiaries in, participated in the signing ceremony adopting the Organization for Economic Co-operation and Development’s Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting, commonly referred to as the MLI. The MLI is intended to provide countries with a tool through which they can amend their income tax treaties. Although not yet effective, the MLI may modify thousands of tax treaties making it more difficult for us to obtain advantageous tax-treaty benefits. As a result, our income may be taxed in jurisdictions where it is not currently taxed and at higher rates of tax than it is currently taxed, which may substantially increase our effective tax rate.

On July 12, 2016, the Anti-Tax Avoidance Directive, or ATAD, was formally adopted by the Economic and Financial Affairs Council of the European Union, or EU. The stated objective of the ATAD is to provide for the effective and swift coordinated implementation of anti-base erosion and profit shifting measures at EU level. Like all Directives, the ATAD is binding as to the results it aims to achieve though EU Member States are free to choose the form and method of achieving those results. In addition, the ATAD contains a number of optional provisions that present an element of choice as to how it will be implemented into law. Elements of the ATAD must be transposed into Irish law by January 1, 2019, and although it is difficult at this stage to determine with precision the impact that the ATAD will have in light of its optional provisions, its implementation could materially increase our effective tax rate.

On December 22, 2017, new legislation was signed into law (H.R. 1, “An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018”, informally titled the Tax Cuts and Jobs Act, or the Tax Act) that significantly revises the Code. The Tax Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), implementation of a “base erosion anti-abuse tax” which requires U.S. corporations to make an alternative determination of taxable income without regard to tax deductions for certain payments to affiliates, taxation of certain non-U.S. corporations’ earnings considered to be “global intangible low taxed income”, or GILTI, repeal of the alternative minimum tax, or AMT, for corporations and changes to a taxpayer’s ability to either utilize or refund the AMT credits previously generated, changes to the limitation on deductions for certain executive compensation particularly with respect to the removal of the previously allowed performance based compensation exception, changes in the attribution rules relating to shareholders of certain “controlled foreign corporations”, limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one-time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, elimination of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing
many business deductions and credits. Notwithstanding the reduction in the U.S. corporate income tax rate, the overall impact of the Tax Act is uncertain and our business and financial condition could be adversely affected. The impact of the Tax Act on holders of our ordinary shares is also uncertain and could be adverse. For example, recent changes in federal income tax law resulting in additional taxes owed by U.S. shareholders under the new GILTI tax rules or related to “controlled foreign corporations” may discourage U.S. investors from owning or acquiring 10% or greater of our outstanding ordinary shares, which other shareholders may have viewed as beneficial or may otherwise negatively impact the trading price of our ordinary shares. We are unable to predict what federal tax law may be proposed or enacted in the future or what effect such changes would have on our business, but such changes, to the extent they are brought into tax legislation, regulations, policies or practices, could affect our effective tax rates in the future in countries where we have operations and have an adverse effect on our overall tax rate in the future, along with increasing the complexity, burden and cost of tax compliance. We urge our shareholders to consult with their legal and tax advisors with respect to this legislation and the potential tax consequences of investing in or holding our ordinary shares.

If we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceuticals industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, sales and marketing and scientific and medical personnel, including our executive officers composed of our Chairman, President and Chief Executive Officer, Timothy P. Walbert; our Executive Vice President, Chief Business Officer, Robert F. Carey; our Executive Vice President, Chief Financial Officer, Paul W. Hoelscher; our Executive Vice President, Chief Administrative Officer, Barry J. Moze; our Executive Vice President, Chief Medical Officer, Jeffrey W. Sherman, M.D., FACP; our Executive Vice President, Head of Research and Development and Chief Scientific Officer, Shao-Lee Lin, M.D., Ph.D; our Executive Vice President, Chief Human Resources Officer, Irina P. Konstantinovskaya; our Executive Vice President, General Counsel, Brian K. Beeler; our Executive Vice President, Primary Care Business Unit, George P. Hampton; our Executive Vice President, Technical Operations, Michael A. DesJardin; our Senior Vice President, Orphan Business Unit, Eric B. Mosbrooker and our Senior Vice President, Rheumatology Business Unit, Vikram Karnani. In order to retain valuable employees at our company, in addition to salary and cash incentives, we provide a mix of performance stock units, or PSUs, stock options and restricted stock units, or RSUs, that vest over time. The value to employees of PSUs, stock options and RSUs will be significantly affected by movements in our share price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies.

Despite our efforts to retain valuable employees, members of our management, sales and marketing, regulatory affairs, clinical development, medical affairs and development teams may terminate their employment with us on short notice. Although we have written employment arrangements with all of our employees, these employment arrangements generally provide for at-will employment, which means that our employees can leave our employment at any time, with or without notice. The loss of the services of any of our executive officers or other key employees and our inability to find suitable replacements could potentially harm our business, financial condition and prospects. We do not maintain “key man” insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level, and senior managers as well as junior, mid-level, and senior sales and marketing and scientific and medical personnel.

Many of the other biotechnology and pharmaceutical companies with whom we compete for qualified personnel have greater financial and other resources, different risk profiles and longer histories in the industry than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high quality candidates than that which we have to offer. If we are unable to continue to attract and retain high quality personnel, the rate and success at which we can develop and commercialize medicines and medicine candidates will be limited.
We are, with respect to our current medicines, and will be, with respect to any other medicine or medicine candidate for which we obtain FDA or EMA approval or which we acquire, subject to ongoing FDA or EMA obligations and continued regulatory review, which may result in significant additional expense. Additionally, any other medicine candidate, if approved by the FDA or the EMA, could be subject to labeling and other restrictions and market withdrawal, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our medicines.

Any regulatory approvals that we obtain for our medicine candidates may also be subject to limitations on the approved indications for which the medicine may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the medicine candidate. In addition, with respect to our current FDA-approved medicines (and with respect to our medicine candidates, if approved), the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the medicine are subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs, GCPs, international council for harmonization, or ICH, guidelines and GLPs, which are regulations and guidelines enforced by the FDA for all of our medicines in clinical development, for any clinical trials that we conduct post-approval. With respect to RAVICTI, the FDA imposed several post-marketing requirements and a post-marketing commitment, which include remaining obligations to conduct studies in UCD patients during the first two months of life and from two months to two years of age, including a study of the pharmacokinetics in both age groups, and a randomized study to determine the safety and efficacy in UCD patients who are treatment naive to phenylbutyrate treatment. Although we are committed to carrying out these commitments, there are challenges in conducting studies in pediatric patients including availability of study sites, patients, and obtaining parental informed consent. In May 2017, the FDA approved our supplemental new drug application, or sNDA, for RAVICTI to expand the age range for chronic management of UCDs from two years of age and older to two months of age and older. We are in the process of seeking approval for a label expansion for RAVICTI, with assessments in progress studying the use of RAVICTI in patients from birth to two months.

In addition, the FDA closely regulates the marketing and promotion of drugs and biologics. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturers’ promotional communications. A significant number of pharmaceutical companies have been the target of inquiries and investigations by various U.S. federal and state regulatory, investigative, prosecutorial and administrative entities in connection with the promotion of medicines for off-label uses and other sales practices. These investigations have alleged violations of various U.S. federal and state laws and regulations, including claims asserting antitrust violations, violations of the Food, Drug and Cosmetic Act, false claims laws, the Prescription Drug Marketing Act, anti-kickback laws, and other alleged violations in connection with the promotion of medicines for unapproved uses, pricing and Medicare and/or Medicaid reimbursement. While Congress has recently considered legislation that would modify or eliminate restrictions for off-label promotion, we do not have sufficient information to anticipate if the current regulatory environment will change.

Later discovery of previously unknown problems with a medicine, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

• restrictions on the marketing or manufacturing of the medicine, withdrawal of the medicine from the market, or voluntary or mandatory medicine recalls;
• refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners, or suspension or revocation of medicine license approvals;
• medicine seizure or detention, or refusal to permit the import or export of medicines; and
• injunctions, the imposition of civil or criminal penalties, or exclusion, debarment or suspension from government healthcare programs.

If we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would have a material adverse effect on our business, results of operations, financial condition and prospects.
We are subject to federal, state and foreign healthcare laws and regulations and implementation or changes to such healthcare laws and regulations could adversely affect our business and results of operations.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to regulate and to change the healthcare system in ways that could affect our ability to sell our medicines profitably. In the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs (including a number of proposals pertaining to prescription drugs, specifically), improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

If we are found to be in violation of any of these laws or any other federal or state regulations, we may be subject to civil and/or criminal penalties, damages, fines, exclusion, additional reporting requirements and/or oversight from federal health care programs and the restructuring of our operations. Any of these could have a material adverse effect on our business and financial results. Since many of these laws have not been fully interpreted by the courts, there is an increased risk that we may be found in violation of one or more of their provisions. Any action against us for violation of these laws, even if we ultimately are successful in our defense, will cause us to incur significant legal expenses and divert our management’s attention away from the operation of our business.

In January 2017, the United States House of Representatives and Senate passed legislation, the concurrent budget resolution for fiscal year 2017, which initiates actions that would repeal certain aspects of the ACA. Further, on January 20, 2017, U.S. President Donald Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA, to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. In May 2017, following the passage of the budget resolution for fiscal year 2017, the U.S. House of Representatives passed legislation known as the American Health Care Act, which, if enacted, would have amended and repealed significant portions of the ACA. The U.S. Senate considered but did not adopt other legislation to amend and/or replace elements of the ACA and authority to act under the fiscal year 2017 budget resolution expired on September 30, 2017. However, on October 12, 2017, U.S. President Donald Trump signed another Executive Order directing certain federal agencies to propose regulations or guidelines to permit small businesses to form association health plans, expand the availability of short-term, limited duration insurance, and expand the use of health reimbursement arrangements, which may circumvent some of the requirements for health insurance mandated by the ACA. In addition, citing legal guidance from the U.S. Department of Justice and the HHS, the Trump administration has concluded that cost-sharing reduction, or CSR, payments to insurance companies required under the ACA have not received necessary appropriations from Congress and announced that it will discontinue these payments immediately until such appropriations are made. The loss of the CSR payments is expected to increase premiums on certain policies issued by qualified health plans under the ACA. Finally, while Congress has not passed comprehensive ACA repeal or replace legislation, the federal income tax legislation signed into law on December 22, 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate”. We continue to evaluate the effect that the ACA and additional actions by Congress to possibly repeal and replace it has on our business.

In addition, drug pricing by pharmaceutical companies has come under increased scrutiny. Specifically, there have been several recent state and U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing by requiring drug companies to notify insurers and government regulators of price increases and provide an explanation of the reasons for the increase, reduce the out-of-pocket cost of prescription drugs, review the relationship between pricing and manufacturer patient programs, reduce the cost of drugs under Medicare, and reform government program reimbursement methodologies. Legislation was recently signed into law in California that requires drug manufacturers to provide advance notice and explanation to state regulators, health plans and insurers and PBMs for price increases of more than 16% over two years. Moreover, U.S. President Donald Trump has discussed the need for federal legislation, regulation or Executive Order to regulate the prices of medicines. For example, the Trump administration’s budget proposal for the U.S. government’s fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require Congress to pass legislation to become effective, these provisions reinforce the administration’s focus on controlling drug prices. The majority of our medicines are purchased by private payers, and much of the focus of pending legislation is on government program reimbursement. However, we cannot know what form any such action may take, the likelihood it would be executed, enacted, effectuated or implemented or the market’s perception of how such legislation would affect us. Any reduction in reimbursement from government programs may result in a similar reduction in payments.
from private payers. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our current medicines and/or those for which we may receive regulatory approval in the future.

We are subject, directly or indirectly, to federal and state healthcare fraud and abuse and false claims laws, privacy and security laws and regulations. Prosecutions under such laws have increased in recent years and we may become subject to such litigation. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

In the United States, we are subject directly, or indirectly through our customers, to various state and federal fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute, the federal False Claims Act, civil monetary penalty statutes prohibiting beneficiary inducements, and similar state laws, federal and state privacy and security laws, sunshine laws, government price reporting laws, and other fraud laws. These laws may impact, among other things, our current and proposed sales, marketing and educational programs, as well as other possible relationships with customers, pharmacies, physicians, payers, and patients. We are subject to similar laws in the EU/EEA, including (effective as of May 25, 2018) the EU General Data Protection Regulation (2016/679), under which fines of up to €20.0 million or up to 4% of the annual global turnover of the infringer, whichever is greater, could be imposed for significant non-compliance.

Compliance with these laws, including the development of a comprehensive compliance program, is difficult, costly and time consuming. Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. These risks may be increased where there are evolving interpretations of applicable regulatory requirements, such as those applicable to manufacturer co-pay initiatives. Pharmaceutical manufacturer co-pay initiatives and free medicine programs are the subject of ongoing litigation (involving other manufacturers and to which we are not a party) and evolving interpretations of applicable regulatory requirements and certain state laws, and any change in the regulatory or enforcement environment regarding such programs could impact our ability to offer such programs. If we are unsuccessful with our HorizonCares programs, any other co-pay initiatives or free medicine programs, we would be at a competitive disadvantage in terms of pricing versus preferred branded and generic competitors, or be subject to significant penalties. We are engaged in various business arrangements with current and potential customers, and we can give no assurance that such arrangements would not be subject to scrutiny under such laws, despite our efforts to properly structure such arrangements. Even if we structure our programs with the intent of compliance with such laws, there can be no certainty that we would not need to defend our business activities against enforcement or litigation. Further, we cannot give any assurances that prior business activities or arrangements of other companies that we acquire will not be scrutinized or subject to enforcement or litigation.

There has also been a trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The ACA, among other things, imposed reporting requirements on drug manufacturers for payments made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit required information may result in significant civil monetary penalties.

We are unable to predict whether we could be subject to actions under any of these or other healthcare laws, or the impact of such actions. If we are found to be in violation of, or to encourage or assist the violation by third parties of any of the laws described above or other applicable state and federal fraud and abuse laws, we may be subject to penalties, including administrative, civil and criminal penalties, damages, fines, withdrawal of regulatory approval, imprisonment, exclusion from government healthcare reimbursement programs, contractual damages, reputational harm, diminished profits and future earnings, injunctions and other associated remedies, or private “qui tam” actions brought by individual whistleblowers in the name of the government, and the curtailment or restructuring of our operations, all of which could have a material adverse effect on our business and results of operations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management’s attention from the operation of our business.
Our medicines or any other medicine candidate that we develop may cause undesirable side effects or have other properties that could delay or prevent regulatory approval or commercialization, result in medicine re-labeling or withdrawal from the market or have a significant impact on customer demand.

Undesirable side effects caused by any medicine candidate that we develop could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, or cause us to evaluate the future of our development programs. With respect to RAVICTI, the most common side effects are diarrhea, nausea, decreased appetite, gas, vomiting, high blood levels of ammonia, headache, tiredness and dizziness. With respect to PROCYSBI, the most common side effects include vomiting, nausea, abdominal pain, breath odor, diarrhea, skin odor, fatigue, rash and headache. The most common side effects observed in pivotal trials for ACTIMMUNE were “flu-like” or constitutional symptoms such as fever, headache, chills, myalgia and fatigue. With respect to BUPHENYL, the most common side effects are change in the frequency of breathing, lack of or irregular menstruation, lower back, side, or stomach pain, mood or mental changes, muscle pain or twitching, nausea or vomiting, nervousness or restlessness, swelling of the feet or lower legs, unpleasant taste and unusual tiredness or weakness. With respect to QUINSAIR, the most common side effects include itching, wheezing, hives, rash, swelling, pale skin color, fast heartbeat and faintness. With respect to KRYSTEXXA, the most commonly reported serious adverse reactions in the pivotal trials were gout flares, infusion reactions, nausea, contusion or ecchymosis, nasopharyngitis, constipation, chest pain, anaphylaxis, exacerbation of pre-existing congestive heart failure and vomiting. The most commonly reported treatment-emergent adverse events in the Phase 3 clinical trials with RAYOS/LODOTRA included flare in rheumatoid arthritis related symptoms, abdominal pain, nasopharyngitis, headache, flushing, upper respiratory tract infection, back pain and weight gain. The most common adverse events reported in a Phase 2 clinical trial of PENNSAID 2% were application site reactions, such as dryness, exfoliation, erythema, pruritus, pain, induration, rash and scabbing. In our two Phase 3 clinical trials with DUEXIS, the most commonly reported treatment-emergent adverse events were nausea, dyspepsia, diarrhea, constipation and upper respiratory tract infection. In Phase 3 endoscopic registration clinical trials with VIMOVO, the most commonly reported treatment-emergent adverse events were erosive gastritis, dyspepsia, gastritis, diarrhea, gastric ulcer, upper abdominal pain, nausea and upper respiratory tract infection. With respect to MIGERGOT, the most commonly reported treatment reactions are ischemia, cyanosis, absence of pulse, cold extremities, gangrene, precordial distress and pain, electrocardiogram change, muscle pain, nausea and vomiting, rectal or anal ulcer, parathesias, numbness weakness, vertigo, localized edemas and itching.

The FDA or other regulatory authorities may also require, or we may undertake, additional clinical trials to support the safety profile of our medicines or medicine candidates.

In addition, if we or others identify undesirable side effects caused by our medicines or any other medicine candidate that we may develop that receives marketing approval, or if there is a perception that the medicine is associated with undesirable side effects:

• regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
• regulatory authorities may withdraw their approval of the medicine or place restrictions on the way it is prescribed;
• we may be required to change the way the medicine is administered, conduct additional clinical trials or change the labeling of the medicine or implement a risk evaluation and mitigation strategy; and
• we may be subject to increased exposure to product liability and/or personal injury claims.

If any of these events occurred with respect to our medicines, our ability to generate significant revenues from the sale of these medicines would be significantly harmed.

We rely on third parties to conduct our pre-clinical and clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines or if they experience regulatory compliance issues, we may not be able to obtain regulatory approval for or commercialize our medicine candidates and our business could be substantially harmed.

We have agreements with third-party contract research organizations, or CROs, to conduct our clinical programs, including those required for post-marketing commitments, and we expect to continue to rely on CROs for the completion of on-going and planned clinical trials. We may also have the need to enter into other such agreements in the future if we were to develop other medicine candidates or conduct clinical trials in additional indications for our existing medicines. We have an agreement in place with Syneos Health, Inc., in connection with our Phase 3 confirmatory trial to evaluate teprotumumab.
for the treatment of thyroid eye disease. In connection with the investigator-initiated study to evaluate ACTIMMUNE in combination with PD-1/PD-L1 inhibitors in various forms of cancer including advanced urothelial carcinoma (bladder cancer) and renal cell carcinoma, we are collaborating with Fox Chase Cancer Center. In connection with our ongoing study to evaluate RAYOS/LODOTRA on the fatigue experienced by SLE patients, we are collaborating with the ALR. We also rely heavily on these parties for the execution of our clinical studies and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol. We, our CROs and our academic research organizations are required to comply with current GCP or ICH regulations. The FDA enforces these GCP or ICH regulations through periodic inspections of trial sponsors, principal investigators and trial sites. If we or our CROs or collaborators fail to comply with applicable GCP or ICH regulations, the data generated in our clinical trials may be deemed unreliable and our submission of marketing applications may be delayed or the FDA may require us to perform additional clinical trials before approving our marketing applications. We cannot assure that, upon inspection, the FDA will determine that any of our clinical trials comply or complied with GCP or ICH regulations. In addition, our clinical trials must be conducted with medicine produced under cGMP regulations, and may require a large number of test subjects. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of our CROs or collaborators violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws. We must also obtain certain third-party institutional review board, or IRB, and ethics committee approvals in order to conduct our clinical trials. Delays by IRBs and ethics committees in providing such approvals may delay our clinical trials.

If any of our relationships with these third-party CROs or collaborators terminate, we may not be able to enter into similar arrangements on commercially reasonable terms, or at all. If CROs or collaborators do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our medicines and medicine candidates. As a result, our results of operations and the commercial prospects for our medicines and medicine candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Switching or adding additional CROs or collaborators can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new CRO or collaborator commences work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our CROs and collaborators, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition or prospects.

Clinical development of drugs and biologics involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is uncertain. Failure can occur at any time during the clinical trial process. The results of pre-clinical studies and early clinical trials of potential medicine candidates may not be predictive of the results of later-stage clinical trials. Medicine candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical testing. For example, in December 2016, we announced that the Phase 3 trial, Safety, Tolerability and Efficacy of ACTIMMUNE Dose Escalation in Friedreich’s Ataxia, evaluating ACTIMMUNE for the treatment of Friedreich’s ataxia, or FA, did not meet its primary endpoint.

With respect to investigator-initiated studies for several of our products, and with respect to the Phase 3 pivotal clinical trial of teprotumumab in thyroid eye disease that we commenced in the fourth quarter of 2017, and to the extent that we are required to conduct additional clinical development of any of our existing or later acquired medicines or we conduct clinical development of earlier stage medicine candidates, we may experience delays in these clinical trials or investigator-initiated studies. We do not know whether any additional clinical trials will be initiated in the future, begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

• obtaining regulatory approval to commence a trial;
• reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
obtaining IRB or ethics committee approval at each site;
recruiting suitable patients to participate in a trial;
having patients complete a trial or return for post-treatment follow-up;
clinical sites dropping out of a trial;
adding new sites; or
manufacturing sufficient quantities of medicine candidates for use in clinical trials.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, competing clinical trials and clinicians’ and patients’ perceptions as to the potential advantages of the medicine candidate being studied in relation to other available therapies, including any new drugs or biologics that may be approved for the indications we are investigating. Furthermore, we rely and expect to rely on CROs and clinical trial sites to ensure the proper and timely conduct of our future clinical trials and while we have and intend to have agreements governing their committed activities, we will have limited influence over their actual performance.

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

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA. The FDA may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the study. The FDA may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA and may ultimately lead to the denial of marketing approval of one or more of our medicine candidates.

Any of these occurrences may harm our business, financial condition, results of operations and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our medicine candidates.

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

Our operations could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions. While we carry insurance for certain of these events and have implemented disaster management plans and contingencies, the occurrence of any of these business interruptions could seriously harm our business and financial condition and increase our costs and expenses. We conduct significant management operations at both our global headquarters located in Dublin, Ireland and our U.S. office located in Lake Forest, Illinois. If our Dublin or Lake Forest offices were affected by a natural or man-made disaster or other business interruption, our ability to manage our domestic and foreign operations could be impaired, which could materially and adversely affect our results of operations and financial condition. We currently rely, and intend to rely in the future, on third-party manufacturers and suppliers to produce our medicines and third-party logistics partners to ship our medicines. Our ability to obtain commercial supplies of our medicines could be disrupted and our results of operations and financial condition could be materially and adversely affected if the operations of these third-party suppliers or logistics partners were affected by a man-made or natural disaster or other business interruption. The ultimate impact of such events on us, our significant suppliers and our general infrastructure is unknown.
We are dependent on information technology systems, infrastructure and data, which exposes us to data security risks. We are dependent upon our own or third-party information technology systems, infrastructure and data, including mobile technologies, to operate our business. The multitude and complexity of our computer systems may make them vulnerable to service interruption or destruction, malicious intrusion, or random attack. Likewise, data privacy or security breaches by employees or others may pose a risk that sensitive data, including our intellectual property, trade secrets or personal information of our employees, patients, customers or other business partners may be exposed to unauthorized persons or to the public. Cyber-attacks are increasing in their frequency, sophistication and intensity. Cyber-attacks could include the deployment of harmful malware, denial-of-service, social engineering and other means to affect service reliability and threaten data confidentiality, integrity and availability. Our business partners face similar risks and any security breach of their systems could adversely affect our security posture. A security breach or privacy violation that leads to disclosure or modification of or prevents access to patient information, including personally identifiable information or protected health information, could harm our reputation, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, require us to verify the correctness of database contents and otherwise subject us to litigation or other liability under laws and regulations that protect personal data, any of which could disrupt our business and/or result in increased costs or loss of revenue. Moreover, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information, trade secrets or other intellectual property. While we have invested, and continue to invest, in the protection of our data and information technology infrastructure, there can be no assurance that our efforts will prevent service interruptions, or identify breaches in our systems, that could adversely affect our business and operations and/or result in the loss of critical or sensitive information, which could result in financial, legal, business or reputational harm to us. In addition, our liability insurance may not be sufficient in type or amount to cover us against claims related to security breaches, cyber-attacks and other related breaches.

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

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

• decreased demand for our medicines or medicine candidates that we may develop;
• injury to our reputation;
• withdrawal of clinical trial participants;
• initiation of investigations by regulators;
• costs to defend the related litigation;
• a diversion of management’s time and resources;
• substantial monetary awards to trial participants or patients;
• medicine recalls, withdrawals or labeling, marketing or promotional restrictions;
• loss of revenue;
• exhaustion of any available insurance and our capital resources; and
• the inability to commercialize our medicines or medicine candidates.
Our inability to obtain and retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of medicines we develop. We currently carry product liability insurance covering our clinical studies and commercial medicine sales in the amount of $125.0 million in the aggregate. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. If we determine that it is prudent to increase our product liability coverage due to the on-going commercialization of our current medicines in the United States, and/or the potential commercial launches of any of our medicines in additional markets or for additional indications, we may be unable to obtain such increased coverage on acceptable terms or at all. Our insurance policies also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

Our business involves the use of hazardous materials, and we and our third-party manufacturers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our third-party manufacturers’ activities involve the controlled storage, use and disposal of hazardous materials owned by us, including the components of our medicine candidates and other hazardous compounds. We and our manufacturers are subject to federal, state and local as well as foreign laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials comply with the standards prescribed by these laws and regulations, we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident, state, federal or foreign authorities may curtail the use of these materials and interrupt our business operations. We do not currently maintain hazardous materials insurance coverage. If we are subject to any liability as a result of our third-party manufacturers’ activities involving hazardous materials, our business and financial condition may be adversely affected. In the future we may seek to establish longer-term third-party manufacturing arrangements, pursuant to which we would seek to obtain contractual indemnification protection from such third-party manufacturers potentially limiting this liability exposure.

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

We are exposed to the risk that our employees, independent contractors, principal investigators, consultants, vendors, distributors and CROs may engage in fraudulent or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or unauthorized activities that violate FDA regulations, including those laws that require the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare fraud and abuse laws and regulations, and laws that require the true, complete and accurate reporting of financial information or data. 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. Misconduct by our employees and other third parties may also include the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Code of Business Conduct and Ethics, but it is not always possible to identify and deter misconduct by our employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment.
Risks Related to our Financial Position and Capital Requirements

In the past we have incurred significant operating losses.

We have a limited operating history and even less history operating as a combined organization following the acquisitions of Vidara, Hyperion, Crealta Holdings LLC, or Crealta, Raptor and River Vision Development Corp., or River Vision. We have financed our operations primarily through equity and debt financings and have incurred significant operating losses in the past. We had an operating loss of $392.4 million for the year ended December 31, 2017, an operating loss of $147.2 million for the year ended December 31, 2016 and operating income of $55.4 million for the year ended December 31, 2015. We had a net loss of $410.5 million for the year ended December 31, 2017, a net loss of $166.8 million for the year ended December 31, 2016 and net income of $39.5 million for the year ended December 31, 2015. As of December 31, 2017, we had an accumulated deficit of $1,252.3 million. Our prior losses have resulted principally from costs incurred in our development activities for our medicines and medicine candidates, commercialization activities related to our medicines, costs associated with our acquisition transactions and costs associated with derivative liability accounting. Our prior losses, combined with possible future losses, have had and will continue to have an adverse effect on our shareholders’ equity and working capital. While we anticipate that we will generate operating profits in the future, whether we can sustain this will depend on the revenues we generate from the sale of our medicines being sufficient to cover our operating expenses.

We have limited sources of revenues and significant expenses. We cannot be certain that we will achieve or sustain profitability, which would depress the market price of our ordinary shares and could cause our investors to lose all or a part of their investment.

Our ability to achieve and sustain profitability depends upon our ability to generate sales of our medicines. We have a limited history of commercializing our medicines as a company, and commercialization has been primarily in the United States. We may never be able to successfully commercialize our medicines or develop or commercialize other medicines in the United States or in the EU, which we believe represents our most significant commercial opportunity. Our ability to generate future revenues depends heavily on our success in:

• continued commercialization of our existing medicines and any other medicine candidates for which we obtain approval;
• obtaining FDA approvals for teprotumumab, additional indications for ACTIMMUNE or an expanded indication for RAVICTI;
• securing additional foreign regulatory approvals for our medicines in territories where we have commercial rights; and
• developing, acquiring and commercializing a portfolio of other medicines or medicine candidates in addition to our current medicines.

Even if we do generate additional medicine sales, we may not be able to achieve or sustain profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the market price of our ordinary shares and could impair our ability to raise capital, expand our business, diversify our medicine offerings or continue our operations.

We may need to obtain additional financing to fund additional acquisitions.

Our operations have consumed substantial amounts of cash since inception. We expect to continue to spend substantial amounts to:

• commercialize our existing medicines in the United States, including the substantial expansion of our sales force in recent years;
• complete the regulatory approval process, and any future required clinical development related thereto, for our medicines and medicine candidates;
• potentially acquire other businesses or additional complementary medicines or medicines that augment our current medicine portfolio, including costs associated with refinancing debt of acquired companies; and
• conduct clinical trials with respect to potential additional indications, as well as conduct post-marketing requirements and commitments, with respect to our medicines and medicines we acquire.
While we believe that our existing cash and cash equivalents will be sufficient to fund our operations based on our current expectations of continued revenue growth, we may need to raise additional funds if we choose to expand our commercialization or development efforts more rapidly than presently anticipated, if we develop or acquire additional medicines or acquire companies, or if our revenue does not meet expectations.

We cannot be certain that additional funding will be available on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our medicines or medicine candidates or one or more of our other research and development initiatives, or delay, cut back or abandon our plans to grow the business through acquisitions. We also could be required to:

- seek collaborators for one or more of our current or future medicine candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available; or
- relinquish or license on unfavorable terms our rights to technologies or medicine candidates that we would otherwise seek to develop or commercialize ourselves.

In addition, if we are unable to secure financing to support future acquisitions, our ability to execute on a key aspect of our overall growth strategy would be impaired.

Any of the above events could significantly harm our business, financial condition and prospects.

We have incurred a substantial amount of debt, which could adversely affect our business, including by restricting our ability to engage in additional transactions or incur additional indebtedness, and prevent us from meeting our debt obligations.

As of December 31, 2017, we had $1,901.7 million book value, or $2,020.8 million aggregate principal amount, of indebtedness, including $845.8 million in secured indebtedness. In March 2017, we borrowed $850.0 million in aggregate principal amount of secured loans pursuant to our credit agreement. In October 2017, we borrowed approximately $845.8 million aggregate principal amount of loans under our credit agreement pursuant to an amendment to our credit agreement to refinance the then outstanding senior secured term loans incurred in March 2017 under our credit agreement, which totaled approximately $845.8 million. In connection with the acquisition of Hyperion, we issued $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023, or the 2023 Senior Notes, in April 2015. In connection with the acquisition of Raptor, we issued $300.0 million aggregate principal amount of 8.75% Senior Notes due 2024, or the 2024 Senior Notes, in October 2016. In March 2015, we issued $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022, or the Exchangeable Senior Notes. Accordingly, we have a significant amount of debt outstanding on a consolidated basis.

This substantial level of debt could have important consequences to our business, including, but not limited to:

- reducing the benefits we expect to receive from our prior and any future acquisition transactions;
- making it more difficult for us to satisfy our obligations;
- requiring a substantial portion of our cash flows from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flows to fund acquisitions, capital expenditures, and future business opportunities;
- exposing us to the risk of increased interest rates to the extent of any future borrowings, including borrowings under our credit agreement, at variable rates of interest;
- making it more difficult for us to satisfy our obligations with respect to our indebtedness, including our outstanding notes, our credit agreement, and any failure to comply with the obligations of any of our debt instruments, including restrictive covenants and borrowing conditions, could result in an event of default under the agreements governing such indebtedness;
- increasing our vulnerability to, and reducing our flexibility to respond to, changes in our business or general adverse economic and industry conditions;
- limiting our ability to obtain additional financing for working capital, capital expenditures, debt service requirements, acquisitions, and general corporate or other purposes and increasing the cost of any such financing;
limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and placing us at a competitive disadvantage as compared to our competitors, to the extent they are not as highly leveraged and who, therefore, may be able to take advantage of opportunities that our leverage may prevent us from exploiting; and

• restricting us from pursuing certain business opportunities.

The credit agreement and the indentures governing the 2024 Senior Notes and the 2023 Senior Notes impose, and the terms of any future indebtedness may impose, various covenants that limit our ability and/or the ability of our restricted subsidiaries’ (as designated under such agreements) to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales, consolidate with or merge or sell all or substantially all of our assets, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries, and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to us.

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We generally have broad discretion in the use of our cash and may not use it effectively.

Our management has broad discretion in the application of our cash, and investors will be relying on the judgment of our management regarding the use of our cash. Our management may not apply our cash in ways that ultimately increase the value of any investment in our securities. We expect to use our existing cash to fund commercialization activities for our medicines, to potentially fund additional medicine or business acquisitions, to potentially fund additional regulatory approvals of certain of our medicines, to potentially fund development, life cycle management or manufacturing activities of our medicines for other indications, to potentially fund share repurchases, and for working capital, capital expenditures and general corporate purposes. We may also invest our cash in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our shareholders. If we do not invest or apply our cash in ways that enhance shareholder value, we may fail to achieve expected financial results, which could cause the price of our ordinary shares to decline.

Our ability to use net operating loss carryforwards and certain other tax attributes to offset U.S. income taxes may be limited.

Under Sections 382 and 383 of the Code, if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percent change (by value) in its equity ownership over a three-year period), the corporation’s ability to use pre-change net operating loss carryforwards and other pre-change tax attributes to offset post-change income may be limited. We continue to carry forward our annual limitation resulting from an ownership change date of August 2, 2012. The limitation on pre-change net operating losses incurred prior to the August 2, 2012 change date is approximately $7.7 million for 2018 through 2028. We continue to carry forward the annual limitation related to Hyperion of $50.0 million resulting from the last ownership change date in 2014 and the annual limitation related to Raptor of $0.2 million resulting from the last ownership change date in 2009. In addition, in the second quarter of 2017, we recognized $37.4 million of federal net operating losses, $43.2 million of state net operating losses and $5.8 million of federal tax credits following our acquisition of River Vision Development Corp. These acquired federal net operating losses and tax credits are subject to an annual limitation of $12.5 million from 2018 through 2021. The net operating loss carryforward limitation is cumulative such that any use of the carryforwards below the limitations in one year will result in a corresponding increase in the limitations for the subsequent tax year. Under the Tax Act, U.S. federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such federal net operating losses is limited. It is uncertain if and to what extent various U.S. states will conform to the Tax Act.

Following certain acquisitions of a U.S. corporation by a foreign corporation, Section 7874 of the Code limits the ability of the acquired U.S. corporation and its U.S. affiliates to utilize U.S. tax attributes such as net operating losses to offset U.S. taxable income resulting from certain transactions. Based on the limited guidance available, we expect this limitation is applicable following the Vidara Merger. As a result, it is not currently expected that we or our other U.S. affiliates will be able to utilize their U.S. tax attributes to offset their U.S. taxable income, if any, resulting from certain taxable transactions following the Vidara Merger. Notwithstanding this limitation, we expect that we will be able to fully use our U.S. net operating losses and tax credits prior to their expiration. As a result of this limitation, however, it may take HPI longer to use its net operating losses and tax credits. Moreover, contrary to these expectations, it is possible that the limitation under Section 7874 of the Code on the utilization of U.S. tax attributes could prevent us from fully utilizing our U.S. tax attributes prior to their expiration if we do not generate sufficient taxable income.

Any limitation on our ability to use our net operating loss and tax credit carryforwards, including the carryforwards of companies that we acquire, will likely increase the taxes we would otherwise pay in future years if we were not subject to such limitations.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and share price.

From time to time, global credit and financial markets have experienced extreme disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment and continued unpredictable and unstable market conditions. If the equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and share price and could require us to delay or abandon commercialization or development plans. There is a risk that one or more of our current service providers, manufacturers and other partners may not survive an economic down-turn, which could directly affect our ability to attain our operating goals on schedule and on budget.
The U.K.’s referendum to leave the EU or “Brexit,” has caused and may continue to cause disruptions to capital and currency markets worldwide. The full impact of the Brexit decision, however, remains uncertain. A process of negotiation will determine the future terms of the U.K.’s relationship with the EU. During this period of negotiation, our results of operations and access to capital may be negatively affected by interest rate, exchange rate and other market and economic volatility, as well as regulatory and political uncertainty. The tax consequences of the U.K.’s withdrawal from the EU are uncertain as well. Brexit may also have a detrimental effect on our customers, distributors and suppliers, which would, in turn, adversely affect our revenues and financial condition.

At December 31, 2017, we had $751.4 million of cash and cash equivalents consisting of cash and money market funds. While we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents since December 31, 2017, no assurance can be given that deterioration in conditions of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents or our ability to meet our financing objectives. Dislocations in the credit market may adversely impact the value and/or liquidity of marketable securities owned by us.

**Changes in accounting rules or policies may affect our financial position and results of operations.**

Accounting principles generally accepted in the United States, or GAAP, and related implementation guidelines and interpretations can be highly complex and involve subjective judgments. Changes in these rules or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations. In addition, our operation as an Irish company with multiple subsidiaries in different jurisdictions adds additional complexity to the application of GAAP and this complexity will be exacerbated further if we complete additional strategic transactions. Changes in the application of existing rules or guidance applicable to us or our wholly owned subsidiaries could significantly affect our consolidated financial position and results of operations.

**Covenants under the indentures governing our 2024 Senior Notes and 2023 Senior Notes and our credit agreement may restrict our business and operations in many ways, and if we do not effectively manage our covenants, our financial conditions and results of operations could be adversely affected.**

The indentures governing the 2024 Senior Notes and the 2023 Senior Notes and the credit agreement impose various covenants that limit our ability and/or our restricted subsidiaries’ ability to, among other things:

- pay dividends or distributions, repurchase equity, prepay, redeem or repurchase certain debt and make certain investments;
- incur additional debt and issue certain preferred stock;
- provide guarantees in respect of obligations of other persons;
- incur liens on assets;
- engage in certain asset sales;
- merge, consolidate with or sell all or substantially all of our assets to another person;
- enter into transactions with affiliates;
- sell assets and capital stock of our subsidiaries;
- enter into agreements that restrict distributions from our subsidiaries;
- designate subsidiaries as unrestricted subsidiaries; and
- allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to us.

These covenants may:

- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;
- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general business purposes;
• require us to use a substantial portion of our cash flow from operations to make debt service payments;
• limit our flexibility to plan for, or react to, changes in our business and industry;
• place us at a competitive disadvantage compared to less leveraged competitors; and
• increase our vulnerability to the impact of adverse economic and industry conditions.

If we are unable to successfully manage the limitations and decreased flexibility on our business due to our significant debt obligations, we may not be able to capitalize on strategic opportunities or grow our business to the extent we would be able to without these limitations.

Our failure to comply with any of the covenants could result in a default under the credit agreement or the indentures governing the 2024 Senior Notes or the 2023 Senior Notes, which could permit the administrative agent or the trustee, as applicable, or permit the lenders or the holders of the 2024 Senior Notes or the 2023 Senior Notes to cause the administrative agent or the trustee, as applicable, to declare all or part of any outstanding senior secured term loans, the 2023 Senior Notes or the 2024 Senior Notes to be immediately due and payable or to exercise any remedies provided to the administrative agent or the trustee, including, in the case of the credit agreement proceeding against the collateral granted to secure our obligations under the credit agreement. An event of default under the credit agreement or the indentures governing the 2024 Senior Notes or the 2023 Senior Notes could also lead to an event of default under the terms of the other agreements and the indenture governing our Exchangeable Senior Notes. Any such event of default or any exercise of rights and remedies by our creditors could seriously harm our business.

If intangible assets that we have recorded in connection with our acquisition transactions become impaired, we could have to take significant charges against earnings.

In connection with the accounting for our various acquisition transactions, we have recorded significant amounts of intangible assets. Under GAAP, we must assess, at least annually and potentially more frequently, whether the value of goodwill and other indefinite-lived intangible assets has been impaired. Amortizing intangible assets will be assessed for impairment in the event of an impairment indicator. Any reduction or impairment of the value of goodwill or other intangible assets will result in a charge against earnings, which could materially adversely affect our results of operations and shareholders’ equity in future periods.

Risks Related to Our Intellectual Property

If we are unable to obtain or protect intellectual property rights related to our medicines and medicine candidates, we may not be able to compete effectively in our markets.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our medicines and medicine candidates. The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own may fail to result in issued patents with claims that cover our medicines in the United States or in other foreign countries. If this were to occur, early generic competition could be expected against our current medicines and other medicine candidates in development. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, which prior art can invalidate a patent or prevent a patent from issuing based on a pending patent application. In particular, because the APIs in RAYOS/LODOTRA, DUEXIS and VIMOVO have been on the market as separate medicines for many years, it is possible that these medicines have previously been used off-label in such a manner that such prior usage would affect the validity of our patents or our ability to obtain patents based on our patent applications. In addition, claims directed to dosing and dose adjustment may be substantially less likely to issue in light of the Supreme Court decision in Mayo Collaborative Services v. Prometheus Laboratories, Inc., where the court held that claims directed to methods of determining whether to adjust drug dosing levels based on drug metabolite levels in the red blood cells were not patent eligible because they were directed to a law of nature. This decision may have wide-ranging implications on the validity and scope of pharmaceutical method claims.

Even if patents do successfully issue, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed or invalidated.
Patent litigation is currently pending in the United States District Court for the Eastern District of Texas against Par Pharmaceutical and in the United States District Court for the District of New Jersey against Lupin and against Par Pharmaceutical, who are each intending to market generic versions of RAVICTI prior to the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the RAVICTI cases, and arise from Paragraph IV Patent Certification notice letters from each of Par Pharmaceutical and Lupin advising each had filed an ANDA with the FDA seeking approval to market a generic version of RAVICTI before the expiration of the patents-in-suit. For a more detailed description of the RAVICTI litigation, see Note 19 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

Patent litigation is currently pending in the United States District Court for the District of New Jersey and the Court of Appeals for the Federal Circuit against several companies intending to market a generic version of VIMOVO before the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the VIMOVO cases, and involve the following sets of defendants: (i) Dr. Reddy’s; (ii) Lupin; and (iii) Mylan. Patent litigation against a fourth generic company, Actavis, is currently pending in the Court of Appeals for the Federal Circuit. The cases arise from Paragraph IV Patent Certification notice letters from each of Dr. Reddy’s, Lupin, Mylan and Actavis, advising each had filed an ANDA with the FDA seeking approval to market generic versions of VIMOVO before the expiration of the patents-in-suit. For a more detailed description of the VIMOVO litigation, see Note 19 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

Patent litigation is currently pending in the United States District Court for the District of New Jersey against two companies intending to market a generic version of PENNSAID 2% prior to the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the PENNSAID 2% cases, and involve the following sets of defendants: (i) Actavis and (ii) Lupin. These cases arise from Paragraph IV Patent Certification notice letters from each of Actavis and Lupin advising each had filed an ANDA with the FDA seeking approval to market a generic version of PENNSAID 2% before the expiration of the patents-in-suit. For a more detailed description of the PENNSAID 2% litigation, see Note 19 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

We intend to vigorously defend our intellectual property rights relating to our medicines, but we cannot predict the outcome of the RAVICTI cases, the PENNSAID 2% cases and the VIMOVO cases. Any adverse outcome in these matters or any new generic challenges that may arise could result in one or more generic versions of our medicines being launched before the expiration of the listed patents, which could adversely affect our ability to successfully execute our business strategy to increase sales of our medicines, and would negatively impact our financial condition and results of operations, including causing a significant decrease in our revenues and cash flows.

Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the patent applications we hold with respect to our medicines fail to issue or if their breadth or strength of protection is threatened, it could dissuade companies from collaborating with us to develop them and threaten our ability to commercialize our medicines. We cannot offer any assurances about which, if any, patents will issue or whether any issued patents will be found not invalid and not unenforceable or will go unthreatened by third parties. Since patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we were the first to file any patent application related to our medicines or any other medicine candidates. Furthermore, if third parties have filed such patent applications, an interference proceeding in the United States can be provoked by a third-party or instituted by us to determine which party was the first to invent any of the subject matter covered by the patent claims of our applications.

With respect to RAVICTI, the composition of matter patent we hold would have expired in the United States in February 2015 without term extension. However, Hyperion applied for a term extension for this patent under the Drug Price Competition and Patent Term Restoration Act and received notice that the United States Patent and Trademark Office, or the U.S. PTO, extended the expiration date of the patent to July 28, 2018, and to 2022 with respect to orphan drug exclusivity. We cannot guarantee that pending patent applications related to RAVICTI will result in additional patents or that other existing and future patents related to RAVICTI will be held valid and enforceable or will be sufficient to deter generic competition in the United States. Therefore, it is possible that upon expiration of the RAVICTI composition of matter patent, we would need to rely on forms of regulatory exclusivity, to the extent available, to protect against generic competition.
In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our drug discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Although we expect all of our employees to assign their inventions to us, and all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed or that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques.

Further, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. For example, if the issuance, in a given country, of a patent to us, covering an invention, is not followed by the issuance, in other countries, of patents covering the same invention, or if any judicial interpretation of the validity, enforceability, or scope of the claims in, or the written description or enablement in, a patent issued in one country is not similar to the interpretation given to the corresponding patent issued in another country, our ability to protect our intellectual property in such countries may be limited. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may materially diminish the value of our intellectual property or narrow the scope of our patent protection. If we are unable to prevent material disclosure of the non-patented intellectual property related to our technologies to third parties, and there is no guarantee that we will have any such enforceable trade secret protection, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, results of operations and financial condition.

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

Our commercial success depends in part on us avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions and inter party reexamination proceedings before the U.S. PTO. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which our collaborators are developing medicine candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our medicine candidates may be subject to claims of infringement of the patent rights of third parties.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our medicines and/or any other medicine candidates. Because patent applications can take many years to issue, there may be currently pending patent applications, which may later result in issued patents that our medicine candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of any of our medicine candidates, any molecules formed during the manufacturing process or any final medicine itself, the holders of any such patents may be able to block our ability to commercialize such medicine candidate unless we obtained a license under the applicable patents, or until such patents expire. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, including combination therapy, the holders of any such patent may be able to block our ability to develop and commercialize the applicable medicine candidate unless we obtained a license or until such patent expires. In either case, such a license may not be available on commercially reasonable terms or at all.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our medicine candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys’ fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing medicines, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our medicine candidates, and we have done so from time to time. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further
develop and commercialize one or more of our medicine candidates, which could harm our business significantly. We cannot provide any assurances that third-party patents do not exist which might be enforced against our medicines, resulting in either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties.

If we fail to comply with our obligations in the agreements under which we license rights to technology from third parties, we could lose license rights that are important to our business.

We are party to a number of technology licenses that are important to our business and expect to enter into additional licenses in the future. For example, we rely on a license from Ucyclyd with respect to technology developed by Ucyclyd in connection with the manufacturing of RAVICTI. The purchase agreement under which Hyperion purchased the worldwide rights to RAVICTI contains obligations to pay Ucyclyd regulatory and sales milestone payments relating to RAVICTI, as well as royalties on the net sales of RAVICTI. On May 31, 2013, when Hyperion acquired BUPHENYL under a restated collaboration agreement with Ucyclyd, Hyperion received a license to use some of the manufacturing technology developed by Ucyclyd in connection with the manufacturing of BUPHENYL. The restated collaboration agreement also contains obligations to pay Ucyclyd regulatory and sales milestone payments, as well as royalties on net sales of BUPHENYL. If we fail to make a required payment to Ucyclyd and do not cure the failure within the required time period, Ucyclyd may be able to terminate the license to use its manufacturing technology for RAVICTI and BUPHENYL. If we lose access to the Ucyclyd manufacturing technology, we cannot guarantee that an acceptable alternative method of manufacture could be developed or acquired. Even if alternative technology could be developed or acquired, the loss of the Ucyclyd technology could still result in substantial costs and potential periods where we would not be able to market and sell RAVICTI and/or BUPHENYL. We also license intellectual property necessary for commercialization of RAVICTI from an external party. This party may be entitled to terminate the license if we breach the agreement, including failure to pay required royalties on net sales of RAVICTI, or we do not meet specified diligence obligations in our development and commercialization of RAVICTI, and we do not cure the failure within the required time period. If the license is terminated, it may be difficult or impossible for us to continue to commercialize RAVICTI, which would have a material adverse effect on our business, financial condition and results of operations.

We also license rights to patents, know-how and trademarks for ACTIMMUNE from Genentech Inc., or Genentech, under an agreement that remains in effect for so long as we continue to commercialize and sell ACTIMMUNE. However, Genentech may terminate the agreement upon our material default, if not cured within a specified period of time. Genentech may also terminate the agreement in the event of our bankruptcy or insolvency. Upon such a termination of the agreement, all intellectual property rights conveyed to us under the agreement, including the rights to the ACTIMMUNE trademark, revert to Genentech. If we fail to comply with our obligations under this agreement, we could lose the ability to market and distribute ACTIMMUNE, which would have a material adverse effect on our business, financial condition and results of operations.

In addition, we are subject to contractual obligations under our agreements with Tripez and PARI related to QUINSAIR. Under the agreement with Tripez, we are required to pursue commercially reasonable efforts to initiate, and subsequently to complete, an additional clinical trial of QUINSAIR in a non-CF patient population within a specified period of time and an obligation to progress toward submitting an NDA for approval of QUINSAIR in the United States for use in all or part of the CF patient population. These obligations are subject to certain exceptions due to, for example, manufacturing delays not under our control, or delays caused by the FDA. If we fail to properly exercise such efforts to initiate and complete an appropriate clinical trial, or fail to submit an NDA for U.S. approval in the CF patient population, during the time periods specified in the agreement, we may be subject to various claims by Tripez and parties affiliated with Tripez. In addition, if we do not spend a minimum amount on QUINSAIR development in each of the three years following our acquisition of Raptor, we may also be obligated to pre-pay a milestone payment related to initiating a clinical trial for QUINSAIR in a non-CF indication. During October 2017, we triggered a milestone payment under this agreement, and we paid Tripez $20.0 million in November 2017. Under the license agreement with PARI, we are required to comply with diligence milestones related to development and commercialization of QUINSAIR in the United States and to spend a specified minimum amount per year on development activities in the United States until submission of the NDA for QUINSAIR in the United States. If we do not comply with these obligations, our licenses to certain intellectual property related to QUINSAIR may become non-exclusive in the United States or could be terminated. We are also subject to contractual obligations under our amended and restated license agreement with UCSD, with respect to PROCYSBI, including obligations to consider engaging in the development of PROCYSBI for the treatment of NASH and related diligence obligations if we undertake such development. Under the amended and restated license agreement with UCSD, we also are subject to diligence obligations to identify a third party to undertake development of PROCYSBI for the treatment of Huntington’s disease. To the extent that we fail to perform the diligence obligations under the agreement, UCSD may, with
respect to such indication, terminate the license or otherwise cause the license to become non-exclusive. If one or more of these licenses was terminated, we would have no further right to use or exploit the related intellectual property, which would limit our ability to develop PROCYSBI or QUINSAIR in other indications, and could impact our ability to continue commercializing PROCYSBI or QUINSAIR in their approved indications.

We also hold an exclusive license to patents and technology from Duke University, or Duke, and Mountain View Pharmaceuticals, Inc., or MVP, covering KRYSTEXXA. Duke and MVP may terminate the license if we commit fraud or for our willful misconduct or illegal conduct. Duke and MVP may also terminate the license upon our material breach of the agreement, if not cured within a specified period of time, or upon written notice if we have committed two or more material breaches under the agreement. Duke and MVP may also terminate the license in the event of our bankruptcy or insolvency. If the license is terminated, it may be impossible for us to continue to commercialize KRYSTEXXA, which would have a material adverse effect on our business, financial condition and results of operations.

We hold an exclusive license to Vectura Group plc’s, or Vectura, proprietary technology and know-how covering the delayed-release of corticosteroids relating to RAYOS/LODOTRA. If we fail to comply with our obligations under our agreement with Vectura or our other license agreements, or if we are subject to a bankruptcy, the licensor may have the right to terminate the license, in which event we would not be able to market medicines covered by the license, including RAYOS/LODOTRA.

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

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one of our patents, or a patent of one of our licensors, is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

There are numerous post grant review proceedings available at the U.S. PTO (including inter partes review, post-grant review and ex-parte reexamination) and similar proceedings in other countries of the world that could be initiated by a third-party that could potentially negatively impact our issued patents.

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

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

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, 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 on any issued patent are due to be paid to the U.S. PTO and foreign patent agencies in several stages over the lifetime of the patent. The U.S. PTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance
events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or licensors that control the prosecution and maintenance of our licensed patents fail to maintain the patents and patent applications covering our medicine candidates, our competitors might be able to enter the market, which would have a material adverse effect on our business.

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

We employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of our employees’ former employers or other third parties. We may also be subject to claims that former employers or other third parties have an ownership interest in our patents. Litigation may be necessary to defend against these claims. There is no guarantee of success in defending these claims, and even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees.

Risks Related to Ownership of Our Ordinary Shares

The market price of our ordinary shares historically has been volatile and is likely to continue to be volatile, and you could lose all or part of any investment in our ordinary shares.

The trading price of our ordinary shares has been volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this report, these factors include:

- our failure to successfully execute our commercialization strategy with respect to our approved medicines, particularly our commercialization of our medicines in the United States;
- actions or announcements by third-party or government payers with respect to coverage and reimbursement of our medicines;
- disputes or other developments relating to intellectual property and other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our medicines and medicine candidates;
- unanticipated serious safety concerns related to the use of our medicines;
- adverse regulatory decisions;
- changes in laws or regulations applicable to our business, medicines or medicine candidates, including but not limited to clinical trial requirements for approvals or tax laws;
- inability to comply with our debt covenants and to make payments as they become due;
- inability to obtain adequate commercial supply for any approved medicine or inability to do so at acceptable prices;
- developments concerning our commercial partners, including but not limited to those with our sources of manufacturing supply;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse results or delays in clinical trials;
- our failure to successfully develop and/or acquire additional medicine candidates or obtain approvals for additional indications for our existing medicine candidates;
- introduction of new medicines or services offered by us or our competitors;
- overall performance of the equity markets, including the pharmaceutical sector, and general political and economic conditions;
- failure to meet or exceed revenue and financial projections that we may provide to the public;
- actual or anticipated variations in quarterly operating results;
- failure to meet or exceed the estimates and projections of the investment community;
• inaccurate or significant adverse media coverage;
• publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
• our inability to successfully enter new markets;
• the termination of a collaboration or the inability to establish additional collaborations;
• announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
• our inability to maintain an adequate rate of growth;
• ineffectiveness of our internal controls or our inability to otherwise comply with financial reporting requirements;
• adverse U.S. and foreign tax exposure;
• additions or departures of key management, commercial or regulatory personnel;
• issuances of debt or equity securities;
• significant lawsuits, including patent or shareholder litigation;
• changes in the market valuations of similar companies to us;
• sales of our ordinary shares by us or our shareholders in the future;
• trading volume of our ordinary shares;
• effects of natural or man-made catastrophic events or other business interruptions; and
• other events or factors, many of which are beyond our control.

In addition, the stock market in general, and The NASDAQ Global Select Market and the stock of biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may adversely affect the market price of our ordinary shares, regardless of our actual operating performance.

We have never declared or paid dividends on our share capital and we do not anticipate paying dividends in the foreseeable future.

We have never declared or paid any cash dividends on our ordinary shares. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future, including due to limitations that are currently imposed by our credit agreement and the indentures governing the 2024 Senior Notes and the 2023 Senior Notes. Any return to shareholders will therefore be limited to the increase, if any, of our ordinary share price.

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

As a public company, we have incurred and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. In particular, the Sarbanes-Oxley Act of 2000, or the Sarbanes-Oxley Act, as well as rules subsequently implemented by the SEC and the NASDAQ Stock Market, Inc., or NASDAQ, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. These rules and regulations have substantially increased our legal and financial compliance costs and have made some activities more time-consuming and costly. These effects are exacerbated by our transition to an Irish company and the integration of numerous acquired businesses and operations into our historical business and operating structure. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will continue to decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our medicines or services. For example, these rules and regulations make it more difficult and more expensive for us to obtain and maintain director and officer liability insurance.
We cannot predict or estimate the amount or timing of additional costs that we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. If we fail to comply with the continued listing requirements of NASDAQ, our ordinary shares could be delisted from The NASDAQ Global Select Market, which would adversely affect the liquidity of our ordinary shares and our ability to obtain future financing.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. In particular, we are required to perform annual system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, or Section 404. Our independent registered public accounting firm is also required to deliver a report on the effectiveness of our internal control over financial reporting. Our testing, or the testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses. Our compliance with Section 404 requires that we incur substantial expense and expend significant management efforts, particularly because of our Irish parent company structure and international operations. If we are not able to comply with the requirements of Section 404 or if we or our independent registered public accounting firm identify deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses, the market price of our ordinary shares could decline and we could be subject to sanctions or investigations by NASDAQ, the SEC or other regulatory authorities, which would require additional financial and management resources.

New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act and rules adopted by the SEC and by NASDAQ, would likely result in increased costs as we respond to their requirements.

Sales of a substantial number of our ordinary shares in the public market could cause our share price to decline.

If our existing shareholders sell, or indicate an intention to sell, substantial amounts of our ordinary shares in the public market, the trading price of such ordinary shares could decline. In addition, our ordinary shares that are either subject to outstanding options or reserved for future issuance under our employee benefit plans are or may become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules and Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. If these additional ordinary shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our ordinary shares could decline.

In addition, any conversion or exchange of our Exchangeable Senior Notes, whether pursuant to their terms or pursuant to privately negotiated transactions between the issuer and/or us and a holder of such securities, could depress the market price for our ordinary shares.

Future sales and issuances of our ordinary shares, securities convertible into our ordinary shares or rights to purchase ordinary shares or convertible securities could result in additional dilution of the percentage ownership of our shareholders and could cause our share price to decline.

Additional capital may be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities or securities convertible into or exchangeable for ordinary shares, our shareholders may experience substantial dilution. We may sell ordinary shares, and we may sell convertible or exchangeable securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell such ordinary shares, convertible or exchangeable securities or other equity securities in subsequent transactions, existing shareholders may be materially diluted. New investors in such subsequent transactions could gain rights, preferences and privileges senior to those of holders of ordinary shares. We also maintain equity incentive plans, including our Amended and Restated 2014 Equity Incentive Plan, 2014 Non-Employee Equity Plan and 2014 Employee Stock Purchase Plan, and intend to grant additional ordinary share awards under these and future plans, which will result in additional dilution to our existing shareholders.
Irish law differs from the laws in effect in the United States and may afford less protection to holders of our securities.

It may not be possible to enforce court judgments obtained in the United States against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the United States currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Acts, which differ in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in a jurisdiction of the United States.

Provisions of our articles of association could delay or prevent a takeover of us by a third-party.

Our articles of association could delay, defer or prevent a third-party from acquiring us, despite the possible benefit to our shareholders, or otherwise adversely affect the price of our ordinary shares. For example, our articles of association:

• impose advance notice requirements for shareholder proposals and nominations of directors to be considered at shareholder meetings;
• stagger the terms of our board of directors into three classes; and
• require the approval of a supermajority of the voting power of the shares of our share capital entitled to vote generally at a meeting of shareholders to amend or repeal our articles of association.

In addition, several mandatory provisions of Irish law could prevent or delay an acquisition of us. For example, Irish law does not permit shareholders of an Irish public limited company to take action by written consent with less than unanimous consent. We are also subject to various provisions of Irish law relating to mandatory bids, voluntary bids, requirements to make a cash offer and minimum price requirements, as well as substantial acquisition rules and rules requiring the disclosure of interests in our ordinary shares in certain circumstances.

These provisions may discourage potential takeover attempts, discourage bids for our ordinary shares at a premium over the market price or adversely affect the market price of, and the voting and other rights of the holders of, our ordinary shares. These provisions could also discourage proxy contests and make it more difficult for you and our other shareholders to elect directors other than the candidates nominated by our board of directors, and could depress the market price of our ordinary shares.
A transfer of our ordinary shares may be subject to Irish stamp duty.

In certain circumstances, the transfer of shares in an Irish incorporated company will be subject to Irish stamp duty, which is a legal obligation of the buyer. This duty is currently charged at the rate of 1.0 percent of the price paid or the market value of the shares acquired, if higher. Because our ordinary shares are traded on a recognized stock exchange in the United States, an exemption from this stamp duty is available to transfers by shareholders who hold ordinary shares beneficially through brokers, which in turn hold those shares through the Depository Trust Company, or DTC, to holders who also hold through DTC. However, a transfer by or to a record holder who holds ordinary shares directly in his, her or its own name could be subject to this stamp duty. We, in our absolute discretion and insofar as the Companies Acts or any other applicable law permit, may, or may provide that one of our subsidiaries will pay Irish stamp duty arising on a transfer of our ordinary shares on behalf of the transferee of such ordinary shares. If stamp duty resulting from the transfer of ordinary shares which would otherwise be payable by the transferee is paid by us or any of our subsidiaries on behalf of the transferee, then in those circumstances, we will, on our behalf or on behalf of such subsidiary (as the case may be), be entitled to (i) seek reimbursement of the stamp duty from the transferee, (ii) set-off the stamp duty against any dividends payable to the transferee of those ordinary shares and (iii) claim a first and permanent lien on the ordinary shares on which stamp duty has been paid by us or such subsidiary for the amount of stamp duty paid. Our lien shall extend to all dividends paid on those ordinary shares.

Dividends paid by us may be subject to Irish dividend withholding tax.

In certain circumstances, as an Irish tax resident company, we will be required to deduct Irish dividend withholding tax (currently at the rate of 20%) from dividends paid to our shareholders. Shareholders that are resident in the United States, EU countries (other than Ireland) or other countries with which Ireland has signed a tax treaty (whether the treaty has been ratified or not) generally should not be subject to Irish withholding tax so long as the shareholder has provided its broker, for onward transmission to our qualifying intermediary or other designated agent (in the case of shares held beneficially), or our or its transfer agent (in the case of shares held directly), with all the necessary documentation by the appropriate due date prior to payment of the dividend. However, some shareholders may be subject to withholding tax, which could adversely affect the price of our ordinary shares.

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

The trading market for our ordinary shares will depend in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our rating or publish inaccurate or unfavorable research about our business, our share price could decline. If one or more of these analysts cease coverage of our company or fail to publish reports on our company regularly, demand for our ordinary shares could decrease, which might cause our share price and trading volume to decline.

Securities class action litigation could divert our management’s attention and harm our business and could subject us to significant liabilities.

The stock markets have from time to time experienced significant price and volume fluctuations that have affected the market prices for the equity securities of pharmaceutical companies. These broad market fluctuations may cause the market price of our ordinary shares to decline. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. For example, following declines in our stock price, two federal securities class action lawsuits were filed in March 2016 against us and certain of our current and former officers alleging violations of the Securities Exchange Act of 1934, as amended. Subsequently, the two actions were consolidated (captioned Schaffer v. Horizon Pharma plc, et al., Case No. 1:16-cv-01763), and plaintiff added claims under the Securities Act and named additional defendants. On January 18, 2018, the District Court dismissed all plaintiffs’ claims against all defendants, and denied the plaintiffs any further opportunity to amend their complaint. On February 16, 2018, plaintiffs filed a notice of appeal to the District Court’s ruling. Even if we are successful in defending this appeal or any similar claims that may be brought in the future, such litigation could result in substantial costs and may be a distraction to our management, and may lead to an unfavorable outcome that could adversely impact our financial condition and prospects.

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Item 2B. Unresolved Staff Comments

None.

Item 2. Properties

<table>
<thead>
<tr>
<th>Location</th>
<th>Approximate Square Footage</th>
<th>Lease Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin, Ireland</td>
<td>18,900</td>
<td>November 3, 2029</td>
</tr>
<tr>
<td>Lake Forest, Illinois (1)</td>
<td>160,000</td>
<td>March 31, 2024</td>
</tr>
<tr>
<td>Novato, California (2)</td>
<td>61,000</td>
<td>August 31, 2021</td>
</tr>
<tr>
<td>Deerfield, Illinois (3)</td>
<td>32,300</td>
<td>June 30, 2018</td>
</tr>
<tr>
<td>Brisbane, California</td>
<td>20,100</td>
<td>November 30, 2019</td>
</tr>
<tr>
<td>Mannheim, Germany</td>
<td>14,300</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>Chicago, Illinois</td>
<td>6,500</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>Other</td>
<td>13,300</td>
<td>March 31, 2018 to May 31, 2020</td>
</tr>
</tbody>
</table>

1. In connection with the Lake Forest lease, we have provided a $2.0 million letter of credit to the landlord, through a commercial bank.

2. In March 2017, we vacated an area of the office space in Novato, California and in March and April 2017, we entered into sublease arrangements for this space with third parties.

3. In January 2016, we vacated the premises in Deerfield, Illinois and began occupying the premises in Lake Forest, Illinois. In April 2017, we entered into a sublease arrangement for a portion of this space with a third party. In June 2017, we terminated a portion of the lease, resulting in 32,300 square feet remaining.

Item 3. Legal Proceedings

For a description of our legal proceedings, see Note 19 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

None.
MARKET INFORMATION

Our ordinary shares trade on The NASDAQ Global Select Market under the trading symbol “HZNP”.

The following table sets forth the high and low sales prices per share of our ordinary shares as reported on The NASDAQ Global Select Market for the periods indicated.

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2017</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First quarter</td>
<td>$18.31</td>
<td>$14.20</td>
</tr>
<tr>
<td>Second quarter</td>
<td>15.90</td>
<td>9.45</td>
</tr>
<tr>
<td>Third quarter</td>
<td>14.22</td>
<td>11.17</td>
</tr>
<tr>
<td>Fourth quarter</td>
<td>15.40</td>
<td>12.66</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2016</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First quarter</td>
<td>$22.02</td>
<td>$13.36</td>
</tr>
<tr>
<td>Second quarter</td>
<td>19.45</td>
<td>13.05</td>
</tr>
<tr>
<td>Third quarter</td>
<td>23.44</td>
<td>16.18</td>
</tr>
<tr>
<td>Fourth quarter</td>
<td>21.98</td>
<td>14.16</td>
</tr>
</tbody>
</table>

HOLDERS OF RECORD

The closing price of our ordinary shares on February 22, 2018 was $13.96. As of February 22, 2018, there were approximately thirteen holders of record of our ordinary shares. Because almost all of our ordinary shares are held by brokers, nominees and other institutions on behalf of shareholders, we are unable to estimate the total number of shareholders represented by these record holders.
The following graph shows a comparison from December 31, 2012 through December 31, 2017 of the cumulative total return for (i) our ordinary shares, (ii) the NASDAQ U.S. Benchmark TR Index and (iii) NASDAQ Pharmaceuticals.

Information set forth in the graph below represents the performance of the Horizon Pharma, Inc. common stock from December 31, 2012 until September 18, 2014, the day before the consummation of the Vidara Merger, and the performance of our ordinary shares from September 19, 2014 through December 31, 2017. Our ordinary shares trade on the same exchange, the NASDAQ Global Select Market, and under the same trading symbol, “HZNP”, as the Horizon Pharma, Inc. common stock prior to the Vidara Merger. The graph assumes an initial investment of $100 on December 31, 2012. The comparisons in the graph are required by the Securities and Exchange Commission and are not intended to forecast or be indicative of possible future performance of our ordinary shares.

### Cumulative Returns

<table>
<thead>
<tr>
<th>Date</th>
<th>Horizon Pharma plc</th>
<th>NASDAQ Pharmaceuticals</th>
<th>NASDAQ U.S. Benchmark TR Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/31/2012</td>
<td>$100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>12/31/2013</td>
<td>$327.04</td>
<td>135.68</td>
<td>133.48</td>
</tr>
<tr>
<td>12/31/2014</td>
<td>$553.22</td>
<td>165.28</td>
<td>150.12</td>
</tr>
<tr>
<td>12/31/2015</td>
<td>$930.04</td>
<td>174.27</td>
<td>150.84</td>
</tr>
<tr>
<td>12/31/2016</td>
<td>$694.42</td>
<td>172.37</td>
<td>170.46</td>
</tr>
<tr>
<td>12/31/2017</td>
<td>$626.61</td>
<td>205.33</td>
<td>206.91</td>
</tr>
</tbody>
</table>

The foregoing graph and table are furnished solely with this report, and are not filed with this report, and shall not be deemed incorporated by reference into any other filing under the Securities Act of 1933, as amended, or the Securities Act, or the Securities Exchange Act of 1934, as amended, whether made by us before or after the date hereof, regardless of any general incorporation language in any such filing, except to the extent we specifically incorporate this material by reference into any such filing.

### Dividend Policy

We have never declared or paid cash dividends on our common equity. We currently intend to retain all available funds and any future earnings to support operations and finance the growth and development of our business and do not intend to pay cash dividends on our ordinary shares for the foreseeable future. Under Irish law, dividends may only be paid, and share repurchases and redemptions must generally be funded only out of, “distributable reserves”. In addition, our ability to pay cash dividends is currently prohibited by the terms of our credit agreement with Citibank, N.A., as administrative and collateral agent, $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023 and the $300.0 million aggregate principal amount of 8.75% Senior Notes due 2024, subject to customary exceptions. Any future determination as to the payment of dividends will, subject to Irish legal requirements, be at the sole discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors our board of directors deems relevant.
Securities Authorized for Issuance under Equity Compensation Plans

See Item 12 of Part III of this Annual Report on Form 10-K regarding information about securities authorized for issuance under our equity compensation plans.

Recent Sales of Unregistered Securities

Except as previously reported in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the Securities and Exchange Commission there were no unregistered sales of equity securities by us during the year ended December 31, 2017.

Issuer Repurchases of Equity Securities

None.

Irish Law Matters

See Irish Law Matters included in Item 1 of Part I of this Annual Report on Form 10-K.

Item 6. Selected Financial Data

The selected statement of comprehensive (loss) income data and selected statement of cash flows data for the years ended December 31, 2017, 2016 and 2015, and the balance sheet data as of December 31, 2017 and 2016 have been derived from our audited financial statements included elsewhere in this Annual Report on Form 10-K. The selected statements of comprehensive loss data and selected statement of cash flows data for the years ended December 31, 2014 and 2013, and the balance sheet data as of December 31, 2015, 2014 and 2013 have been derived from audited financial statements which are not included in this Annual Report on Form 10-K.

Our historical results are not necessarily indicative of future results. The selected financial data should be read in conjunction with "Management’s Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this Annual Report on Form 10-K. The selected financial data for the year ended December 31, 2013 is that of Horizon Pharma, Inc., or HPI, our predecessor, while the selected financial data for the years ended December 31, 2017, 2016, 2015 and 2014 is that of Horizon Pharma plc.

On September 19, 2014, the businesses of HPI and Vidara Therapeutics International Public Limited Company were combined in a merger transaction, on May 7, 2015, we completed our acquisition of Hyperion Therapeutics, Inc., on January 13, 2016, we completed our acquisition of Crealta Holdings LLC and on October 25, 2016, we completed our acquisition of Raptor Pharmaceutical Corp. The financial data presented below include the results of operations of the merged or acquired Vidara, Hyperion, Crealta and Raptor businesses from the applicable dates of merger or acquisition.

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<tr>
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</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$751,368</td>
<td>$509,055</td>
<td>$859,616</td>
<td>$218,807</td>
<td>$80,480</td>
</tr>
<tr>
<td>Working capital</td>
<td>473,199</td>
<td>440,430</td>
<td>748,595</td>
<td>106,024</td>
<td>67,455</td>
</tr>
<tr>
<td>Total assets (1)</td>
<td>4,166,092</td>
<td>4,292,059</td>
<td>3,058,588</td>
<td>1,123,133</td>
<td>246,328</td>
</tr>
<tr>
<td>Total debt, net (1)</td>
<td>1,901,655</td>
<td>1,807,493</td>
<td>1,136,756</td>
<td>334,012</td>
<td>104,494</td>
</tr>
<tr>
<td>Accumulated deficit (2)</td>
<td>(1,252,329)</td>
<td>(848,021)</td>
<td>(681,187)</td>
<td>(720,719)</td>
<td>(457,116)</td>
</tr>
<tr>
<td>Total shareholders’ deficit (2)</td>
<td>991,098</td>
<td>1,263,779</td>
<td>1,313,145</td>
<td>540,204</td>
<td>(49,082)</td>
</tr>
</tbody>
</table>
### Selected Statement of Comprehensive (Loss) Income Data

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Net sales</strong></td>
<td>$1,056,231</td>
<td>$981,120</td>
<td>$757,044</td>
<td>$296,955</td>
<td>$74,016</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td>546,275</td>
<td>393,272</td>
<td>219,502</td>
<td>78,753</td>
<td>14,625</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>509,956</td>
<td>587,848</td>
<td>537,542</td>
<td>218,202</td>
<td>59,391</td>
</tr>
<tr>
<td><strong>Loss before benefit for income taxes</strong></td>
<td>$(513,275)</td>
<td>$(228,085)</td>
<td>$(132,712)</td>
<td>$(269,687)</td>
<td>$(150,126)</td>
</tr>
<tr>
<td><strong>Net (loss) income</strong></td>
<td>$(410,526)</td>
<td>$(166,834)</td>
<td>39,532</td>
<td>$(263,603)</td>
<td>$(149,005)</td>
</tr>
<tr>
<td><strong>Net (loss) income per ordinary share - basic</strong></td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>0.27</td>
<td>$(3.15)</td>
<td>$(2.34)</td>
</tr>
<tr>
<td><strong>Net (loss) income per ordinary share - diluted</strong></td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>0.25</td>
<td>$(3.15)</td>
<td>$(2.34)</td>
</tr>
</tbody>
</table>

### Selected Statement of Cash Flows Data

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net cash provided by (used in) operating activities</strong></td>
<td>$280,208</td>
<td>$369,456</td>
<td>$194,166</td>
<td>$27,549</td>
<td>$(54,287)</td>
</tr>
<tr>
<td><strong>Net cash used in investing activities</strong></td>
<td>$(121,619)</td>
<td>$(1,375,881)</td>
<td>$(995,048)</td>
<td>$(227,720)</td>
<td>$(36,135)</td>
</tr>
<tr>
<td><strong>Net cash provided by financing activities</strong></td>
<td>78,408</td>
<td>657,074</td>
<td>1,442,481</td>
<td>338,285</td>
<td>66,716</td>
</tr>
<tr>
<td><strong>Payments for acquisitions, net of cash acquired</strong></td>
<td>$(187,220)</td>
<td>$(1,356,271)</td>
<td>$(1,022,361)</td>
<td>$(224,220)</td>
<td>$(35,000)</td>
</tr>
<tr>
<td><strong>Proceeds from divestiture, net of cash divested</strong></td>
<td>69,371</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Net proceeds from the issuance of ordinary shares/common stock</strong></td>
<td>4,505</td>
<td>4,884</td>
<td>500,454</td>
<td>41,934</td>
<td>6,637</td>
</tr>
<tr>
<td><strong>Net proceeds from the issuance of debt</strong></td>
<td>1,693,512</td>
<td>656,190</td>
<td>1,241,027</td>
<td>286,966</td>
<td>143,598</td>
</tr>
<tr>
<td><strong>Repayment of debt</strong></td>
<td>$(1,618,617)</td>
<td>$(4,000)</td>
<td>$(299,000)</td>
<td>—</td>
<td>$(64,884)</td>
</tr>
</tbody>
</table>

(1) In 2016, we retrospectively adopted Accounting Standards Update, or ASU, No. 2015-03, *Interest-Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*, simplifying the presentation of debt issuance costs. As a result, deferred financing costs of $11.5 million and $6.3 million that were classified within “total assets” at December 31, 2014 and 2013, respectively, were reclassified to “total debt, net” in the above table to conform prior-period classifications as a result of the new guidance.

(2) On January 1, 2017, we adopted ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*, on a modified retrospective basis and recorded a decrease of $7.2 million in net deferred tax liabilities and a corresponding decrease in accumulated deficit during the year ended December 31, 2017.
You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes appearing at the end of this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should read the “Risk Factors” section of this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

The discussion below contains “forward-looking statements,” as defined in Section 21E of the Securities Exchange Act of 1934, as amended, that reflect our current expectations regarding our future growth, results of operations, cash flows, performance and business prospects and opportunities, as well as assumptions made by, and information currently available to, our management. We have tried to identify forward-looking statements by using words such as “anticipate,” “believe,” “plan,” “expect,” “intend,” “will,” and similar expressions, but these words are not the exclusive means of identifying forward-looking statements. These statements are based on information currently available to us and are subject to various risks, uncertainties, and other factors, including, but not limited to, those matters discussed in Item 1A. “Risk Factors” in Part I of this Annual Report on Form 10-K, that could cause our actual growth, results of operations, cash flows, performance and business prospects and opportunities to differ materially from those expressed in, or implied by, these statements. Except as expressly required by the federal securities laws, we undertake no obligation to update such factors or to publicly announce the results of any of the forward-looking statements contained herein to reflect future events, developments, or changed circumstances, or for any other reason.

OVERVIEW

Unless otherwise indicated or the context otherwise requires, references to “we”, “us” and “our” refer to Horizon Pharma plc and its consolidated subsidiaries.

Beginning in the first quarter of 2017, we modified our presentation of certain operating expenses. Previously, we presented “general and administrative” expenses as one line item in our consolidated statement of comprehensive (loss) income, and “selling and marketing” expenses as another. For the year ended December 31, 2017 presentation and prior-period comparisons, we now combine these two line items into one line item, titled “selling, general and administrative” expenses.
Our Business

We are a biopharmaceutical company focused on researching, developing and commercializing innovative medicines that address unmet treatment needs for rare and rheumatic diseases. By fostering a growing pipeline of medicines in development and exploring all potential uses for currently marketed medicines, we strive to make a powerful difference for patients, their caregivers and physicians.

Our marketed medicines are:

**Orphan Business Unit**
- RAVICTI® (glycerol phenylbutyrate) Oral Liquid
- PROCYSBI® (cysteamine bitartrate) delayed-release capsules
- ACTIMMUNE® (interferon gamma-1b); marketed as IMUKIN® outside the United States, Canada and Japan
- BUPHENYL® (sodium phenylbutyrate) Tablets and Powder; marketed as AMMONAPS® in certain European countries and Japan
- QUINSAIR™ (levofloxacin inhalation solution)

**Rheumatology Business Unit**
- KRYSTEXXA® (pegloticase)
- RAYOS® (prednisone) delayed-release tablets; marketed as LODOTRA® outside the United States

**Primary Care Business Unit**
- PENNSAID® (diclofenac sodium topical solution) 2% w/w, or PENNSAID 2%
- DUEXIS® (ibuprofen/famotidine)
- VIMOVO® (naproxen/esomeprazole magnesium)
- MIGERGOT® (ergotamine tartrate & caffeine suppositories)

During the years ended December 31, 2017, 2016 and 2015, we completed the following acquisitions and divestitures:

- On June 30, 2017, we completed our acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International GmbH, or Boehringer Ingelheim International, in all territories outside of the United States, Canada and Japan.
- On June 23, 2017, we sold our European subsidiary that owned the marketing rights to PROCYSBI® (cysteamine bitartrate) delayed-release capsules and QUINSAIR™ (levofloxacin inhalation solution) in Europe, the Middle East and Africa, or EMEA, regions, or the Chiesi divestiture, to Chiesi Farmaceutici S.p.A., or Chiesi.
- On May 8, 2017, we completed our acquisition of River Vision Development Corp., or River Vision, which added the late development-stage rare disease biologic medicine candidate teprotumumab to our research and development pipeline.
- On October 25, 2016, we completed our acquisition of Raptor Pharmaceutical Corp., or Raptor, which added the rare disease medicines PROCYSBI and QUINSAIR to our medicine portfolio.
- On January 13, 2016, we completed our acquisition of Crealta Holdings LLC, or Crealta, which added the rare disease medicine KRYSTEXXA and the primary care medicine MIGERGOT to our medicine portfolio.
- On May 7, 2015, we completed our acquisition of Hyperion Therapeutics, Inc., or Hyperion, which added the rare disease medicines RAVICTI and BUPHENYL to our medicine portfolio.

The consolidated financial statements presented herein include the results of operations of the acquired Hyperion, Crealta and Raptor businesses from the applicable dates of acquisition. See Note 4 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K, for further details of our acquisitions and divestitures.
Our strategy is to continue the transformation of Horizon Pharma plc into a balanced, diversified, sustainable-growth biopharmaceutical company predominantly focused on rare disease medicines. We are executing on our strategy by accelerating the growth of our rare disease medicine portfolio through differentiated commercial strategies, business development efforts, and the expansion of our pipeline with post-marketing and development-stage programs. We are strongly committed to helping ensure patient access to their medicines and support services, and by investing in the further development of medicines for patients with rare or underserved diseases.

**Orphan Business Unit**

The rare disease medicines in our orphan business unit are RAVICTI, PROCYSBI, ACTIMMUNE, BUPHENYL and QUINSAIR. Our strategy for RAVICTI is to drive growth through increased awareness and diagnosis of urea cycle disorders, and to drive conversion from older-generation nitrogen scavengers, such as generic forms of sodium phenylbutyrate, to RAVICTI, based on the medicine’s differentiated benefits. With respect to PROCYSBI, our strategy is to drive conversion of patients from older-generation immediate-release capsules of cysteamine bitartrate to PROCYSBI, increase the uptake of diagnosed but untreated patients and identify previously undiagnosed patients who are suitable for treatment. Our strategy with respect to ACTIMMUNE includes driving growth by increasing awareness and diagnosis of chronic granulomatous disease and increasing the length and persistence of treatment.

With our May 2017 acquisition of River Vision, we added the late-stage rare disease biologic medicine candidate teprotumumab to our pipeline. Teprotumumab, which successfully completed a Phase 2 clinical trial and is currently enrolling patients in a Phase 3 confirmatory trial, targets the treatment of moderate-to-severe thyroid eye disease, a debilitating autoimmune condition that presents in patients with Graves’ disease. Our strategy for teprotumumab is to support its continued clinical development and pursue regulatory approval. The River Vision acquisition further demonstrates our commitment to rare disease medicines and expands and diversifies our rare disease medicine pipeline to support sustainable longer-term growth. Our Phase 3 clinical trial evaluating teprotumumab for the treatment of moderate-to-severe active thyroid eye disease was initiated during the fourth quarter of 2017, and we anticipate that data from the trial will be available during the second half of 2019.

**Rheumatology Business Unit**

The rare disease medicine KRISTEXXA is the primary marketed medicine in our rheumatology business unit. We are focused on optimizing and maximizing the peak sales potential of KRISTEXXA by expanding our commercialization efforts, as well as investing in education, patient and physician outreach, and investigation programs that demonstrate KRISTEXXA as an effective treatment of chronic refractory gout, or, uncontrolled gout, which is refractory (unresponsive) to conventional therapies. We believe that KRISTEXXA represents a significant opportunity and potential growth driver for our rheumatology business unit. The rheumatology business unit also includes RAYOS/LODOTRA.

**Primary Care Business Unit**

Our strategy for the primary care business unit, which includes PENNSAID 2%, DUEXIS, VIMOVO and MIGERGOT, is to educate physicians about these clinically differentiated medicines and the benefits they offer. Patients are able to fill prescriptions for these medicines through pharmacies participating in our HorizonCares patient access program, as well as other pharmacies. In addition, we have evolved our commercial strategy to enter into business arrangements with pharmacy benefit managers, or PBMs, and other payers to secure formulary status and reimbursement of our medicines. The business arrangements with the PBMs generally require us to pay administrative fees and rebates to the PBMs and other payers for qualifying prescriptions.

For all of our business units we market our medicines in the United States through our field sales force, which numbered approximately 430 representatives as of December 31, 2017.
# RESULTS OF OPERATIONS

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

<table>
<thead>
<tr>
<th></th>
<th>For the Years Ended December 31, 2017</th>
<th>2017 (in thousands)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>$1,056,231</td>
<td>$981,120</td>
<td>$75,111</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>546,275</td>
<td>393,272</td>
<td>153,003</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>509,956</td>
<td>587,848</td>
<td>(77,892)</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development</td>
<td>224,962</td>
<td>60,707</td>
<td>164,255</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>677,363</td>
<td>608,308</td>
<td>69,055</td>
</tr>
<tr>
<td>Impairment of in-process research and development</td>
<td>---</td>
<td>66,000</td>
<td>(66,000)</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>902,325</td>
<td>735,015</td>
<td>167,310</td>
</tr>
<tr>
<td>Operating (loss) income</td>
<td>(392,369)</td>
<td>(147,167)</td>
<td>(245,202)</td>
</tr>
<tr>
<td>Other expense, net:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest expense, net</td>
<td>(126,523)</td>
<td>(86,610)</td>
<td>(39,913)</td>
</tr>
<tr>
<td>Foreign exchange loss</td>
<td>(260)</td>
<td>(1,005)</td>
<td>745</td>
</tr>
<tr>
<td>Gain on divestiture</td>
<td>6,267</td>
<td>—</td>
<td>6,267</td>
</tr>
<tr>
<td>Loss on debt extinguishment</td>
<td>(978)</td>
<td>—</td>
<td>(978)</td>
</tr>
<tr>
<td>Other income (expense), net</td>
<td>588</td>
<td>6,697</td>
<td>(6,109)</td>
</tr>
<tr>
<td><strong>Total other expense, net</strong></td>
<td>(120,906)</td>
<td>(80,918)</td>
<td>(39,988)</td>
</tr>
<tr>
<td>Loss before benefit for income taxes</td>
<td>(513,275)</td>
<td>(228,085)</td>
<td>(285,190)</td>
</tr>
<tr>
<td>Benefit for income taxes</td>
<td>(102,749)</td>
<td>(61,251)</td>
<td>(41,498)</td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td>(410,526)</td>
<td>(166,834)</td>
<td>(243,692)</td>
</tr>
</tbody>
</table>

Net sales. Net sales increased $75.1 million, or 8%, to $1,056.2 million during the year ended December 31, 2017, from $981.1 million during the year ended December 31, 2016, primarily due to lower net sales during the year ended December 31, 2016, as a result of the $65.0 million litigation settlement with Express Scripts, Inc., or Express Scripts.

The following table presents a summary of total net sales attributed to geographic sources for the years ended December 31, 2017 and 2016 (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2017</th>
<th></th>
<th>Year Ended December 31, 2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>% of Total Net Sales</td>
<td>Amount</td>
<td>% of Total Net Sales</td>
</tr>
<tr>
<td>United States</td>
<td>$1,026,527</td>
<td>97%</td>
<td>$964,041</td>
<td>98%</td>
</tr>
<tr>
<td>Rest of world</td>
<td>29,704</td>
<td>3%</td>
<td>17,079</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total net sales</strong></td>
<td>$1,056,231</td>
<td></td>
<td>$981,120</td>
<td></td>
</tr>
</tbody>
</table>
The following table reflects the components of net sales for the years ended December 31, 2017 and 2016 (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>Change $</th>
<th>Change %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>RAVIDIA</td>
<td>$193,918</td>
<td>$151,532</td>
<td>$42,386</td>
</tr>
<tr>
<td>PENNSAID 2%</td>
<td>191,050</td>
<td>304,433</td>
<td>(113,383)</td>
</tr>
<tr>
<td>KRYSTESXXA</td>
<td>156,483</td>
<td>91,102</td>
<td>65,381</td>
</tr>
<tr>
<td>PROCYSBI</td>
<td>137,740</td>
<td>25,268</td>
<td>112,472</td>
</tr>
<tr>
<td>DUEXIS</td>
<td>121,161</td>
<td>173,728</td>
<td>(52,567)</td>
</tr>
<tr>
<td>ACTIMMUNE</td>
<td>110,993</td>
<td>104,624</td>
<td>6,369</td>
</tr>
<tr>
<td>VIMOVO</td>
<td>57,666</td>
<td>121,315</td>
<td>(63,649)</td>
</tr>
<tr>
<td>RAYOS</td>
<td>52,125</td>
<td>47,356</td>
<td>4,769</td>
</tr>
<tr>
<td>BUPHENYL</td>
<td>20,792</td>
<td>16,879</td>
<td>3,913</td>
</tr>
<tr>
<td>MIGERGOT</td>
<td>5,468</td>
<td>4,651</td>
<td>817</td>
</tr>
<tr>
<td>LODOTRAX</td>
<td>5,393</td>
<td>4,193</td>
<td>1,200</td>
</tr>
<tr>
<td>QUINSAIR</td>
<td>3,442</td>
<td>1,039</td>
<td>2,403</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>—</td>
<td>(65,000)</td>
<td>65,000</td>
</tr>
<tr>
<td>Total net sales</td>
<td>$1,056,231</td>
<td>$981,120</td>
<td>$75,111</td>
</tr>
</tbody>
</table>

Net sales were higher during the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to lower net sales during the year ended December 31, 2016 as a result of the $65.0 million litigation settlement with Express Scripts, the recognition of PROCYSBI sales following the acquisition of Raptor in October 2016 and higher net sales of KRYSTESXXA and RAVIDIA, offset by lower net sales of PENNSAID 2%, VIMOVO and DUEXIS.

RAVIDIA. Net sales increased $42.4 million, or 28%, to $193.9 million during the year ended December 31, 2017, from $151.5 million during the year ended December 31, 2016. Net sales in the United States increased by approximately $39.4 million, which was composed of $31.5 million resulting from prescription volume growth and $7.9 million due to higher net pricing. Net sales outside the United States increased by approximately $3.0 million due to higher sales volume.

PENNSAID 2%. Net sales decreased $113.4 million, or 37%, to $191.1 million during the year ended December 31, 2017, from $304.5 million during the year ended December 31, 2016. Net sales decreased by approximately $90.2 million due to lower net pricing, as further described after the next table, and approximately $23.2 million due to higher sales volume.

KRYSTESXXA. Net sales increased $65.4 million, or 72%, to $156.5 million during the year ended December 31, 2017, from $91.1 million during the year ended December 31, 2016. Net sales increased by approximately $40.1 million resulting from prescription volume growth and approximately $25.3 million due to higher net pricing.

PROCYSBI. Net sales increased $112.5 million, or 445%, to $137.7 million during the year ended December 31, 2017, from $25.2 million during the year ended December 31, 2016. Net sales increased by approximately $101.8 million resulting from prescription volume growth and approximately $10.7 million due to higher net pricing. We began recognizing PROCYSBI sales following our acquisition of Raptor in October 2016.

DUEXIS. Net sales decreased $52.6 million, or 30%, to $121.2 million during the year ended December 31, 2017, from $173.8 million during the year ended December 31, 2016. Net sales decreased by approximately $59.4 million due to lower net pricing, as further described after the next table, partially offset by an increase of $6.8 million resulting from prescription volume growth.

ACTIMMUNE. Net sales increased $6.4 million, or 6%, to $111.0 million during the year ended December 31, 2017, from $104.6 million during the year ended December 31, 2016. Net sales increased by approximately $12.9 million due to higher net pricing, partially offset by a decrease of approximately $6.5 million resulting from lower prescription volume.

VIMOVO. Net sales decreased $63.6 million, or 52%, to $57.7 million during the year ended December 31, 2017, from $121.3 million during the year ended December 31, 2016. Net sales decreased by approximately $47.1 million due to lower net pricing, as further described after the next table, and approximately $16.5 million resulting from lower prescription volume.
RAYOS. Net sales increased $4.8 million, or 10%, to $52.1 million during the year ended December 31, 2017, from $47.3 million during the year ended December 31, 2016. Net sales increased by approximately $17.2 million resulting from prescription volume growth, partially offset by a decrease of approximately $12.4 million due to lower net pricing.

BUPHENYL. Net sales increased $3.9 million, or 23%, to $20.8 million during the year ended December 31, 2017, from $16.9 million during the year ended December 31, 2016. Net sales increased by approximately $7.3 million due to higher net pricing, partially offset by a decrease of approximately $3.4 million resulting from lower prescription volume.

MIGERGOT. Net sales increased $0.8 million, or 18%, to $5.5 million during the year ended December 31, 2017, from $4.7 million during the year ended December 31, 2016. Net sales increased by approximately $1.1 million due to higher net pricing, partially offset by a decrease of approximately $0.3 million resulting from lower prescription volume.

LODOTRA. Net sales increased $1.2 million, or 29%, to $5.4 million during the year ended December 31, 2017, from $4.2 million during the year ended December 31, 2016. The increase was due to increased shipments to our European distribution partner, Mundipharma International Corporation Limited, or Mundipharma. LODOTRA sales to Mundipharma occur at the time we ship, based on Mundipharma’s estimated requirements. Accordingly, LODOTRA sales are not linear or directly tied to Mundipharma’s in-market sales and can therefore fluctuate significantly from period to period.

QUINSAIR. Net sales increased $2.4 million, or 231%, to $3.4 million during the year ended December 31, 2017, from $1.0 million during the year ended December 31, 2016. Net sales increased by approximately $2.7 million resulting from prescription volume growth, partially offset by a decrease of approximately $0.3 million due to lower net pricing. We began recognizing QUINSAIR sales following our acquisition of Raptor in October 2016. In June 2017, following the Chiesi divestiture, our QUINSAIR sales in EMEA ceased, and post-June 2017 sales were in Canada and Latin America.

In September 2016, we entered into a settlement agreement and mutual release with Express Scripts pursuant to which we and Express Scripts were released from any and all claims relating to our then ongoing litigation without admitting any fault or wrongdoing and we agreed to pay Express Scripts $65.0 million. This settlement was accounted for as a reduction of net sales in the consolidated statement of comprehensive loss for the year ended December 31, 2016.

The table below reconciles our gross to net sales for the years ended December 31, 2017 and 2016 (in millions):

<table>
<thead>
<tr>
<th>Year Ended December 31, 2017</th>
<th>Year Ended December 31, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount</strong></td>
<td><strong>% of Gross Sales</strong></td>
</tr>
<tr>
<td>Gross sales</td>
<td>$ 4,057.8</td>
</tr>
<tr>
<td>Adjustments to gross sales:</td>
<td></td>
</tr>
<tr>
<td>Prompt pay discounts</td>
<td>(80.2)</td>
</tr>
<tr>
<td>Medicine returns</td>
<td>(45.6)</td>
</tr>
<tr>
<td>Co-pay and other patient assistance</td>
<td>(1,907.6)</td>
</tr>
<tr>
<td>Wholesaler fees and commercial rebates</td>
<td>(641.5)</td>
</tr>
<tr>
<td>Government rebates and chargebacks</td>
<td>(326.7)</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total adjustments</strong></td>
<td>(3,001.6)</td>
</tr>
<tr>
<td>Net sales</td>
<td>$ 1,056.2</td>
</tr>
</tbody>
</table>
During the year ended December 31, 2017, wholesaler fees and commercial rebates, as a percentage of gross sales, increased to 15.8% from 4.2% during the year ended December 31, 2016, and co-pay and other patient assistance, as a percentage of gross sales, decreased to 47.0% from 52.6% during the year ended December 31, 2016. During the second half of 2016, we entered into business arrangements with PBMs and other payers in an effort to secure formulary status and reimbursement of our medicines, such as our arrangements with Express Scripts, CVS Caremark and Prime Therapeutics LLC, which resulted in lower co-pay and other patient assistance costs as a percentage of gross sales during the year ended December 31, 2017. The mix of PBM healthcare plans that adopted our primary care medicines onto their formulary during 2017 was more heavily weighted towards those plans for which we pay a higher commercial rebate. In addition, we also experienced a higher rate of managed care control in our non-contracted business, which resulted in significantly lower net pricing during the year ended December 31, 2017, when compared to the year ended December 31, 2016.

On a quarter-to-quarter basis, our net sales have traditionally been lower in first half of the year, particularly in the first quarter, with the second half of the year representing a greater share of overall net sales each year. This is due to annual managed care plan changes and the re-setting of patients’ medical insurance deductibles at the beginning of each year, resulting in higher co-pay and other patient assistance costs as patients meet their annual medical insurance deductibles during the first and second quarters, and higher net sales in the second half of the year after patients meet their deductibles and healthcare plans reimburse a greater portion of the total cost of our medicines.

Cost of Goods Sold. Cost of goods sold increased $153.0 million to $546.3 million during the year ended December 31, 2017, from $393.3 million during the year ended December 31, 2016. As a percentage of net sales, cost of goods sold was 51.7% during the year ended December 31, 2017, compared to 40.1% during the year ended December 31, 2016. Costs of goods sold as a percentage of net sales was higher during the year ended December 31, 2016 due to the one-time reduction in net sales in the year ended December 31, 2016 as a result of the litigation settlement with Express Scripts. Additionally, we recorded an increase in cost of goods sold in the year ended December 31, 2017. The increase in cost of goods sold was primarily attributable to a $59.9 million increase in intangible amortization expense, a $48.0 million increase in inventory step-up expense, a $20.7 million increase in royalty remeasurement expense, a $10.7 million increase in drug substance harmonization costs, a $10.5 million increase in royalty accretion expense and a $9.6 million increase in employee costs, which reflects the increase in manufacturing activities resulting from the growth of our medicine portfolio. During the year ended December 31, 2016 we recorded a loss of $14.3 million in relation to purchase commitments with Boehringer Ingelheim, which related to additional units of ACTIMMUNE following the cancellation of the Phase 3 trial, Safety, Tolerability and Efficacy of ACTIMMUNE Dose Escalation in Friedreich’s Ataxia study, or the FA program. During the year ended December 31, 2017, we updated our forecast for future demand and renegotiated our purchase commitments with Boehringer Ingelheim and recorded additional net expense of $1.7 million to cost of goods sold.

The increase in intangible amortization of $59.9 million during the year ended December 31, 2017 compared to the prior year was primarily due to an increase of $59.1 million in amortization of developed technology related to PROCYSBI (acquired in October 2016).

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on our gross profit, gross margin percentage and net income (loss) for all affected periods, we disclose balance sheet and income statement amounts related to inventory step-up within the Notes to the consolidated financial statements. The increase in inventory step-up expense of $48.0 million recorded to cost of goods sold during the year ended December 31, 2017 compared to the prior year was primarily due to KRYSTEXXA inventory step-up expense of $78.3 million (acquired in January 2016) and PROCYSBI and QUINSAIR inventory step-up expense of $40.8 million (acquired in October 2016) recorded during the year ended December 31, 2017, compared to $48.8 million recorded during the year ended December 31, 2016 related to KRYSTEXXA and MIGERGOT inventory step-up expense and $22.3 million recorded related to PROCYSBI and QUINSAIR inventory step-up expense.
Research and Development Expenses. Research and development expenses increased $164.3 million to $225.0 million during the year ended December 31, 2017, from $60.7 million during the year ended December 31, 2016. The increase was primarily attributable to $150.3 million related to the acquisition of River Vision during the year ended December 31, 2017. Pursuant to Accounting Standards Codification Topic 805, Business Combinations, or ASC 805, as amended by ASU No. 2017-01, we accounted for the River Vision acquisition as the purchase of an in-process research and development, or IPR&D, asset and, pursuant to ASC Topic 730, Research and Development, recorded the purchase price as a research and development expense during the year ended December 31, 2017. Additionally, during the year ended December 31, 2017, we entered into an agreement to license HZN-003 (formerly MEDI4945), a rheumatology pipeline program with the objective of enhancing our leadership position in the uncontrolled gout market, from MedImmune LLC, or MedImmune, and we paid MedImmune an upfront cash payment of $12.0 million which we recorded as a “research and development” expense in the consolidated statement of comprehensive loss during the year ended December 31, 2017 and included in “accrued expenses” as of December 31, 2017. The upfront payment was subsequently paid in January 2018.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased $69.1 million to $677.4 million during the year ended December 31, 2017, from $608.3 million during the year ended December 31, 2016. The increase was primarily attributable to an increase of $22.9 million in employee costs related to our growth in headcount following the Raptor acquisition in October 2016, an increase of $24.2 million in marketing program costs and the impairment of $22.3 million paid to Boehringer Ingelheim International upon closing of the acquisition of certain rights to interferon gamma-1b during the year ended December 31, 2017, compared to $5.3 million recorded as an impairment during the year ended December 31, 2016.

Impairment of In-Process Research and Development. At the time of the merger of the businesses of Horizon Pharma, Inc., or HPI, and Vidara on September 19, 2014, or the Vidara Merger, IPR&D was considered separable from the business as the project could be sold to a third party, and we assigned a fair value of $66.0 million to an intangible asset. On December 8, 2016, we announced the discontinuation of the FA program. Following this announcement, we determined that the IPR&D has no alternative use or economic value, and we recorded an impairment charge during the year ended December 31, 2016 to fully write off the value of the asset on our consolidated balance sheet.

Interest Expense, Net. Interest expense, net, increased $39.9 million to $126.5 million during the year ended December 31, 2017, from $86.6 million during the year ended December 31, 2016. The increase was primarily due to higher borrowings, including our $300.0 million aggregate principal amount of 8.75% Senior Notes due 2024, or the 2024 Senior Notes, in connection with our acquisition of Raptor in October 2016, and our $850.0 million principal amount of secured loans under our 2017 term loan facility, of which $375.0 million was in connection with our acquisition of Raptor, compared to the $397.0 million principal amount of secured loans from previous borrowings under our senior secured loan facility.

Gain on divestiture. During the year ended December 31, 2017, we completed the Chiesi divestiture for an upfront payment of $72.5 million, which reflects $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds, and we recorded a gain of $6.3 million on the divestiture.

Foreign Exchange Loss. During the year ended December 31, 2017, we reported a foreign exchange loss of $0.3 million.

Loss on Debt Extinguishment. During the year ended December 31, 2017, we entered into two refinancing amendments for our term loans. We accounted for a portion of the repayments under these refinancing amendments as a debt extinguishment and recorded a loss on debt extinguishment of $1.0 million in the consolidated statements of comprehensive loss, which reflected the write-off of the unamortized portion of debt discount and deferred financing costs previously incurred and a one percent prepayment penalty fee.

Benefit for Income Taxes. During the year ended December 31, 2017, we recorded a benefit for income taxes of $102.7 million compared to $61.3 million during the year ended December 31, 2016. The increase in benefit for income taxes during the year ended December 31, 2017, compared to year ended December 31, 2016, was primarily due to a provisional $74.9 million net benefit recorded following the enactment in the United States of H.R. 1, “An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018”, informally titled the Tax Cuts and Jobs Act, or the Tax Act, in December 2017, which net benefit included a $134.2 million tax benefit from the revaluation of our U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of the $59.2 million deferred tax asset related to our U.S. interest expense carryforwards under Section 163(j) of the Internal Revenue Code of 1986, as amended, or the Code. Additionally, during the year ended December 31, 2017, we recorded an increase in pre-tax losses which resulted in an increase in the benefit for income taxes during the year.
During the year ended December 31, 2017, the first of three tranches of our outstanding performance stock unit awards, or PSUs, expired without payout as the minimum total compounded annual shareholder rate of return was not achieved. As a result, we wrote off to income tax expense $16.4 million of deferred tax assets related to previously recognized share-based compensation. During the years ended December 31, 2017, 2016 and 2015, we recorded share-based compensation expense of $49.6 million, $48.6 million and $37.7 million, respectively, related to these PSUs.

In relation to the remaining outstanding PSUs, if our share price is lower than $32.70 and $33.86 for the twenty trading days ending March 22, 2018 and June 22, 2018, respectively, approximately $9.3 million and $8.4 million, respectively, of deferred tax assets at December 31, 2017, related to previously recognized share-based compensation expense will be charged to income tax expense.
Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

<table>
<thead>
<tr>
<th>Net sales</th>
<th>For the Years Ended December 31,</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td>(in thousands)</td>
<td>($981,120)</td>
<td>($757,044)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>393,272</td>
<td>219,502</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$587,848</td>
<td>$537,542</td>
</tr>
</tbody>
</table>

Operating expenses

| Research and development | 60,707 | 41,865 | 18,842 |
| Selling, general and administrative | 608,308 | 440,305 | 168,003 |
| Impairment of in-process research and development | 66,000 | — | 66,000 |
| **Total operating expenses** | $735,015 | $482,170 | $252,845 |

Operating (loss) income

| Operating (loss) income | ($147,167) | $55,372 | ($202,539) |

Other income (expense), net:

| Interest expense, net | $(86,610) | $(69,900) | $(16,710) |
| Foreign exchange loss | $(1,005) | $(1,237) | 232 |
| Loss on induced conversion of debt and debt extinguishment | — | $(77,624) | 77,624 |
| Loss on sale of long-term investments | — | $(29,032) | 29,032 |
| Other income (expense), net | 6,697 | $(10,291) | 16,988 |
| **Total other expense, net** | $(80,918) | $(188,084) | 107,166 |

Loss before benefit for income taxes

| Loss before benefit for income taxes | $(228,085) | $(132,712) | $(95,373) |

Benefit for income taxes

| Benefit for income taxes | $(61,251) | $(172,244) | 110,993 |

Net (loss) income

| Net (loss) income | $$(166,834) | $39,532 | $$206,366 |

Net sales. Net sales increased $224.1 million, or 30%, to $981.1 million during the year ended December 31, 2016, from $757.0 million during the year ended December 31, 2015.

The following table presents a summary of total net sales attributed to geographic sources for the years ended December 31, 2016 and 2015 (in thousands):

<table>
<thead>
<tr>
<th>Year Ended December 31, 2016</th>
<th>Year Ended December 31, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>% of Total Net Sales</td>
</tr>
<tr>
<td>United States</td>
<td>$964,041</td>
</tr>
<tr>
<td>Rest of world</td>
<td>17,079</td>
</tr>
<tr>
<td><strong>Total net sales</strong></td>
<td><strong>$981,120</strong></td>
</tr>
</tbody>
</table>
The following table reflects the components of net sales for the years ended December 31, 2016 and 2015 (in thousands):

<table>
<thead>
<tr>
<th>Product/Category</th>
<th>Year Ended December 31, 2016</th>
<th>Change</th>
<th>Year Ended December 31, 2015</th>
<th>Change</th>
<th>Change %</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENNSAID 2%</td>
<td>$304,433</td>
<td>$157,423</td>
<td>$304,433</td>
<td>$(147,010)</td>
<td>107%</td>
</tr>
<tr>
<td>DUEXIS</td>
<td>173,728</td>
<td>(16,629)</td>
<td>190,357</td>
<td>$7,044</td>
<td>(9)%</td>
</tr>
<tr>
<td>RAVICTI</td>
<td>151,532</td>
<td>64,657</td>
<td>86,875</td>
<td>64,657</td>
<td>74%</td>
</tr>
<tr>
<td>VIMOVO</td>
<td>121,315</td>
<td>(45,357)</td>
<td>166,672</td>
<td>121,315</td>
<td>(27)%</td>
</tr>
<tr>
<td>ACTIMMUNE</td>
<td>104,624</td>
<td>(2,820)</td>
<td>107,444</td>
<td>$91,102</td>
<td>(3)%</td>
</tr>
<tr>
<td>KRYSSEXKA</td>
<td>91,102</td>
<td>$7,027</td>
<td>—</td>
<td>91,102</td>
<td></td>
</tr>
<tr>
<td>RAYOS</td>
<td>47,356</td>
<td>3,421</td>
<td>40,329</td>
<td>$16,792</td>
<td>17%</td>
</tr>
<tr>
<td>PROCYSBI</td>
<td>25,266</td>
<td>—</td>
<td>25,268</td>
<td>$25,268</td>
<td>*</td>
</tr>
<tr>
<td>BUPHENYL</td>
<td>16,879</td>
<td>3,619</td>
<td>13,458</td>
<td>3,421</td>
<td>25%</td>
</tr>
<tr>
<td>LODOTRA</td>
<td>4,193</td>
<td>(706)</td>
<td>4,899</td>
<td>$1,706</td>
<td>(14)%</td>
</tr>
<tr>
<td>QUINSAIR</td>
<td>1,039</td>
<td>—</td>
<td>1,039</td>
<td>$1,039</td>
<td>*</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>(65,000)</td>
<td>—</td>
<td>—</td>
<td>(65,000)</td>
<td>*</td>
</tr>
<tr>
<td><strong>Total net sales</strong></td>
<td><strong>$981,120</strong></td>
<td><strong>$224,076</strong></td>
<td><strong>$757,044</strong></td>
<td><strong>$224,076</strong></td>
<td><strong>30%</strong></td>
</tr>
</tbody>
</table>

* Percentage change is not meaningful.

The increase in net sales during the year ended December 31, 2016 was primarily due to the growth in net sales of PENNSAID 2%, the full-period recognition of RAVICTI sales in 2016, compared to a partial period recognition in 2015 following the acquisition of Hyperion in May 2015, the recognition of KRYSSEXKA sales following the acquisition of Crealta in January 2016 and the recognition of PROCYSBI sales following the acquisition of Raptor in October 2016, offset by the $65.0 million litigation settlement with Express Scripts along with lower net sales of VIMOVO and DUEXIS.

**PENNSAID 2%**. Net sales increased $157.4 million, or 107%, to $304.4 million during the year ended December 31, 2016, from $147.0 million during the year ended December 31, 2015. Net sales increased by approximately $87.5 million due to higher net pricing and $69.9 million resulting from prescription volume growth.

**DUEXIS**. Net sales decreased $16.6 million, or 9%, to $173.7 million during the year ended December 31, 2016, from $190.3 million during the year ended December 31, 2015. Net sales decreased by approximately $50.4 million due to lower net pricing resulting from higher co-pay and other patient assistance, offset by an increase of approximately $33.8 million resulting from prescription volume growth.

**RAVICTI**. Net sales increased $64.7 million, or 74%, to $151.5 million during the year ended December 31, 2016, from $86.8 million during the year ended December 31, 2015. Net sales increased by approximately $55.7 million resulting from prescription volume growth and $9.0 million due to higher net pricing. We began recognizing RAVICTI sales following the acquisition of Hyperion in May 2015, therefore only a partial period of RAVICTI sales were recognized during the year ended December 31, 2015, compared with full-period recognition of sales during the year ended December 31, 2016.

**VIMOVO**. Net sales decreased $45.4 million, or 27%, to $121.3 million during the year ended December 31, 2016, from $166.7 million during the year ended December 31, 2015. Net sales decreased by approximately $35.9 million due to lower net pricing resulting from higher co-pay and other patient assistance and approximately $9.5 million resulting from lower prescription volumes.

**ACTIMMUNE**. Net sales decreased $2.8 million, or 3%, to $104.6 million during the year ended December 31, 2016, from $107.4 million during the year ended December 31, 2015. Net sales decreased by approximately $8.8 million resulting from prescription volume decreases, offset by an increase of approximately $6.0 million due to higher net pricing.

**KRYSSEXKA**. Net sales were $91.1 million during the year ended December 31, 2016. We began recognizing KRYSSEXKA sales following the acquisition of Crealta in January 2016.
RAYOS. Net sales increased $7.0 million, or 17%, to $47.4 million during the year ended December 31, 2016, from $40.4 million during the year ended December 31, 2015. Net sales increased by approximately $8.4 million resulting from prescription volume growth, offset by a decrease of approximately $1.4 million due to lower net pricing.

PROCYSBI. Net sales were $25.3 million during the year ended December 31, 2016. We began recognizing PROCYSBI sales following the acquisition of Raptor in October 2016.

BUPHENYL. Net sales increased $3.4 million, or 25%, to $16.9 million during the year ended December 31, 2016, from $13.5 million during the year ended December 31, 2015. We began recognizing BUPHENYL sales following the acquisition of Hyperion in May 2015, therefore only a partial period of BUPHENYL sales were recognized during the year ended December 31, 2015, compared with full-period recognition of sales during the year ended December 31, 2016.

MIGERGOT. Net sales were $4.7 million during the year ended December 31, 2016. We began recognizing MIGERGOT sales following the acquisition of Crealta in January 2016.

LODOTRA. Net sales decreased $0.7 million, or 14%, to $4.2 million during the year ended December 31, 2016, from $4.9 million during the year ended December 31, 2015. The decrease was due to fewer shipments to our European distribution partner, Mundipharma International Corporation Limited, or Mundipharma. LODOTRA sales to Mundipharma occur at the time we ship, based on Mundipharma’s estimated requirements. Accordingly, LODOTRA sales are not linear or directly tied to Mundipharma’s in-market sales and can therefore fluctuate significantly.

QUINSAIR. Net sales were $1.0 million during the year ended December 31, 2016. We began recognizing QUINSAIR sales following the acquisition of Raptor in October 2016.

In September 2016, we entered into a settlement agreement and mutual release with Express Scripts pursuant to which we and Express Scripts were released from any and all claims relating to our then ongoing litigation without admitting any fault or wrongdoing and we agreed to pay Express Scripts $65.0 million. This settlement has been accounted for as a reduction of “net sales” in the consolidated statement of comprehensive loss for the year ended December 31, 2016.

The table below reconciles our gross to net sales for the years ended December 31, 2016 and 2015 (in millions):

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2016</th>
<th></th>
<th>Year Ended December 31, 2015</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>% of Gross Sales</td>
<td>Amount</td>
<td>% of Gross Sales</td>
</tr>
<tr>
<td>Gross sales</td>
<td>$3,234.2</td>
<td>100.0%</td>
<td>$2,057.3</td>
<td>100.0%</td>
</tr>
<tr>
<td>Adjustments to gross sales:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prompt pay discounts</td>
<td>(64.0)</td>
<td>(2.0)%</td>
<td>(41.3)</td>
<td>(2.0)%</td>
</tr>
<tr>
<td>Medicine returns</td>
<td>(17.1)</td>
<td>(0.5)%</td>
<td>(14.4)</td>
<td>(0.7)%</td>
</tr>
<tr>
<td>Co-pay and other patient assistance</td>
<td>(1,701.3)</td>
<td>(52.6)%</td>
<td>(1,020.2)</td>
<td>(49.6)%</td>
</tr>
<tr>
<td>Wholesaler fees and commercial rebates</td>
<td>(133.7)</td>
<td>(4.2)%</td>
<td>(66.1)</td>
<td>(3.2)%</td>
</tr>
<tr>
<td>Government rebates and chargebacks</td>
<td>(272.0)</td>
<td>(8.4)%</td>
<td>(158.3)</td>
<td>(7.7)%</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>(65.0)</td>
<td>(2.0)%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total adjustments</strong></td>
<td><strong>(2,253.1)</strong></td>
<td><strong>(69.7)%</strong></td>
<td><strong>(1,300.3)</strong></td>
<td><strong>(63.2)%</strong></td>
</tr>
<tr>
<td><strong>Net sales</strong></td>
<td><strong>$981.1</strong></td>
<td><strong>30.3%</strong></td>
<td><strong>$757.0</strong></td>
<td><strong>36.8%</strong></td>
</tr>
</tbody>
</table>

During the year ended December 31, 2016, co-pay and other patient assistance, as a percentage of gross sales, increased to 52.6% from 49.6% during the year ended December 31, 2015. The increase was primarily due to the expansion of our HorizonCares program during 2016.
Cost of Goods Sold. Cost of goods sold increased $173.8 million to $393.3 million during the year ended December 31, 2016, from $219.5 million during the year ended December 31, 2015. As a percentage of net sales, cost of goods sold was 40.0% during the year ended December 31, 2016, compared to 29.0% during the year ended December 31, 2015. The large increase in costs of goods sold as a percentage of net sales was due to the one-time reduction in net sales in the year ended December 31, 2016 as a result of the litigation settlement with Express Scripts and an increase in cost of goods sold in the year ended December 31, 2016. The increase in cost of goods sold was primarily a result of higher intangible amortization expense of $84.0 million and increased inventory step-up expense of $59.6 million. Other factors that caused cost of goods sold to increase during the year included a $14.3 million expense related to a loss on inventory purchase commitments, higher royalty accretion expense of $20.5 million and a $16.2 million increase in direct and indirect costs associated with higher sales, offset by a $20.8 million decrease in charges relating to the remeasurement of contingent royalty liabilities.

The increase in intangible amortization of $84.0 million during the year ended December 31, 2016 compared to the prior year was due to a $33.9 million increase in amortization expense related to RAVICTI and BUPHENYL intangible assets (acquired in May 2015), $35.9 million amortization of developed technology related to KRYSTEXXA and MIGERGOT (acquired in January 2016), $14.0 million amortization of developed technology related to PROCYSBI (acquired in October 2016) and $0.2 million increase in amortization related to ACTIMMUNE.

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on our gross profit, gross margin percentage and net income (loss) for all affected periods, we disclose balance sheet and income statement amounts related to inventory step-up within the Notes to the consolidated financial statements. The increase in inventory step-up expense of $59.6 million during the year ended December 31, 2016 compared to the prior year was due to $48.8 million recorded during the year ended December 31, 2016 related to KRYSTEXXA and MIGERGOT inventory step-up (acquired in January 2016) and $22.4 million related to PROCYSBI and QUINSAIR inventory step-up (acquired in October 2016), compared to $8.4 million recorded during the year ended December 31, 2015 related to RAVICTI and BUPHENYL inventory step-up (acquired in May 2015) and $3.2 million related to ACTIMMUNE inventory step-up (acquired in September 2014).

Research and Development Expenses. Research and development expenses increased $18.8 million to $60.7 million during the year ended December 31, 2016, from $41.9 million during the year ended December 31, 2015. The increase in research and development expenses during the year ended December 31, 2016 was primarily attributable to $2.8 million of higher share-based compensation, an increase of $5.5 million in other employee costs resulting from growth in our headcount following the Hyperion, Crealta and Raptor acquisitions, $4.0 million related to costs to be incurred in the winding down of the FA program, an increase of $3.0 million in general research and development costs, a $2.0 million upfront fee paid for a license of a patent and an increase of $1.5 million in regulatory submission fees.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased $168.0 million to $608.3 million during the year ended December 31, 2016, from $440.3 million during the year ended December 31, 2015. The increase in selling, general and administrative expenses was in line with the significant growth in gross sales and the increase in the number of employees over the same period, and was primarily attributable to an increase of $59.3 million in employee costs resulting from increasing our headcount, a $30.5 million increase in professional costs, a $25.5 million increase in share-based compensation expense and a $19.3 million increase in marketing expenses.

Impairment of In-Process Research and Development. At the time of the Vidara Merger, IPR&D was considered separable from the business as the project could be sold to a third party, and we assigned a fair value of $66.0 million to the intangible asset. Following the FA announcement, we determined that the IPR&D has no alternative use or economic value, and we recorded an impairment charge during the year ended December 31, 2016 to fully write off the value of the asset on our consolidated balance sheet.

Interest Expense, Net. Interest expense, net, increased $16.7 million to $86.6 million during the year ended December 31, 2016, from $69.9 million during the year ended December 31, 2015. The increased interest expense, net, was primarily due to full-period recognition during the year ended December 31, 2016 of the interest on higher borrowings to fund the acquisition of Hyperion in May 2015, including our $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023, or the 2023 Senior Notes, prior six-year $400.0 million term loan facility, or the 2015 Term Loan Facility, and $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022, or the Exchangeable Senior Notes, as compared to partial period recognition of the interest on these borrowings during the year ended December 31, 2015 and our lower prior year borrowings under our prior five-year $300.0 million term loan facility, or 2014 Term Loan Facility. We also incurred additional interest expense following our borrowings to fund the acquisition of Raptor in October 2016, including our additional $375.0 million additional borrowings under the 2015 Term Loan Facility, or the 2016 Incremental Loan Facility, and the 2024 Senior Notes.
Foreign Exchange Loss. During the year ended December 31, 2016, we reported a foreign exchange loss of $1.0 million.

Loss on Induced Conversion of Debt and Debt Extinguishment. The loss on induced conversion of debt and debt extinguishment during the year ended December 31, 2016 of $77.6 million was composed of $20.7 million related to the induced conversions of our 5.00% Convertible Senior Notes due 2018, including $10.0 million for cash inducement payments, a $10.1 million charge for the extinguishment of debt and $0.6 million of expenses, and $56.9 million related to the extinguishment of the 2014 Term Loan Facility, consisting of a $45.4 million early redemption premium and a $11.5 million charge for the extinguishment of debt. The number of shares issued equaled the number of shares based on the underlying conversion option. The aggregate cash payments to the holders for additional exchange consideration were recorded as part of the extinguishment loss. There were no induced conversions in 2016.

Loss on Sale of Long-Term Investments. The loss on sale of long-term investments during the year ended December 31, 2015 was $29.0 million. During the third quarter of 2015, we purchased 2,250,000 shares of common stock of Depomed, Inc., or Depomed, representing 3.75% of Depomed’s then outstanding common stock. The shares were acquired at a cost of $71.8 million. During the fourth quarter of 2015, following our decision to withdraw our offer to acquire Depomed, we sold all of our shares in Depomed, receiving sales proceeds of $42.8 million and recognized a realized loss of $29.0 million. There were no sales of long-term investments in 2016.

Other Income (Expense) net. Other income, net during the year ended December 31, 2016 was primarily related to the release of a contingent liability of $6.9 million which was assumed as part of the Crealta acquisition. In December 2015, Crealta considered it probable that the manufacture of the active pharmaceutical ingredient, or API, for KRYSTEXXA would be moved out of Israel based on a notice of termination provided by its contract manufacturer, therefore triggering a repayment obligation to Israel’s Office of the Chief Scientist. As a result, Crealta established a $6.9 million contingent liability reserve in its December 31, 2015 financial statements. As of the date of our acquisition of Crealta, the $6.9 million repayment obligation was still probable. Therefore, it was recorded as an assumed liability in “other long-term liabilities” as part of the acquisition accounting for Crealta. During the third quarter of 2016, Horizon management negotiated a new amendment to the manufacturing agreement and it was determined that the manufacture of the KRYSTEXXA API would not be moved outside of Israel and thus the repayment of the $6.9 million would not be triggered. The contingent liability was released to “other income (expense)” during the year ended December 31, 2016 as it was a reversal of an assumed liability and therefore did not represent income from operations. Other expense, net, during the year ended December 31, 2015 totaled $10.3 million, which primarily included the fees related to the Hyperion acquisition financing commitment.

Benefit for Income Taxes. During the year ended December 31, 2016, we recorded an income tax benefit of $61.3 million compared to $172.2 million during the year ended December 31, 2015. The recognition of income tax benefit during the year ended December 31, 2016 was primarily attributable to the mix of income and losses amongst jurisdictions, a notional interest deduction and the change in our U.S. state effective tax rate. The recognition of an income tax benefit during the year ended December 31, 2015 was primarily attributable to the release of $103.1 million in valuation allowances in the U.S. tax consolidation group due to the recognition of significant deferred tax liabilities as a result of the Hyperion acquisition as well as the ability to recognize a tax benefit on losses incurred in the United States.
Non-GAAP Financial Measures

Non-GAAP adjusted net sales, EBITDA, or earnings before interest, taxes, depreciation and amortization, adjusted EBITDA, non-GAAP net income and non-GAAP earnings per share are used and provided by us as non-GAAP financial measures. These non-GAAP financial measures are intended to provide additional information on our performance, operations and profitability. Adjustments to our GAAP figures as well as EBITDA exclude acquisition/divestiture-related costs, upfront and milestone payments related to license agreements, drug substance harmonization costs, fees related to term loan refinancing, restructuring and realignment costs, the Express Scripts litigation settlement amount, loss on sale of long-term investments and charges related to discontinuation of the Friedreich’s ataxia program, as well as non-cash items such as share-based compensation, inventory step-up expense, depreciation and amortization, remeasurement of royalties for medicines acquired through business combinations, royalty accretion, non-cash interest expense, non-current asset impairment charges, gain on divestiture, loss on debt extinguishment, reversal of pre-acquisition reserve upon signing of contract and other non-cash adjustments. Certain other special items or substantive events may also be included in the non-GAAP adjustments periodically when their magnitude is significant within the periods incurred. We maintain an established non-GAAP cost policy that guides the determination of what costs will be excluded in non-GAAP measures. We believe that these non-GAAP financial measures, when considered together with the GAAP figures, can enhance an overall understanding of our financial and operating performance. The non-GAAP financial measures are included with the intent of providing investors with a more complete understanding of our historical financial results and trends and to facilitate comparisons between periods. In addition, these non-GAAP financial measures are among the indicators our management uses for planning and forecasting purposes and measuring our performance. For example, adjusted EBITDA is used by us as one measure of management performance under certain incentive compensation arrangements. These non-GAAP financial measures should be considered in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The non-GAAP financial measures used by us may be calculated differently from, and therefore may not be comparable to, non-GAAP financial measures used by other companies.

Beginning in the second quarter of 2016, we modified the method of calculating non-GAAP income tax expense to align with guidance issued by the Securities and Exchange Commission on May 17, 2016. The modified methodology calculates the income tax component of non-GAAP net income for each period by adjusting the GAAP tax benefit for the estimated tax impact of each non-GAAP adjustment based on the statutory income tax rate of the applicable jurisdictions for each non-GAAP adjustment. This modified methodology does not reflect any use of net operating loss carryforwards that we potentially may have been able to use if our actual earnings for these periods had been the non-GAAP net income. Previously, we had calculated the income tax component of non-GAAP net income by using the estimated cash taxes that we expected to pay for the period. The non-GAAP net income and diluted net income per share amounts shown in the GAAP to non-GAAP reconciliation tables below are based on the modified methodology.

Reconciliations of reported GAAP net sales to non-GAAP adjusted net sales and reported GAAP net (loss) income to EBITDA, adjusted EBITDA and non-GAAP net income, and the related per share amounts, are as follows (in thousands, except share and per share amounts):

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAAP Net Sales</td>
<td>$1,056,231</td>
<td>$981,120</td>
<td>$757,044</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>—</td>
<td>65,000</td>
<td>—</td>
</tr>
<tr>
<td><strong>Non-GAAP Adjusted Net Sales</strong></td>
<td><strong>$1,056,231</strong></td>
<td><strong>$1,046,120</strong></td>
<td><strong>$757,044</strong></td>
</tr>
</tbody>
</table>
### GAAP Net (Loss) Income

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAAP Net (Loss) Income</td>
<td>$(410,526)</td>
<td>$(166,834)</td>
<td>$39,532</td>
</tr>
</tbody>
</table>

### Non-GAAP adjustments:

<table>
<thead>
<tr>
<th>Description</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remeasurement of royalties for medicines acquired through business combinations</td>
<td>21,774</td>
<td>386</td>
<td>21,151</td>
</tr>
<tr>
<td>Acquisition/divestiture-related costs</td>
<td>177,035</td>
<td>52,874</td>
<td>72,221</td>
</tr>
<tr>
<td>Restructuring and realignment costs</td>
<td>4,883</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Amortization, accretion and inventory step-up:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intangible amortization expense</td>
<td>276,784</td>
<td>216,875</td>
<td>132,923</td>
</tr>
<tr>
<td>Accretion of royalty liabilities</td>
<td>51,263</td>
<td>40,616</td>
<td>20,088</td>
</tr>
<tr>
<td>Amortization of debt discount and deferred financing costs</td>
<td>21,619</td>
<td>18,546</td>
<td>18,810</td>
</tr>
<tr>
<td>Inventory step-up expense</td>
<td>119,151</td>
<td>71,137</td>
<td>11,495</td>
</tr>
<tr>
<td>Share-based compensation</td>
<td>121,553</td>
<td>114,144</td>
<td>85,768</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>6,631</td>
<td>4,962</td>
<td>5,420</td>
</tr>
<tr>
<td>Gain on divestiture</td>
<td>(6,267)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Charges relating to discontinuation of the Friedreich's ataxia program (1)</td>
<td>22,509</td>
<td>23,513</td>
<td>—</td>
</tr>
<tr>
<td>Drug substance harmonization costs (2)</td>
<td>10,651</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Upfront and milestone payments related to license agreements</td>
<td>12,186</td>
<td>2,000</td>
<td>—</td>
</tr>
<tr>
<td>Fees related to term loan refinancing</td>
<td>5,220</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Loss on debt extinguishment</td>
<td>978</td>
<td>—</td>
<td>77,624</td>
</tr>
<tr>
<td>Royalties for medicines acquired through business combinations (47,003)</td>
<td>(47,003)</td>
<td>(37,593)</td>
<td>(29,834)</td>
</tr>
<tr>
<td>Royalties for medicines acquired through business combinations</td>
<td>(47,003)</td>
<td>(37,593)</td>
<td>(29,834)</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>—</td>
<td>65,000</td>
<td>—</td>
</tr>
<tr>
<td>Impairment of in-process research and development</td>
<td>—</td>
<td>66,000</td>
<td>—</td>
</tr>
<tr>
<td>Reversal of pre-acquisition reserve upon signing of contract</td>
<td>—</td>
<td>(6,900)</td>
<td>—</td>
</tr>
<tr>
<td>Loss on sale of long-term investments</td>
<td>—</td>
<td>—</td>
<td>29,032</td>
</tr>
<tr>
<td><strong>Total of pre-tax non-GAAP adjustments</strong></td>
<td>798,967</td>
<td>631,560</td>
<td>444,716</td>
</tr>
<tr>
<td>Income tax effect of pre-tax non-GAAP adjustments (3)</td>
<td>(118,704)</td>
<td>(110,290)</td>
<td>(122,214)</td>
</tr>
<tr>
<td>Other non-GAAP income tax adjustments (4)</td>
<td>(74,939)</td>
<td>—</td>
<td>(105,133)</td>
</tr>
<tr>
<td><strong>Total of non-GAAP adjustments</strong></td>
<td>605,324</td>
<td>521,270</td>
<td>217,369</td>
</tr>
</tbody>
</table>

| Non-GAAP Net Income | $194,798 | $354,436 | $256,901 |

### Non-GAAP Earnings Per Share:

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted average ordinary shares – Basic</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>148,788,020</td>
</tr>
<tr>
<td>GAAP (loss) earnings per share - Basic</td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>$0.27</td>
</tr>
<tr>
<td>Non-GAAP adjustments</td>
<td>3.71</td>
<td>3.25</td>
<td>1.46</td>
</tr>
<tr>
<td>Non-GAAP earnings per share – Basic</td>
<td>$1.19</td>
<td>$2.21</td>
<td>$1.73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted average ordinary shares – Diluted</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>148,788,020</td>
</tr>
<tr>
<td>Ordinary share equivalents</td>
<td>2,582,576</td>
<td>3,626,570</td>
<td>7,135,231</td>
</tr>
<tr>
<td>Weighted average ordinary shares – Diluted</td>
<td>165,705,239</td>
<td>164,326,113</td>
<td>155,923,251</td>
</tr>
<tr>
<td>GAAP (loss) earnings per share – Diluted</td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>$0.25</td>
</tr>
<tr>
<td>Non-GAAP adjustments</td>
<td>3.71</td>
<td>3.25</td>
<td>1.40</td>
</tr>
<tr>
<td>Diluted earnings per share effect of ordinary share equivalents</td>
<td>(0.01)</td>
<td>(0.05)</td>
<td>—</td>
</tr>
<tr>
<td>Non-GAAP earnings per share – Diluted</td>
<td>$1.18</td>
<td>$2.16</td>
<td>$1.65</td>
</tr>
<tr>
<td>GAAP Net (Loss) Income</td>
<td>2017</td>
<td>2016</td>
<td>2015</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>$ (410,526)</td>
<td>$ (166,834)</td>
<td>$ 39,532</td>
</tr>
</tbody>
</table>

Depreciation 6,631 4,962 5,420

Amortization, accretion and inventory step-up:

- Intangible amortization expense 276,784 216,875 132,923
- Accretion of royalty liabilities 51,263 40,616 20,088
- Amortization of deferred revenue (860) (836) (962)
- Inventory step-up expense 119,151 71,137 11,495

Interest expense, net (including amortization of debt discount and deferred financing costs) 126,523 86,610 69,900

Benefit for income taxes (102,749) (61,251) (172,244)

EBITDA 66,217 191,279 106,152

Other non-GAAP adjustments:

- Remeasurement of royalties for medicines acquired through business combinations 21,774 386 21,151
- Acquisition/divestiture-related costs 177,035 52,874 72,221
- Restructuring and realignment costs 4,883 — —
- Share-based compensation 121,553 114,144 85,786
- Gain on divestiture (6,267) — —
- Charges relating to discontinuation of the Friedreich's ataxia program (1) 22,509 23,513 —
- Drug substance harmonization costs (2) 10,651 — —
- Upfront and milestone payments related to license agreements 12,186 2,000 —
- Fees related to term loan refinancing 5,220 — —
- Loss on debt extinguishment 978 — 77,624
- Royalties for medicines acquired through business combinations (47,003) (37,593) (29,834)
- Litigation settlement — 65,000 —
- Impairment of in-process research and development — 66,000 —
- Reversal of pre-acquisition reserve upon signing of contract — (6,900) —
- Loss on sale of long-term investments — — 29,032

Total of other non-GAAP adjustments 323,519 279,424 255,980

Adjusted EBITDA $ 389,736 $ 470,703 $ 362,132

(1) Charges relating to discontinuation of the FA program of $22.5 million for the year ended December 31, 2017 include $22.3 million relating to the impairment of a non-current asset, additional net expense of $1.7 million for excess purchase commitments and a reduction of $1.5 million to “research and development expenses” reflecting lower costs than previously estimated to be incurred to discontinue the FA program. Charges relating to the discontinuation of the FA program for the year ended December 31, 2016 include a $14.3 million loss on inventory purchase commitments, a $5.3 million impairment of a non-current asset and $4.0 million of clinical trial wind-down costs.

(2) During the year ended December 31, 2016, we committed to spend $14.9 million related to the harmonization of the manufacturing processes for ACTIMMUNE and IMUKIN drug substance. During the year ended December 31, 2017, we incurred $12.1 million of this spend, including costs of $10.7 million that qualify for exclusion in our non-GAAP financial measures under our non-GAAP cost policy.

(3) Adjustment to the GAAP tax benefit for the estimated tax impact of each non-GAAP adjustment is based on the statutory tax rate of the applicable jurisdictions for each non-GAAP adjustment.

(4) Other non-GAAP income tax adjustments during the year ended December 31, 2017 reflect the provisional $74.9 million net benefit recorded following the enactment of the Tax Act, which net benefit included a $134.2 million tax benefit from the revaluation of our U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of the $59.2 million deferred tax asset related to our U.S. interest expense carryforwards under Section 163(j) of the Code.
Liquidity, Financial Position and Capital Resources

We have incurred losses since our inception in June 2005 and, as of December 31, 2017, we had an accumulated deficit of $1,252.3 million. We expect that our sales and marketing expenses will continue to increase as a result of the commercialization of our medicines but we believe these cost increases will be more than offset by higher net sales and gross profits. Additionally, we expect that our research and development costs will increase as we acquire more development-stage medicine candidates.

We have financed our operations to date through equity financings, debt financings and the issuance of convertible notes, along with cash flows from operations during the last several years. As of December 31, 2017, we had $751.4 million in cash and cash equivalents and total debt with a book value of $1,901.7 million and face value of $2,020.8 million. Cash at December 31, 2017 reflects our use of cash on hand of approximately $144.0 million, net of $6.3 million of cash acquired, to fund our acquisition of River Vision on May 8, 2017, $32.5 million paid during the year ended December 31, 2017 in relation to the litigation settlement in 2016 with Express Scripts and $22.3 million paid to Boehringer Ingelheim International following the completion of the acquisition of certain rights to interferon gamma-1b, and includes $69.4 million received following the Chiesi divestiture in June 2017, net of cash divested. We believe our existing cash and cash equivalents and our expected cash flows from our operations will be sufficient to fund our business needs for at least the next twelve months from the issuance of the financial statements in this Annual Report on Form 10-K. Part of our strategy is to expand and leverage our commercial capabilities and to develop a pipeline of rare disease medicine candidates by researching, developing and commercializing innovative medicines that address unmet treatment needs for rare and rheumatic diseases. To the extent we enter into transactions to acquire medicines or businesses in the future, we will most likely need to finance a significant portion of those acquisitions through additional debt, equity or convertible debt financings, or through the use of cash on hand.

On October 23, 2017, HPI, our wholly owned subsidiary, and Horizon Pharma USA, Inc., our wholly owned subsidiary, or HPUSA, and together with HPI in such capacity, the Borrowers, borrowed approximately $845.8 million aggregate principal amount of loans, or the October 2017 Refinancing Loans, pursuant to an amendment, or the October 2017 Refinancing Amendment, to the Credit Agreement, dated as of May 7, 2015, by and among the Borrowers, us and certain of our subsidiaries as guarantors, the lenders party thereto from time to time and Citibank, N.A., as administrative agent and collateral agent, as amended by Amendment No. 1, dated as of October 25, 2016, or the 2016 Credit Agreement, and Amendment No. 2, dated March 29, 2017, or the March 2017 Credit Agreement. As used herein, all references to the “Credit Agreement” are references to the March 2017 Credit Agreement, as amended by the October 2017 Refinancing Amendment.

The October 2017 Refinancing Loans were incurred as a separate new class of term loans under the Credit Agreement with substantially the same terms as the previously outstanding senior secured term loans incurred on March 29, 2017 under the March 2017 Credit Agreement, or the October 2017 Refinanced Loans, to effectuate a repricing of the October 2017 Refinanced Loans. The Borrowers used the proceeds from the October 2017 Refinancing Loans to repay the October 2017 Refinanced Loans, which totaled approximately $845.8 million. The October 2017 Refinancing Loans bear interest, at the Borrowers’ option, at a rate equal to either the London Inter-Bank Offer Rate, or LIBOR, plus an applicable margin of 3.25% per year (subject to a LIBOR floor of 1.0%), or the adjusted base rate plus 2.25%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1%, (b) prime rate, (c) fed funds plus 0.5%, and (d) 2%. The Credit Agreement provides for (i) the October 2017 Refinancing Loans, (ii) one or more uncommitted additional incremental loan facilities subject to the satisfaction of certain financial and other conditions, and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The Credit Agreement allows for us and certain of our subsidiaries to become borrowers under incremental or refinancing facilities.

The obligations under the Credit Agreement (including obligations in respect of the October 2017 Refinancing Loans) and any swap obligations and cash management obligations owing to a lender (or an affiliate of a lender) thereunder are guaranteed by us and each of our existing and subsequently acquired or formed direct and indirect subsidiaries (other than certain immaterial subsidiaries, subsidiaries whose guarantee would result in material adverse tax consequences and subsidiaries whose guarantee is prohibited by applicable law). The obligations under the Credit Agreement (including obligations in respect of the October 2017 Refinancing Loans) and any such swap and cash management obligations are secured, subject to customary permitted liens and other agreed upon exceptions, by a perfected security interest in (i) all tangible and intangible assets of the Borrowers and the guarantors, except for certain customary excluded assets, and (ii) all of the capital stock owned by the Borrowers and guarantors thereunder (limited, in the case of the stock of certain non-U.S.
subsidiaries of the Borrowers, to 65% of the capital stock of such subsidiaries). The Borrowers and the guarantors under the Credit Agreement are individually and collectively referred to herein as a “Loan Party” and the “Loan Parties,” as applicable.

Borrowers under the Credit Agreement are permitted to make voluntary prepayments of the loans under the Credit Agreement at any time without payment of a premium, except that with respect to the October 2017 Refinancing Loans, a 1% premium will apply to a repayment of the October 2017 Refinancing Loans in connection with a repricing of, or any amendment to the Credit Agreement in a repricing of, such loans effected on or prior to the date that is six months following October 23, 2017. The Borrowers are required to make mandatory prepayments of loans under the Credit Agreement (without payment of a premium) with (a) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (b) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions), (c) net cash proceeds from issuances of debt (other than certain permitted debt), and (d) 50% of our excess cash flow (subject to decrease to 25% or 0% if our first lien leverage ratio is less than 2.25:1 or 1.75:1, respectively). The October 2017 Refinancing Loans will amortize in equal quarterly installments beginning on December 31, 2017 in an aggregate annual amount equal to 1% of the original principal amount of the October 2017 Refinanced Loans (i.e. $850.0 million), with any remaining balance payable on March 29, 2024, the final maturity date of the October 2017 Refinancing Loans.

We elected to exercise our reinvestment rights under the mandatory prepayment provisions of the March 2017 Credit Agreement with respect to the net proceeds from the Chiesi divestiture. To the extent we do not apply such net proceeds to permitted acquisitions (including the acquisition of rights to products and products lines) and/or the acquisition of capital assets within 365 days of the receipt thereof (or commit to so apply and then apply within 180 days after the end of such 365-day period), we would be required to make a mandatory prepayment under the Credit Agreement in an amount equal to the unapplied net proceeds. Until such time, the net proceeds are not legally restricted for use. As of December 31, 2017, we had applied a portion of such net proceeds to the acquisition of additional rights to interferon gamma-1b and to our agreement to license HZN-003.

We were, as of December 31, 2017, and currently are in compliance with the Credit Agreement.

On October 25, 2016, HPI and HPUSA, or the 2024 Issuers, completed a private placement of $300.0 million aggregate principal amount of 2024 Senior Notes to certain investment banks acting as initial purchasers who subsequently resold the 2024 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act.

The obligations under the 2024 Senior Notes are the 2024 Issuers’ general unsecured senior obligations and are fully and unconditionally guaranteed on a senior unsecured basis by us and all of our direct and indirect subsidiaries that are guarantors from time to time under the Credit Agreement.

We used the net proceeds from the offering of the 2024 Senior Notes as well as $375.0 million principal amount of senior secured term loans incurred in October 2016 under the 2016 Credit Agreement to fund a portion of the acquisition of Raptor, repay Raptor’s outstanding debt, and pay any prepayment premiums, fees and expenses in connection with the foregoing.

The 2024 Senior Notes accret interest at an annual rate of 8.75% payable semiannually in arrears on May 1 and November 1 of each year, beginning on May 1, 2017. The 2024 Senior Notes will mature on November 1, 2024, unless earlier repurchased or redeemed.

Except as described below, the 2024 Senior Notes may not be redeemed before November 1, 2019. Thereafter, some or all of the 2024 Senior Notes may be redeemed at any time at specified redemption prices, plus accrued and unpaid interest to the redemption date. At any time prior to November 1, 2019, some or all of the 2024 Senior Notes may be redeemed at a price equal to 100% of the aggregate principal amount thereof, plus make-whole premium and accrued and unpaid interest to the redemption date. Also prior to November 1, 2019, up to 35% of the aggregate principal amount of the 2024 Senior Notes may be redeemed at a redemption price of 108.75% of the aggregate principal amount thereof, plus accrued and unpaid interest, with the net proceeds of certain equity offerings. In addition, the 2024 Senior Notes may be redeemed in whole but not in part at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date, if on the next date on which any amount would be payable in respect of the 2024 Senior Notes, the 2024 Issuers or any guarantor is or would be required to pay additional amounts as a result of certain tax-related events.

If we undergo a change of control, the 2024 Issuers will be required to make an offer to purchase all of the 2024 Senior Notes at a price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest to, but not
including, the repurchase date. If we or certain of our subsidiaries engage in certain asset sales, the 2024 Issuers will be required under certain circumstances to make an offer to purchase the 2024 Senior Notes at 100% of the principal amount thereof, plus accrued and unpaid interest to the repurchase date.

On April 29, 2015, Horizon Pharma Financing Inc., our wholly owned subsidiary, or Horizon Financing, completed a private placement of $475.0 million aggregate principal amount of 2023 Senior Notes to certain investment banks acting as initial purchasers who subsequently resold the 2023 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act, and in offshore transactions to non-U.S. persons in reliance on Regulation S under the Securities Act.

In connection with the closing of the Hyperion acquisition on May 7, 2015, Horizon Financing merged with and into HPI and, as a result, the 2023 Senior Notes became HPI’s general unsecured senior obligations. The obligations under the 2023 Senior Notes are fully and unconditionally guaranteed by our senior unsecured basis us and all of our direct and indirect subsidiaries that are guarantors from time to time under the Credit Agreement.

The 2023 Senior Notes accrue interest at an annual rate of 6.625% payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2015. The 2023 Senior Notes will mature on May 1, 2023, unless earlier repurchased or redeemed.

Except as described below, the 2023 Senior Notes may not be redeemed before May 1, 2018. Thereafter, some or all of the 2023 Senior Notes may be redeemed at any time at specified redemption prices, plus accrued and unpaid interest to the redemption date. At any time prior to May 1, 2018, some or all of the 2023 Senior Notes may be redeemed at a price equal to 100% of the aggregate principal amount thereof, plus a make-whole premium and accrued and unpaid interest to the redemption date. Also prior to May 1, 2018, up to 35% of the aggregate principal amount of the 2023 Senior Notes may be redeemed at a redemption price of 106.625% of the aggregate principal amount thereof, plus accrued and unpaid interest, with the net proceeds of certain equity offerings. In addition, the 2023 Senior Notes may be redeemed in whole but not in part at a redemption price equal to 100% of the aggregate principal amount plus accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date, if on the next date on which any amount would be payable in respect of the 2023 Senior Notes, HPI or any guarantor is or would be required to pay additional amounts as a result of certain tax-related events.

If we undergo a change of control, HPI will be required to make an offer to purchase all of the 2023 Senior Notes at a price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest to, but not including, the repurchase date. If we or certain of our subsidiaries engage in certain asset sales, HPI will be required under certain circumstances to make an offer to purchase the 2023 Senior Notes at 100% of the principal amount thereof, plus accrued and unpaid interest to the repurchase date.

On March 13, 2015, Horizon Pharma Investment Limited, our wholly owned subsidiary, or Horizon Investment, completed a private placement of $400.0 million aggregate principal amount of Exchangeable Senior Notes to several investment banks acting as initial purchasers who subsequently resold the Exchangeable Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act. The net proceeds from the offering of the Exchangeable Senior Notes were approximately $387.2 million, after deducting the initial purchasers’ discount and offering expenses payable by Horizon Investment.

We have fully and unconditionally guaranteed the Exchangeable Senior Notes on a senior unsecured basis, or the Guarantee. The Exchangeable Senior Notes and the Guarantee are Horizon Investment’s and our senior unsecured obligations. The Exchangeable Senior Notes accrue interest at an annual rate of 2.50% payable semiannually in arrears on March 15 and September 15 of each year, beginning on September 15, 2015. The Exchangeable Senior Notes will mature on March 15, 2022, unless earlier exchanged, repurchased or redeemed. The initial exchange rate is 34.8979 of our ordinary shares per $1,000 principal amount of the Exchangeable Senior Notes (equivalent to an initial exchange price of approximately $28.66 per ordinary share).

We have a significant amount of debt outstanding on a consolidated basis. This substantial level of debt could have important consequences to our business, including, but not limited to: making it more difficult for us to satisfy our obligations; requiring a substantial portion of our cash flows from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flows to fund acquisitions, capital expenditures, and future business opportunities; limiting our ability to obtain additional financing, including borrowing additional funds; increasing our vulnerability to, and reducing our flexibility to respond to, general adverse economic and industry conditions; limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
placing us at a disadvantage as compared to our competitors, to the extent that they are not as highly leveraged. We may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness.

In addition, the indentures governing the 2024 Senior Notes and 2023 Senior Notes and the Credit Agreement impose various covenants that limit our ability and/or our restricted subsidiaries’ ability to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales or merger transactions, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries; and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to us.

We were, as of December 31, 2017, and currently are in compliance with the indenture governing the 2024 Senior Notes and 2023 Senior Notes.

During the year ended December 31, 2017, we issued an aggregate of 2.0 million of our ordinary shares in connection with stock option exercises, the vesting of restricted stock units, employee share purchase plan purchases and the vesting of performance stock units. We received a total of $9.3 million in net proceeds in connection with such issuances.

During the year ended December 31, 2017, we issued an aggregate of 391,500 ordinary shares upon the cash exercise of warrants and received proceeds of $1.8 million representing the aggregate exercise price for such warrants. In addition, warrants to purchase an aggregate of 704,285 of our ordinary shares were exercised in cashless exercises, resulting in the issuance of 523,520 ordinary shares.

In May 2016, our board of directors authorized a share repurchase program pursuant to which we may repurchase up to 5,000,000 of our ordinary shares. In May 2017, our board of directors reauthorized a share repurchase program pursuant to which we may repurchase up to 16,000,000 of our ordinary shares. As of December 31, 2017, we had repurchased 100,000 of our ordinary shares under this repurchase program, for total consideration of $1.0 million. The timing and amount of future repurchases, if any, will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, our cash resources, restrictions under the Credit Agreement and market conditions.

Sources and Uses of Cash

The following table provides a summary of our cash position and cash flows for the years ended December 31, 2017, 2016 and 2015 (in thousands):

<table>
<thead>
<tr>
<th>For the Years Ended December 31</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$751,368</td>
<td>$599,055</td>
<td>$859,616</td>
</tr>
<tr>
<td>Cash provided by (used in):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating activities</td>
<td>280,208</td>
<td>369,456</td>
<td>194,166</td>
</tr>
<tr>
<td>Investing activities</td>
<td>(101,619)</td>
<td>(1,375,881)</td>
<td>(995,048)</td>
</tr>
<tr>
<td>Financing activities</td>
<td>58,408</td>
<td>657,074</td>
<td>1,442,481</td>
</tr>
</tbody>
</table>

Net Cash Provided by Operating Activities

During the years ended December 31, 2017, 2016 and 2015, net cash provided by operating activities was $280.2 million, $369.5 million and $194.2 million, respectively.

Net cash provided by operating activities during the year ended December 31, 2017 was primarily attributable to cash collections from net sales. Cash provided by operating activities was negatively impacted during the year ended December 31, 2017 by cash payments of $113.8 million for interest, $32.5 million outlay for the remaining fifty percent of the litigation settlement amount with Express Scripts, cash payments of $54.0 million for acquisition/divestiture-related costs, cash payments relating to term loan refinancing of $9.1 million, cash payments related to the discontinuation of the FA program of $7.2 million, cash payments relating to our drug substance harmonization program of $5.2 million and cash payments related to our restructuring and realignment activities of $4.7 million.
Net cash provided by operating activities during 2016 was primarily attributable to cash collections from net sales. Cash provided by operating activities was negatively impacted during the year ended December 31, 2016, by $32.5 million outlay for fifty percent of the litigation settlement amount with Express Scripts, cash payments of $48.9 million for acquisition-related expenses and $60.8 million for interest payments made on our 2015 Term Loan Facility, 2016 Incremental Loan Facility, 2023 Senior Notes and Exchangeable Senior Notes.

Net cash provided by operating activities during 2015 was primarily attributable to cash collections from net sales. Cash provided by operating activities was negatively impacted during the year ended December 31, 2015, due to cash payments of $68.2 million for acquisition-related expenses, including the payment in April 2015 of approximately $11.2 million of employee and director excise taxes due to the Vidara Merger. Cash payments during the year ended December 31, 2015 also included a $45.4 million early redemption premium related to the 2014 Term Loan Facility, $42.0 million of interest payments made on our 2014 Term Loan Facility, 2015 Term Loan Facility, 2023 Senior Notes and Exchangeable Senior Notes, and $10.0 million of cash payments related to induced debt conversions.

Net Cash Used in Investing Activities
During the years ended December 31, 2017, 2016 and 2015, net cash used in investing activities was $101.6 million, $1,375.9 million and $995.0 million, respectively.

Net cash used in investing activities during the year ended December 31, 2017 was primarily associated with $144.9 million of payments for the acquisition of River Vision, net of cash acquired, and associated transaction costs, and $22.3 million relating to the payment for certain rights for interferon gamma-1b. This was partially offset by $69.4 million of proceeds received from the Chiesi divestiture, net of cash divested.

Net cash used in investing activities during 2016 was primarily related to $835.9 million of payments for the acquisition of Raptor, net of cash acquired, $514.8 million of payments for the acquisition of Crealta, net of cash acquired, a $5.6 million (€5.0 million) initial payment for certain non-U.S. intellectual property rights to interferon gamma-1b and $15.7 million of payments for purchases of property and equipment.

Net cash used in investing activities during 2015 was primarily associated with $1,022.4 million of payments for the acquisition of Hyperion, net of cash acquired, and payments of $71.8 million made in relation to the purchase of 2,250,000 shares of common stock of Depomed. This was offset by proceeds of $42.8 million from the sale of such Depomed shares and proceeds from the liquidation of available-for-sale investments of $64.6 million.

Net Cash Provided by Financing Activities
During the years ended December 31, 2017, 2016 and 2015, net cash provided by financing activities was $58.4 million, $657.1 million and $1,442.5 million, respectively.

Net cash provided by financing activities during the year ended December 31, 2017 was primarily attributable to the net proceeds of $1,693.5 million from term loans, offset in part by repayment of term loans of $1,618.6 million. We refinanced our term loans during March 2017 and October 2017. The March 2017 refinancing loans replaced the $394.0 million 2015 term loan facility and the $375.0 million 2016 incremental loan facility and the October 2017 Refinancing Loans replaced the October 2017 Refinanced Loans. The March 2017 Credit Agreement resulted in an increase of $81.0 million of principal amount of our outstanding debt and the October 2017 Refinancing Loans did not result in any changes to the principal amount outstanding. Additionally, during the year ended December 31, 2017, we paid $20.0 million relating to milestones in connection with a contingent consideration liability assumed in our acquisition of Raptor.

Net cash provided by financing activities during 2016 was primarily related to $364.3 million of net proceeds received from borrowings under our 2016 Incremental Loan Facility and $291.9 million of net proceeds received from borrowings under our 2024 Senior Notes.

Net cash provided by financing activities during 2015 was primarily attributable to $387.2 million of net proceeds received from borrowings under the Exchangeable Senior Notes, $391.5 million net proceeds from the 2015 Term Loan Facility, $462.3 million net proceeds from the 2023 Senior Notes and $475.7 million of net proceeds from the issuance of 17,652,500 ordinary shares in our 2015 public offering, partially offset by the repayment of the 2014 Term Loan Facility and a partial repayment of the 2015 Term Loan Facility, which resulted in a financing outflow of $299.0 million.

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Accounts receivable, net. Accounts receivable, net, increased $61.7 million, from $305.7 million as of December 31, 2016 to $367.4 million as of December 31, 2017. The increase is due to growth in gross sales of our medicines.

Inventories, net. Inventories, net, decreased $113.1 million, from $174.8 million as of December 31, 2016 to $61.7 million as of December 31, 2017. The decrease was primarily due to $119.1 million of inventory step-up expense recorded during the year ended December 31, 2017, of which $78.3 million related to KRYSTEXXA and $40.8 million related to PROCYSBI and QUINSAIR. Additionally, during the year ended December 31, 2017, we recorded $3.2 million of inventory step-up expense to the gain on divestiture following the sale of inventory to Chiesi in connection with the Chiesi divestiture.

Developed technology, net. Developed technology, net, decreased $323.2 million, from $2,767.2 million as of December 31, 2016 to $2,443.9 million as of December 31, 2017. The decrease was primarily due to the amortization of developed technology of $276.0 million during the year ended December 31, 2017 and developed technology with a net book value of $47.2 million disposed of in the Chiesi divestiture.

Goodwill. Goodwill decreased $19.2 million from $445.6 million as of December 31, 2016 to $426.4 million as of December 31, 2017. The decrease was due to $16.3 million written off in connection with the Chiesi divestiture and $2.9 million in measurement period adjustments related to the Raptor acquisition, which were recorded during the year ended December 31, 2017.

Inventories, net. Inventories, net, decreased $113.1 million, from $174.8 million as of December 31, 2016 to $61.7 million as of December 31, 2017. The decrease was primarily due to $119.1 million of inventory step-up expense recorded during the year ended December 31, 2017, of which $78.3 million related to KRYSTEXXA and $40.8 million related to PROCYSBI and QUINSAIR. Additionally, during the year ended December 31, 2017, we recorded $3.2 million of inventory step-up expense to the gain on divestiture following the sale of inventory to Chiesi in connection with the Chiesi divestiture.

Other assets. Other assets increased $33.7 million from $2.4 million as of December 31, 2016 to $36.1 million as of December 31, 2017. The increase was primarily due to a royalty reimbursement asset recorded in connection with the Chiesi divestiture during the year ended December 31, 2017, which represents the future estimated amount receivable from Chiesi in respect of PROCYSBI and QUINSAIR contingent royalty liabilities.

Accrued expenses. Accrued expenses decreased $45.0 million, from $182.8 million as of December 31, 2016 to $137.8 million as of December 31, 2017. This was primarily due to the payment of $32.5 million during the year ended December 31, 2017 pursuant to our settlement agreement with Express Scripts, a decrease of $10.1 million in payroll-related expenses and a decrease of $4.8 million in accrued interest.

Accrued trade discounts and rebates. Accrued trade discounts and rebates increased $204.2 million, from $297.6 million as of December 31, 2016 to $501.8 million as of December 31, 2017. This was primarily due to a $142.8 million increase in accrued wholesaler fees and commercial rebates, a $42.0 million increase in accrued co-pay and other patient assistance costs and a $19.4 million increase in accrued government rebates and chargebacks.

Long-term debt, net, net of current. Long-term debt, net, net of current increased $74.9 million from $1,501.7 million as of December 31, 2016 to $1,576.6 million as of December 31, 2017. The increase was primarily related to the $845.8 million aggregate principal amount of October 2017 Refinancing Loans which replaced the October 2017 Refinanced Loans. The October 2017 Refinanced Loans originally replaced the $394.0 million 2015 term loan facility and the $375.0 million 2016 incremental loan facility. The October 2017 Refinanced Loans and October 2017 Refinancing Loans resulted in an increase of $81.0 million of principal amount of our outstanding debt. This increase was offset in part by certain charges related to the refinancing loans and amortization of debt discount and deferred financing fees and a repayment of $4.2 million during the year ended December 31, 2017.

Deferred tax liabilities, net. Deferred tax liabilities, net, decreased $138.7 million, from $296.6 million as of December 31, 2016 to $157.9 million as of December 31, 2017. This was primarily due to a provisional $74.9 million net benefit recorded following the enactment of the Tax Act, which net benefit included a $134.2 million tax benefit from the revaluation of our U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of the $59.2 million deferred tax asset related to our U.S. interest expense carryforwards under Section 163(j) of the Code. We also recorded a decrease in net deferred tax liabilities resulting from the acquisition of deferred tax assets of $19.9 million in connection with the River Vision acquisition and a decrease during the year ended December 31, 2017 in net deferred tax liabilities primarily resulting from the tax effect of the amortization of intangible assets during the year of $61.6 million, partially offset by $34.5 million due to the use of losses during the year. Additionally, we adopted ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting, or ASU No. 2016-09, on a modified retrospective basis on January 1, 2017 and recorded a decrease of $7.2 million in net deferred tax liabilities and a corresponding decrease in accumulated deficit during the year ended December 31, 2017.
As of December 31, 2017, minimum future cash payments due under contractual obligations, including, among others, our debt agreements, minimum purchase agreements and non-cancelable operating lease agreements, were as follows (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023 &amp; Thereafter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt agreements – principal (1)</td>
<td>10,625</td>
<td>8,500</td>
<td>8,500</td>
<td>8,500</td>
<td>406,375</td>
<td>1,578,250</td>
<td>2,020,750</td>
</tr>
<tr>
<td>Purchase commitments (2)</td>
<td>45,098</td>
<td>14,523</td>
<td>10,336</td>
<td>7,116</td>
<td>10,635</td>
<td>27,044</td>
<td>114,752</td>
</tr>
<tr>
<td>Operating lease obligations (3)</td>
<td>7,356</td>
<td>6,659</td>
<td>5,951</td>
<td>5,350</td>
<td>4,092</td>
<td>11,994</td>
<td>41,402</td>
</tr>
<tr>
<td><strong>Total contractual cash obligations</strong></td>
<td>172,174</td>
<td>135,073</td>
<td>132,859</td>
<td>129,344</td>
<td>523,513</td>
<td>1,733,374</td>
<td>2,826,337</td>
</tr>
</tbody>
</table>

(1) Represents the minimum contractual obligation due under the following debt agreements:
- $845.8 million under the October 2017 Refinancing Loans, which includes estimated quarterly interest payments based on the applicable interest rate at December 31, 2017 of 4.75% and quarterly payments of 1.0% of the principal, and repayment of the remaining principal in March 2024.
- $475.0 million 2023 Senior Notes, which includes bi-annual interest payments and repayment of the principal in May 2023.
- $400.0 million Exchangeable Senior Notes, which includes bi-annual interest payments and repayment of the principal in March 2022.
- $300.0 million 2024 Senior Notes, which includes bi-annual interest payments and repayment of the principal in November 2024.

(2) These amounts reflect the following purchase commitments with our third-party manufacturers:
- Purchase commitment for RAVICTI through 2022.
- Purchase commitment for PROCYSBI and QUINSAIR through December 2020.
- Minimum annual order quantities required to be placed with Boehringer Ingelheim for final packaged ACTIMMUNE through July 2024 and additional units we also committed to purchase which were intended to cover anticipated demand if the results of the FA program of ACTIMMUNE for the treatment of FA had been successful. As of December 31, 2017, the minimum binding purchase commitment to Boehringer Ingelheim Biopharmaceuticals GmbH, or Boehringer Ingelheim Biopharmaceuticals, was $24.3 million (converted using a Dollar-to-Euro exchange rate of 1.2003) through July 2024.
- A commitment to spend $3.4 million with Boehringer Ingelheim related to the harmonization of the manufacturing process for ACTIMMUNE drug substance.
- Purchase commitment for BUPHENYL through 2020.
- Minimum purchase commitment for KRYSTESTX through 2026.
- Minimum purchase commitment for RAYOS/LODOTRA tablets from Jagotec AG through December 2023 (the end of the minimum term), which is the firm commitment term under the contract.
- Purchase commitment for final packaged PENNSAID 2% from Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.) through February 2018.
- Purchase commitment for final packaged DUEXIS tablets from Sanofi-Aventis U.S. through June 2018.
- Minimum purchase commitment for VIMOVO tablets from Patheon Pharmaceuticals Inc. through March 2018.
- Purchase commitments for process validation activities for teprotumumab through 2018.

(3) These amounts reflect payments due under our operating leases, which are principally for our facilities. For further details regarding these properties, see Item 2 of Part I, Properties, of this Annual Report on Form 10-K.
As of December 31, 2017, our contingent liability for uncertain tax positions amounted to $23.4 million (excluding interest and penalties). Due to the nature and timing of the ultimate outcome of these uncertain tax positions, we cannot make a reasonably reliable estimate of the amount and period of related future payments, if any. Therefore, our contingent liability has been excluded from the above contractual obligations table. We do not expect a significant tax payment related to these obligations within the next year.

In addition to the obligations set out in the above table, we have assumed material obligations to make royalty and milestone payments to certain third parties on net sales of certain of our medicines. See Note 18 of the Notes to consolidated financial statements, included in Item 15 of this Annual Report on Form 10-K, for details of these material obligations.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, including the use of structured finance, special purpose entities or variable interest entities, other than the indemnification agreements discussed in Note 18 in the Notes to our consolidated financial statements included in this report.

Critical Accounting Policies and Significant Judgments and Estimates

The methods, estimates and judgments that we use in applying our critical accounting policies have a significant impact on the results that we report in our financial statements. Some of our accounting policies require us to make difficult and subjective judgments, often as a result of the need to make estimates regarding matters that are inherently uncertain.

We have identified the accounting policies and estimates listed below as those that we believe require management’s most subjective and complex judgments in estimating the effect of inherent uncertainties. This section should also be read in conjunction with Note 2 in the Notes to our consolidated financial statements included in this report, which includes a discussion of these and other significant accounting policies.

Revenue Recognition

Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the price is fixed or determinable; and collectability is reasonably assured. Some of our agreements contain multiple elements and in accordance with these agreements, we may be eligible for upfront license fees, marketing or commercial milestones and payment for medicine deliveries.

Revenue From Medicine Deliveries

Revenue from medicine deliveries comprises substantially all of our gross sales. We recognize revenue from the sale of our medicines when delivery has occurred, title has transferred, the selling price is fixed or determinable, the right of return no longer exists (which is the earlier of medicine being dispensed through patient prescriptions or the expiration of the right of return) or medicine returns can be reasonably estimated, collectability is reasonably assured and we have no further performance obligations. Due to our ability to reasonably estimate and determine allowances for co-pay and other patient assistance, medicine returns, rebates and discounts based on our own internal data for DUEXIS and RAYOS or data relating to prior sales of our acquired medicines which was received in connection with the acquisition of those medicines, we recognize revenue at the point of sale to wholesale pharmaceutical distributors and pharmacies for all currently distributed medicines.

Revenue From Upfront License Fees

We recognize revenues from the receipt of non-refundable, upfront license fees. In situations where the licensee is able to obtain stand-alone value from the license and no further performance obligations exist on our part, revenues are recognized on the earlier of when payments are received or collection is assured. Where continuing involvement by us is required in the form of technology transfer, medicine manufacturing or technical support, revenues are deferred and recognized over the term of the agreement.

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Revenue From Milestone Receipts

Milestone payments are recognized as revenue based on achievement of the associated milestones, as defined in the relevant agreements. Revenue from a milestone achievement is recognized when earned, as evidenced by acknowledgment from our partner, provided that (1) the milestone event is substantive and its achievability was not reasonably assured at the inception of the agreement, (2) the milestone represents the culmination of an earnings process and (3) the milestone payment is non-refundable. If any of these criteria are not met, revenue from the milestone achievement is recognized over the remaining minimum period of our performance obligations under the agreement.

As of December 31, 2017 and 2016, deferred revenues related to milestone and upfront payments received were $16.6 million and $11.1 million, respectively.

Following the adoption of ASU No. 2014-09, Revenue from Contracts with Customers, we expect to reclassify approximately $11.0 million of deferred revenue directly to retained earnings in the first quarter of 2018.

Medicine Sales Discounts and Allowances

We record allowances for medicine returns, rebates and discounts at the time of sale to wholesale pharmaceutical distributors and pharmacies. We are also required to make significant judgments and estimates in determining some of these allowances. If actual results differ from our estimates, we will be required to make adjustments to these allowances in the future.

Commercial Rebates

We participate in certain commercial rebate programs. Under these rebate programs, we pay a rebate to the commercial entity or third-party administrator of the program. We accrue estimated rebates based on contract prices, estimated percentages of medicine sold to qualified patients and estimated levels of inventory in the distribution channel and record the rebate as a reduction of revenue. Accrued commercial rebates are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Distribution Service Fees

We include distribution service fees paid to our wholesalers for distribution and inventory management services as a reduction to revenue. We accrue estimated distribution fees based on contractually determined amounts, typically as a percentage of revenue, and record the fees as a reduction of revenue. Accrued distribution service fees are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Patient Access Programs

We offer discount card and other programs such as our HorizonCares program to patients under which the patient receives a discount on his or her prescription. In certain circumstances when a patient’s prescription is rejected by a managed care vendor, we will pay for the full cost of the prescription. We reimburse pharmacies for this discount through third-party vendors. We reduce gross sales by the amount of actual co-pay and other patient assistance in the period based on the invoices received. We also record an accrual to reduce gross sales for estimated co-pay and other patient assistance on units sold to distributors that have not yet been prescribed/dispensed to a patient. The estimate is based on contract prices, estimated percentages of medicine that will be prescribed to qualified patients, average assistance paid based on reporting from the third-party vendors and estimated levels of inventory in the distribution channel. Accrued co-pay and other patient assistance fees are included in “accrued trade discounts and rebates” on the consolidated balance sheet. Patient assistance programs include both co-pay assistance and fully bought down prescriptions.
Sales Returns

Consistent with industry practice, we maintain a return policy that allows customers to return medicine within a specified period prior to and subsequent to the medicine expiration date. Generally, medicine may be returned for a period beginning six months prior to its expiration date and up to one year after its expiration date. The right of return expires on the earlier of one year after the medicine expiration date or the time that the medicine is dispensed to the patient. The majority of our medicine returns are the result of medicine dating, which falls within the range set by our policy, and are settled through the issuance of a credit to the customer. Our estimate of the provision for returns is based upon our historical experience with actual returns, which is applied to the level of sales for the period that corresponds to the period during which our customer may return medicine. This period is known to us based on the shelf lives of our medicines at the time of shipment. We record sales returns as an allowance against accounts receivable and a reduction of revenue.

Prompt Pay Discounts

As an incentive for prompt payment, we offer a two percent cash discount to customers. We expect that all customers will comply with the contractual terms to earn the discount. We record the discount as an allowance against accounts receivable and a reduction of revenue.

Government Rebates

We participate in certain federal government rebate programs, such as Medicare and Medicaid. We accrue estimated rebates based on estimated percentages of medicine sold to qualified patients, estimated rebate percentages and estimated levels of inventory in the distribution channel that will be sold to qualified patients and record the rebates as a reduction of revenue. Accrued government rebates are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Government Chargebacks

We provide discounts to federal government qualified entities with whom we have contracted. These federal entities purchase medicines from the wholesale pharmaceutical distributors at a discounted price, and the wholesale pharmaceutical distributors then charge back to us the difference between the current retail price and the contracted price that the federal entities paid for the medicine. We accrue estimated chargebacks based on contract prices and sell-through sales data obtained from third-party information and record the chargeback as a reduction of revenue. Accrued government chargebacks are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Cost of Goods Sold

We recognize cost of goods sold in connection with our sales of each of our distributed medicines. Cost of goods sold includes all costs directly related to the acquisition of our medicines from our third-party manufacturers, including freight charges and other direct expenses such as insurance and supply chain costs. Cost of goods sold also includes amortization of intellectual property as described in the intangible assets and goodwill accounting policy below, inventory step-up expense, royalty payments to third parties, royalty accretion expense, changes in estimates associated with the contingent royalty liability as described in the accrued contingent royalty accounting policy below and loss on inventory purchase commitments.

Intangible Assets

Definite-lived intangible assets are amortized over their estimated useful lives. We review our intangible assets when events or circumstances may indicate that the carrying value of these assets exceeds their fair value. We measure fair value based on the estimated future discounted cash flows associated with our assets in addition to other assumptions and projections that we deem to be reasonable and supportable. The estimated useful lives, from the date of acquisition, for all identified intangible assets that are subject to amortization are between five and thirteen years.

We determined that no impairment of the above intangible assets existed as of December 31, 2017.
Indefinite-lived intangible assets consist of capitalized IPR&D. IPR&D assets represent capitalized incomplete research projects that we acquired through business combinations. Such assets are initially measured at their acquisition date fair values and are tested for impairment, until completion or abandonment of research and development efforts associated with the projects. An IPR&D asset is considered abandoned when research and development efforts associated with the asset have ceased, and there are no plans to sell or license the asset or derive value from the asset. At that point, the asset is considered to be impaired and is written off. Upon successful completion of each project, we will make a determination about the then remaining useful life of the intangible asset and begin amortization. We test our indefinite-lived intangibles, including IPR&D assets, for impairment annually during the fourth quarter and more frequently if events or changes in circumstances indicate that it is more likely than not that the asset is impaired.

Following an impairment charge recorded in the fourth quarter of 2016, we had no indefinite-lived intangible assets as of December 31, 2017 and 2016.

**Business Combinations**

We account for business combinations in accordance with the pronouncement guidance in ASC 805, in which acquired assets and liabilities are measured at their respective estimated fair values as of the acquisition date. We may be required, as in the case of intangible assets or contingent royalties, to determine the fair value associated with these amounts by estimating the fair value using an income approach under the discounted cash flow method, which may include revenue projections and other assumptions made by us to determine the fair value. We recorded goodwill of $9.9 million and $186.2 million in connection with our acquisitions of Crealta and Raptor, respectively. Additionally, as part of the Chiesi divestiture, we recorded a reduction to goodwill of $16.3 million.

**Goodwill**

Goodwill represents the excess of the purchase price of acquired businesses over the estimated fair value of the identifiable net assets acquired. Goodwill is not amortized but is tested for impairment at least annually at the reporting unit level or more frequently if events or changes in circumstances indicate that the asset might be impaired. Impairment loss, if any, is recognized based on a comparison of the fair value of the asset to its carrying value, without consideration of any recoverability. We test goodwill for impairment annually during the fourth quarter and whenever indicators of impairment exist by first assessing qualitative factors to determine whether it is more likely than not that the fair value is less than its carrying amount. If we conclude it is more likely than not that the fair value of a reporting unit is less than its carrying amount, a quantitative impairment test is performed. If we conclude that goodwill is impaired, we will record an impairment charge in our consolidated statement of comprehensive (loss) income. Based upon our most recent annual impairment test performed in the fourth quarter of 2017, we concluded goodwill was not impaired.

** Provision for Income Taxes**

We account for income taxes based upon an asset and liability approach. Deferred tax assets and liabilities represent the future tax consequences of the differences between the financial statement carrying amounts of assets and liabilities versus the tax basis of assets and liabilities. Under this method, deferred tax assets are recognized for deductible temporary differences, and operating loss and tax credit carryforwards. Deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The impact of tax rate changes on deferred tax assets and liabilities is recognized in the year that the change is enacted. We also account for the uncertainty in income taxes by utilizing a comprehensive model for the recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken or are expected to be taken on an income tax return. Deferred tax assets and deferred tax liabilities are netted by jurisdiction on our consolidated balance sheets.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118, or SAB 118, which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the date of enactment for companies to complete the accounting under ASC 740, Income Taxes. In accordance with SAB 118, we reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that our accounting for certain income tax effects of the Tax Act is incomplete but we can determine a reasonable estimate, we record a provisional estimate in the consolidated financial statements. As of December 31, 2017, we have not completed our accounting for the effects of the Tax Act. However, we have made reasonable estimates of the effects on our income tax provision with respect to certain items, primarily the revaluation of our existing U.S. deferred tax balances and the write-off of our U.S. deferred tax assets resulting from interest expense carryforwards under Section 163(j).
of the Code. In other cases, we have not been able to make reasonable estimates and continue to account for those items based on our existing accounting under the provisions of the tax laws that were in effect prior to enactment. We recognized a net income tax benefit of $74.9 million for the year ended December 31, 2017, associated with the items we could reasonably estimate; refer to Note 22 of the Notes to consolidated financial statements. This benefit reflects the revaluation of our U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of the deferred tax asset related to our U.S. interest expense carryforwards. We are still analyzing the Tax Act and refining our calculations and the results of this analysis which could potentially impact the measurement of our income tax balances and income tax expense for the year ended December 31, 2017.

Share-Based Compensation

We account for employee share-based compensation by measuring and recognizing compensation expense for all share-based payments based on estimated grant date fair values. We use the straight-line method to allocate compensation cost to reporting periods over each awardee’s requisite service period, which is generally the vesting period. We adopted ASU No. 2016-09 on January 1, 2017 and we have elected to retain a forfeiture rate after adoption.

Accrued Contingent Royalties

Our accrued contingent royalties consist of the contingent royalty obligations assumed by us related to our acquisitions of rights to certain of our medicines. At the time of each acquisition, we assigned a fair value to the liability for royalties. The royalty liability was based on anticipated revenue streams utilizing the income approach under the discounted cash flow method. The estimated liability for royalties is increased or decreased over time to reflect the change in its present value, and accretion expense is recorded as part of cost of goods sold. We evaluate the adequacy of the estimated contingent royalty liability at least annually in the fourth quarter, or whenever events or changes in circumstances indicate that an evaluation of the estimate is necessary. As part of our evaluation, we adjust the carrying value of the liability to the present value of the revised estimated cash flows using the original discount rate.

Any adjustment to the liability is recorded as an increase or reduction in cost of goods sold. The royalty liability is included in current and long-term accrued royalties on the consolidated balance sheets.

New Accounting Pronouncements Impacting Critical Accounting Policies

Refer to Note 2 in the Notes to our consolidated financial statements included in this report, which includes a discussion of the new accounting pronouncements impacting critical accounting policies.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to various market risks, which include potential losses arising from adverse changes in market rates and prices, such as interest rates and foreign exchange fluctuations. We do not enter into derivatives or other financial instruments for trading or speculative purposes.

Interest Rate Risk. We are subject to interest rate fluctuation exposure through our borrowings under the Credit Agreement and our investment in money market accounts which bear a variable interest rate. Loans under the Credit Agreement bear interest, at our option, at a rate equal to either the LIBOR rate, plus an applicable margin of 3.25% per annum (subject to a 1.00% LIBOR floor), or the adjusted base rate plus 2.25%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1%, (b) prime rate, (c) fed funds plus 0.5% and (d) 2%. Our approximately $845.8 million of October 2017 Refinancing Loans are based on LIBOR. The one month LIBOR rate at the date of filing of this Annual Report on Form 10-K is 1.625%, and as a result, the interest rate on our borrowings is currently 4.875% per annum.

An increase in the LIBOR of 100 basis points above the LIBOR rate at the date of filing of this Annual Report on Form 10-K would increase our interest expense related to the Credit Agreement by $8.4 million per year.

The goals of our investment policy are associated with the preservation of capital, fulfillment of liquidity needs and fiduciary control of cash. To achieve our goal of maximizing income without assuming significant market risk, we maintain our excess cash and cash equivalents in money market funds. Because of the short-term maturities of our cash equivalents, we do not believe that a decrease in interest rates would have any material negative impact on the fair value of our cash equivalents.
Foreign Currency Risk. Our purchase cost of ACTIMMUNE and our sales contracts relating to LODOTRA are principally denominated in Euros and are subject to foreign currency risk. We have contracts relating to RAVICTI, QUINSAIR and PROCYSBI for sales in Canada which sales are subject to foreign currency risk. We also incur certain operating expenses in currencies other than the U.S. dollar in relation to our Irish operations and foreign subsidiaries. Therefore, we are subject to volatility in cash flows due to fluctuations in foreign currency exchange rates, particularly changes in the Euro and the Canadian dollar.

Inflation Risk. We do not believe that inflation has had a material impact on our business or results of operations during the periods for which the consolidated financial statements are presented in this report.

Credit Risk. Historically, our accounts receivable balances have been highly concentrated with a select number of customers, consisting primarily of large wholesale pharmaceutical distributors who, in turn, sell the medicines to pharmacies, hospitals and other customers. As of December 31, 2017, and 2016, our top three customers accounted for approximately 79% and 78%, respectively, of our total outstanding accounts receivable balances.

Item 8. Financial Statements and Supplementary Data
The financial information required by Item 8 is contained in Part IV, Item 15 of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
None.

Item 9A. Controls and Procedures
Evaluation of Disclosure Controls and Procedures
Our Chief Executive Officer and Chief Financial Officer, after evaluating the effectiveness of our “disclosure controls and procedures” (as defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act), have concluded that, as of December 31, 2017, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive officer or officers and principal financial officer or officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management Report on Internal Control over Financial Reporting
Our management, under the supervision of our chief executive officer and our chief financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined under Rule 13a-15(f) of the Exchange Act. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control – Integrated Framework (2013). Management’s assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of our internal control over financial reporting. Based on management’s assessment, management has concluded that, as of December 31, 2017, our internal control over financial reporting was effective based on those criteria.

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The effectiveness of our internal control over financial reporting as of December 31, 2017, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

**Changes in Internal Control Over Financial Reporting**

During the three months ended December 31, 2017, we implemented a new payroll and human capital management system in the United States. In connection with the implementation, we changed certain processes and procedures which resulted in material changes to our internal controls over financial reporting. While we expect this new system implementation to strengthen our internal controls, management will continue to evaluate and monitor our internal controls as processes and procedures in the affected areas evolve.

There have been no other material changes to our internal control over financial reporting, as defined in Exchange Act Rules 13a-15(f) and 15d-15(f), during the three months ended December 31, 2017, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None

**PART III**

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

The information required by this item is incorporated herein by reference to our definitive Proxy Statement to be filed in connection with our 2018 Annual General Meeting of Shareholders, or our 2018 Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2017.

We have adopted a written Code of Business Conduct and Ethics, or Ethics Code, that applies to all officers, directors and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The Ethics Code is available on our website at www.horizonpharma.com. If we make any substantive amendments to the Ethics Code or grant any waiver from a provision of the Ethics Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website or in a Current Report on Form 8-K.

**Item 11. Executive Compensation**

The information required by this item is incorporated herein by reference to our 2018 Proxy Statement.

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

The information required by this item is incorporated herein by reference to our 2018 Proxy Statement.

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

The information required by this item is incorporated herein by reference to our 2018 Proxy Statement.

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

The information required by this item is incorporated herein by reference to our 2018 Proxy Statement.
PART IV
Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report.

1. Financial Statements

   The financial statements listed on the Index to Financial Statements F-1 to F-65 are filed as part of this Annual Report on Form 10-K.

2. Financial Statement Schedules

   Schedule II – Valuation and Qualifying Accounts and Reserves for each of the three fiscal years ended December 31, 2017, 2016 and 2015 appearing on page F-66. Other financial statement schedules have been omitted because the required information is included in the consolidated financial statements or notes thereto or because they are not applicable or not required.

3. Exhibits

   INDEX TO EXHIBITS

<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description of Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Transaction Agreement and Plan of Merger, dated March 18, 2014, by and among Horizon Pharma, Inc., Vidara Therapeutics Holdings LLC, Vidara Therapeutics International Ltd. (now known as Horizon Pharma Public Limited Company), Hamilton Holdings (USA), Inc. and Hamilton Merger Sub, Inc. (incorporated by reference to Exhibit 2.1 to Horizon Pharma, Inc.’s Current Report on Form 8-K, filed on March 20, 2014).</td>
</tr>
<tr>
<td>2.2</td>
<td>First Amendment to Transaction Agreement and Plan of Merger, dated June 12, 2014, by and between Horizon Pharma, Inc. and Vidara Therapeutics Holdings LLC (incorporated by reference to Exhibit 99.1 to Horizon Pharma, Inc.’s Current Report on Form 8-K, filed on June 18, 2014).</td>
</tr>
<tr>
<td>2.3</td>
<td>Agreement and Plan of Merger, dated March 29, 2015, by and among Horizon Pharma, Inc., Ghrian Acquisition Inc. and Hyperion Therapeutics, Inc. (incorporated by reference to Exhibit 2.1 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Current Report on Form 8-K, filed on April 9, 2015).</td>
</tr>
<tr>
<td>2.4*</td>
<td>Agreement and Plan of Merger, dated December 10, 2015, by and among Horizon Pharma USA, Inc., HZNP Limited, Criostail LLC, Crealta Holdings LLC and the other parties thereto (incorporated by reference to Exhibit 2.4 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Annual Report on Form 10-K, filed on May 26, 2017).</td>
</tr>
<tr>
<td>2.5</td>
<td>Agreement and Plan of Merger, dated September 12, 2016, by and among Horizon Pharma Public Limited Company, Misneach Corporation and Raptor Pharmaceutical Corp. (incorporated by reference to Exhibit 2.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on September 12, 2016).</td>
</tr>
<tr>
<td>4.2</td>
<td>Form of 2.5% Exchangeable Senior Note due 2022 (incorporated by reference to Exhibit 4.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on March 13, 2015).</td>
</tr>
<tr>
<td>4.3</td>
<td>Indenture, dated April 29, 2015, by and between Horizon Pharma Financing Inc. and U.S. Bank National Association (incorporated by reference to Exhibit 4.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on April 29, 2015).</td>
</tr>
<tr>
<td>4.4</td>
<td>Form of 6.625% Senior Note due 2023 (incorporated by reference to Exhibit 4.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on April 29, 2015).</td>
</tr>
</tbody>
</table>

Indenture, dated October 25, 2016, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on October 25, 2016).

Form of 8.75% Senior Note due 2024 (incorporated by reference to Exhibit 4.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on October 25, 2016).

Form of Indemnification Agreement entered into by and between Horizon Pharma Public Limited Company and certain of its directors, officers and employees (incorporated by reference to Exhibit 10.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on September 19, 2014).

Form of Indemnification Agreement entered into by and between Horizon Pharma, Inc. and certain directors, officers and employees of Horizon Pharma Public Limited Company (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on September 19, 2014).

Horizon Pharma Public Limited Company Non-Employee Director Compensation Policy, as amended (incorporated by reference to Exhibit 10.3 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 29, 2016).

Horizon Pharma, Inc. 2005 Stock Plan and Form of Stock Option Agreement thereunder (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on September 19, 2014).

Horizon Pharma Public Limited Company 2014 Equity Incentive Plan, as amended, and Form of Option Agreement, Form of Stock Option Grant Notice, Forms of Restricted Stock Unit Agreement and Forms of Restricted Stock Unit Grant Notice thereunder (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on September 19, 2014).


Form of Employee Proprietary Information and Inventions Agreement (incorporated by reference to Exhibit 10.15 to Horizon Pharma, Inc.’s Registration Statement on Form S-1 (No. 333-168504), as amended).


Manufacturing and Supply Agreement, dated May 25, 2011, by and between Horizon Pharma USA, Inc. and Sanofi-Aventis U.S. LLC (incorporated by reference to Exhibit 10.35 to Horizon Pharma, Inc.’s Registration Statement on Form S-1 (No. 333-168504), as amended).

Sales Contract, dated July 1, 2010, by and between Horizon Pharma USA, Inc. and BASF Corporation (incorporated by reference to Exhibit 10.29 to Horizon Pharma, Inc.’s Registration Statement on Form S-1 (No. 333-168504), as amended).
Amendment to Manufacturing and Supply Agreement, effective as of September 25, 2013, by and between Horizon Pharma USA, Inc. and Sanofi-Aventis U.S. LLC (incorporated by reference to Exhibit 10.3 to Horizon Pharma, Inc.’s Quarterly Report on Form 10-Q, filed on November 8, 2013).


First Amendment to Amended and Restated Executive Employment Agreement, dated January 16, 2014, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Jeffrey W. Sherman, M.D., FACP (incorporated by reference to Exhibit 99.3 to Horizon Pharma, Inc.’s Current Report on Form 8-K, filed on January 16, 2014).

Executive Employment Agreement, effective as of March 5, 2014, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Robert F. Carey (incorporated by reference to Exhibit 10.56 to Horizon Pharma, Inc.’s Annual Report on Form 10-K, filed on March 13, 2014).

Executive Employment Agreement, effective as of June 23, 2014, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Paul W. Hoelscher (incorporated by reference to Exhibit 99.4 to Horizon Pharma, Inc.’s Current Report on Form 8-K, filed on June 18, 2014).

Supply Agreement, dated October 17, 2014, by and between Horizon Pharma Ireland Limited and Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.) (incorporated by reference to Exhibit 10.57 to Horizon Pharma Public Limited Company’s Amendment No. 2 to Annual Report on Form 10-K, filed on April 10, 2015).


Amendment No. 1 to License Agreement for Interferon Gamma, dated December 28, 1998, by and between Genentech, Inc. and Connetics Corporation (incorporated by reference to Exhibit 10.63 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).

Amendment No. 2 to License Agreement for Interferon Gamma, dated January 15, 1999, by and between Genentech, Inc. and Connetics Corporation (incorporated by reference to Exhibit 10.64 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).

Amendment No. 3 to License Agreement for Interferon Gamma, dated April 27, 1999, by and between Genentech, Inc. and Connetics Corporation (incorporated by reference to Exhibit 10.65 to Horizon Pharma Public Limited Company’s Amendment No. 3 to Annual Report on Form 10-K, filed on May 26, 2017).

Consent to Assignment Agreement, dated June 23, 2000 (Amendment No. 4), by and among Genentech, Inc., Connetics Corporation and InterMune Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.66 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).

Amendment No. 5 to License Agreement for Interferon Gamma, dated January 25, 2001, by and between Genentech, Inc. and InterMune Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.67 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).

Amendment No. 6 to License Agreement for Interferon Gamma, dated February 27, 2006, by and between Genentech, Inc. and InterMune, Inc. (incorporated by reference to Exhibit 10.68 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).

Amendment No. 7 to License Agreement for Interferon Gamma, dated December 17, 2013, by and between Genentech, Inc. and Vidara Therapeutics International Public Limited Company (incorporated by reference to Exhibit 10.69 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2015).
Executive Employment Agreement, effective as of September 18, 2014, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Barry Moze (incorporated by reference to Exhibit 10.74 to Horizon Pharma Public Limited Company's Annual Report on Form 10-K, filed on February 27, 2015).

Horizon Pharma, Inc. Deferred Compensation Plan.

Horizon Pharma Public Limited Company Equity Long Term Incentive Program (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company's Quarterly Report on Form 10-Q, filed on May 8, 2015).

Executive Employment Agreement, dated May 7, 2015, by and among Horizon Pharma Inc., Horizon Pharma USA, Inc. and Brian Beeler (incorporated by reference to Exhibit 10.4 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on May 8, 2015).

Credit Agreement, dated May 7, 2015, by and among Horizon Pharma, Inc., as borrower, Horizon Pharma Public Limited Company, as Irish Holdco and a guarantor, the subsidiary guarantors party thereto, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated by reference to Exhibit 10.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on May 11, 2015).

License Agreement, dated April 16, 1999, by and among Saul Brusilow, M.D., Brusilow Enterprises, Inc. and Medicis Pharmaceutical Corporation (incorporated by reference to Exhibit 10.8 to Horizon Pharma Public Limited Company’s Amendment No. 2 to Quarterly Report on Form 10-Q, filed on May 26, 2017).

Settlement Agreement and First Amendment to License Agreement, dated August 21, 2007, by and among Saul Brusilow, M.D., Brusilow Enterprises, Inc., Medicis Pharmaceutical Corporation and Ucyclyd Pharma, Inc. (incorporated by reference to Exhibit 10.22 to Hyperion Therapeutics, Inc.’s Amendment No. 1 to the Registration Statement on Form S-1, filed on May 24, 2012).

Horizon Pharma Public Limited Company Share Clog Program Trust Deed, as amended, and Form of Clog Letter (incorporated by reference to Exhibit 10.6 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 8, 2016).

Executive Employment Agreement, dated August 6, 2015, by and among Horizon Pharma Inc., Horizon Pharma USA, Inc. and George P. Hampton (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on November 6, 2015).


Sublease, dated August 21, 2015, by and between Solo Cup Operating Corporation and Horizon Pharma USA, Inc. and Sublease Consent and Recognition Agreement, dated October 2, 2015, by and among Lake Forest Landmark II, LLC, Solo Cup Operating Corporation and Horizon Pharma USA, Inc. (incorporated by reference to Exhibit 10.64 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 29, 2016).

Asset Purchase Agreement, dated March 22, 2012, by and between Hyperion Therapeutics, Inc. and Ucyclyd Pharma, Inc. (incorporated by reference to Exhibit 2.1 to Hyperion Therapeutics, Inc.’s Amendment No. 1 to the Registration Statement on Form S-1, filed on May 24, 2012).
10.43* Amendment No. 1 to Supply Agreement, dated February 4, 2016, by and between Horizon Pharma Ireland Limited and Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.) (incorporated by reference to Exhibit 10.66 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 29, 2016).

10.44* Commercial Supply Agreement, dated October 16, 2008, by and between Exelead, Inc. (formerly known as Sigma-Tau PharmaSource, Inc. (as successor in interest to Enzon Pharmaceuticals, Inc.) and Crealta Pharmaceuticals LLC (as successor in interest to Savient Pharmaceuticals, Inc.), as amended October 5, 2009, October 22, 2009 and July 29, 2014 (incorporated by reference to Exhibit 10.68 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Annual Report on Form 10-K, filed on May 26, 2017).

10.45* Fifth Amendment to Commercial Supply Agreement, effective as of August 31, 2016, by and between Horizon Pharma Ireland Limited and Bio-Technology General (Israel) Ltd. (incorporated by reference to Exhibit 10.1 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on November 7, 2016).

10.46 Amendment No. 1, dated October 25, 2016, to Credit Agreement, dated May 7, 2015, by and among Horizon Pharma, Inc., as borrower, Horizon Pharma Public Limited Company, as Irish Holdco and a guarantor, the subsidiary guarantors party thereto, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated by reference to Exhibit 99.1 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Current Report on Form 8-K, filed on October 25, 2016).

10.47* API Supply Agreement, dated November 3, 2010, by and among Cambrex Profarmaco Milano, Horizon Orphan LLC (as successor in interest to Raptor Therapeutics Inc.) and Horizon Pharma Europe B.V. (as successor in interest to Raptor Pharmaceuticals Europe B.V.), as amended April 9, 2013 (incorporated by reference to Exhibit 10.4 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on November 7, 2016).


10.49* Amendment No. 1 to Sales Contract, effective as of January 1, 2016, by and between Horizon Pharma USA, Inc. and BASF Corporation (incorporated by reference to Exhibit 10.74 to Horizon Pharma Public Limited Company’s Annual Report on Form 10-K, filed on February 27, 2017).

10.50+ Horizon Pharma Public Limited Company Equity Long Term Incentive Program (incorporated by reference to Exhibit 99.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on January 11, 2018).


10.53+ Executive Employment Agreement, effective as of January 4, 2018, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Shao-Lee Lin, M.D., Ph.D.

10.54+ Executive Employment Agreement, effective as of September 11, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Irina Konstantinovsky (incorporated by reference to Exhibit 10.2 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on November 6, 2017).

10.55+ Executive Employment Agreement, effective as of August 21, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Eric Mosbrooker (incorporated by reference to Exhibit 10.3 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on November 6, 2017).

10.56 Amendment No. 2, dated March 29, 2017, to Credit Agreement, dated May 7, 2015, by and among Horizon Pharma, Inc., as Borrower, Horizon Pharma USA, Inc., as an Additional Borrower, Horizon Pharma Public Limited Company, as Irish Holdco and a guarantor, the subsidiary guarantors party thereto, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated by reference to Exhibit 99.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on March 30, 2017).
Amendment No. 3, dated October 23, 2017, to Credit Agreement, dated May 7, 2015, by and among Horizon Pharma, Inc., as Borrower, Horizon Pharma USA, Inc., as an Additional Borrower, Horizon Pharma Public Limited Company, as Irish Holdco and a guarantor, the subsidiary guarantors party thereto, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated by reference to Exhibit 99.1 to Horizon Pharma Public Limited Company’s Current Report on Form 8-K, filed on October 23, 2017).

Global Supply Agreement, dated June 30, 2017, by and between Horizon Pharma Ireland Limited and Boehringer Ingelheim Biopharmaceuticals GmbH (incorporated by reference to Exhibit 10.3 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Quarterly Report on Form 10-Q, filed on September 28, 2017).

Amended and Restated License Agreement, dated May 31, 2017, by and between Horizon Orphan LLC and The Regents of the University of California (incorporated by reference to Exhibit 10.4 to Horizon Pharma Public Limited Company’s Amendment No. 1 to Quarterly Report on Form 10-Q, filed on September 28, 2017).

Executive Employment Agreement, effective as of February 1, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Vikram Karnani (incorporated by reference to Exhibit 10.5 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 7, 2017).

Second Amendment to Amended and Restated Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Jeffrey W. Sherman, M.D. (incorporated by reference to Exhibit 10.6 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 7, 2017).

First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Paul W. Hoelscher (incorporated by reference to Exhibit 10.7 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 7, 2017).

First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Barry Moze (incorporated by reference to Exhibit 10.8 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 7, 2017).

First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Brian Beeler (incorporated by reference to Exhibit 10.9 to Horizon Pharma Public Limited Company’s Quarterly Report on Form 10-Q, filed on August 7, 2017).


Executive Employment Agreement, effective as of February 16, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Michael DesJardin.

First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Michael DesJardin.

Consulting Agreement, effective as of February 1, 2018, by and between Horizon Pharma USA, Inc. and David Happel.

Second Amendment to Supply Agreement, dated January 1, 2017, by and between Horizon Pharma Ireland Limited and Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.).

Third Amendment to Supply Agreement, dated February 16, 2018, by and between Horizon Pharma Ireland Limited and Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.).
Item 16. Form 10-K Summary

None.
Report of Independent Registered Public Accounting Firm
Consolidated Balance Sheets as of December 31, 2017 and 2016
Consolidated Statements of Comprehensive (Loss) Income for the Years Ended December 31, 2017, 2016 and 2015
Consolidated Statements of Shareholders’ Equity for the Years Ended December 31, 2017, 2016 and 2015
Notes to Consolidated Financial Statements
To the Board of Directors and Shareholders of Horizon Pharma plc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Horizon Pharma plc and its subsidiaries (the “Company”) as of December 31, 2017 and 2016, and the related consolidated statements of comprehensive (loss) income, shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
February 28, 2018

We have served as the Company’s auditor since 2009.
## HORIZON PHARMA PLC

### CONSOLIDATED BALANCE SHEETS

(In thousands, except share data)

<table>
<thead>
<tr>
<th></th>
<th>As of December 31, 2017</th>
<th>As of December 31, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CURRENT ASSETS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$751,368</td>
<td>$509,055</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>6,529</td>
<td>7,095</td>
</tr>
<tr>
<td>Accounts receivable, net</td>
<td>367,351</td>
<td>305,725</td>
</tr>
<tr>
<td>Inventories, net</td>
<td>61,655</td>
<td>174,788</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>43,402</td>
<td>49,619</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>1,230,305</td>
<td>1,046,282</td>
</tr>
<tr>
<td>Property and equipment, net</td>
<td>20,405</td>
<td>23,484</td>
</tr>
<tr>
<td>Developed technology, net</td>
<td>2,443,949</td>
<td>2,767,184</td>
</tr>
<tr>
<td>Other intangible assets, net</td>
<td>5,441</td>
<td>6,251</td>
</tr>
<tr>
<td>Goodwill</td>
<td>426,441</td>
<td>445,579</td>
</tr>
<tr>
<td>Deferred tax assets, net</td>
<td>3,470</td>
<td>911</td>
</tr>
<tr>
<td>Other assets</td>
<td>36,081</td>
<td>2,368</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$4,166,092</td>
<td>$4,292,059</td>
</tr>
<tr>
<td><strong>LIABILITIES AND SHAREHOLDERS’ EQUITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CURRENT LIABILITIES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term debt—current portion</td>
<td>$10,625</td>
<td>$7,750</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>34,681</td>
<td>52,479</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>137,834</td>
<td>182,765</td>
</tr>
<tr>
<td>Accrued trade discounts and rebates</td>
<td>501,753</td>
<td>297,556</td>
</tr>
<tr>
<td>Accrued royalties—current portion</td>
<td>65,328</td>
<td>61,981</td>
</tr>
<tr>
<td>Deferred revenues—current portion</td>
<td>6,885</td>
<td>3,321</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>757,106</td>
<td>605,852</td>
</tr>
<tr>
<td>LONG-TERM LIABILITIES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchangeable notes, net</td>
<td>314,384</td>
<td>298,002</td>
</tr>
<tr>
<td>Long-term debt, net, net of current</td>
<td>1,576,646</td>
<td>1,501,741</td>
</tr>
<tr>
<td>Accrued royalties, net of current</td>
<td>291,185</td>
<td>272,293</td>
</tr>
<tr>
<td>Deferred revenues, net of current</td>
<td>9,713</td>
<td>7,763</td>
</tr>
<tr>
<td>Deferred tax liabilities, net</td>
<td>157,945</td>
<td>296,568</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>68,015</td>
<td>46,061</td>
</tr>
<tr>
<td><strong>Total long-term liabilities</strong></td>
<td>2,417,888</td>
<td>2,422,428</td>
</tr>
<tr>
<td>COMMITMENTS AND CONTINGENCIES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHAREHOLDERS’ EQUITY:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinary shares, $0.0001 nominal value; 300,000,000 shares authorized; 164,785,083 and 162,004,956 shares issued at December 31, 2017 and December 31, 2016, respectively, and 164,400,717 and 161,620,590 shares outstanding at December 31, 2017 and December 31, 2016, respectively</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Treasury stock, 384,366 ordinary shares at December 31, 2017 and December 31, 2016</td>
<td>(4,585)</td>
<td>(4,585)</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td>2,248,979</td>
<td>2,119,455</td>
</tr>
<tr>
<td>Accumulated other comprehensive loss</td>
<td>(983)</td>
<td>(3,086)</td>
</tr>
<tr>
<td>Accumulated deficit</td>
<td>(1,252,329)</td>
<td>(848,021)</td>
</tr>
<tr>
<td><strong>Total shareholders’ equity</strong></td>
<td>991,098</td>
<td>1,263,779</td>
</tr>
<tr>
<td><strong>Total liabilities and shareholders’ equity</strong></td>
<td>$4,166,092</td>
<td>$4,292,059</td>
</tr>
</tbody>
</table>

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

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HORIZON PHARMA PLC
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(In thousands, except share and per share data)
For the Years Ended December 31,

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>$1,056,231</td>
<td>$981,120</td>
<td>$757,044</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>546,275</td>
<td>393,272</td>
<td>219,502</td>
</tr>
<tr>
<td>Gross profit</td>
<td>509,956</td>
<td>587,848</td>
<td>537,542</td>
</tr>
<tr>
<td>OPERATING EXPENSES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and</td>
<td>224,962</td>
<td>60,707</td>
<td>41,865</td>
</tr>
<tr>
<td>development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selling, general</td>
<td>677,363</td>
<td>608,308</td>
<td>440,305</td>
</tr>
<tr>
<td>and administrative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impairment of in</td>
<td>—</td>
<td>66,000</td>
<td>—</td>
</tr>
<tr>
<td>process research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total operating</td>
<td>902,325</td>
<td>735,015</td>
<td>482,170</td>
</tr>
<tr>
<td>Operating (loss)</td>
<td>(392,369)</td>
<td>(147,167)</td>
<td>55,372</td>
</tr>
<tr>
<td>income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER EXPENSE, NET:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest expense,</td>
<td>(126,523)</td>
<td>(86,610)</td>
<td>(69,900)</td>
</tr>
<tr>
<td>net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign exchange</td>
<td>(260)</td>
<td>(1,005)</td>
<td>(1,237)</td>
</tr>
<tr>
<td>loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain on divestiture</td>
<td>6,267</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Loss on induced</td>
<td>(978)</td>
<td>—</td>
<td>(77,624)</td>
</tr>
<tr>
<td>conversion of debt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and debt extinguishment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss on sale of</td>
<td>—</td>
<td>—</td>
<td>(29,032)</td>
</tr>
<tr>
<td>long-term investments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other income (expense), net</td>
<td>588</td>
<td>6,697</td>
<td>(10,291)</td>
</tr>
<tr>
<td>Total other expense, net</td>
<td>(120,906)</td>
<td>(80,918)</td>
<td>(188,084)</td>
</tr>
<tr>
<td>Loss before benefit</td>
<td>(513,275)</td>
<td>(228,085)</td>
<td>(132,712)</td>
</tr>
<tr>
<td>for income taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit for income</td>
<td>(102,749)</td>
<td>(61,251)</td>
<td>(172,244)</td>
</tr>
<tr>
<td>taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>$410,526</td>
<td>$166,834</td>
<td>$39,532</td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>$2.52</td>
<td>$1.04</td>
<td>$0.27</td>
</tr>
<tr>
<td>per ordinary share—basic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighted average</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>148,788,020</td>
</tr>
<tr>
<td>ordinary shares</td>
<td>(2.52)</td>
<td>(1.04)</td>
<td>0.25</td>
</tr>
<tr>
<td>outstanding—diluted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>2,103</td>
<td>435</td>
<td>1,712</td>
</tr>
<tr>
<td>per ordinary share</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—diluted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighted average</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>155,923,251</td>
</tr>
<tr>
<td>ordinary shares</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>outstanding—diluted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign currency</td>
<td>2,067</td>
<td>(302)</td>
<td>1,712</td>
</tr>
<tr>
<td>translation adjustments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pension remeasurements</td>
<td>36</td>
<td>(133)</td>
<td>—</td>
</tr>
<tr>
<td>Other comprehensive income (loss)</td>
<td>2,103</td>
<td>(435)</td>
<td>1,712</td>
</tr>
<tr>
<td>Comprehensive (loss) income</td>
<td>$408,423</td>
<td>$167,269</td>
<td>$41,244</td>
</tr>
</tbody>
</table>

The accompanying notes are an integral part of these consolidated financial statements.
The accompanying notes are an integral part of these consolidated financial statements.
## HORIZON PHARMA PLC

### CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

<table>
<thead>
<tr>
<th></th>
<th>For the Years Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td><strong>CASH FLOWS FROM OPERATING ACTIVITIES:</strong></td>
<td></td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>$(410,526)</td>
</tr>
<tr>
<td><strong>Adjustments to reconcile net (loss) income to net cash provided by operating activities:</strong></td>
<td></td>
</tr>
<tr>
<td>Depreciation and amortization expense</td>
<td>283,415</td>
</tr>
<tr>
<td>Equity-settled share-based compensation</td>
<td>125,019</td>
</tr>
<tr>
<td>Royalty accretion</td>
<td>51,263</td>
</tr>
<tr>
<td>Royalty liability remeasurement</td>
<td>21,774</td>
</tr>
<tr>
<td>Acquired in-process research and development expense</td>
<td>159,171</td>
</tr>
<tr>
<td>Gain on divestiture</td>
<td>(2,934)</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>(132,231)</td>
</tr>
<tr>
<td>Loss on induced conversions of debt and debt extinguishment</td>
<td>125,019</td>
</tr>
<tr>
<td>Payments related to term loan refinancing</td>
<td>(3,988)</td>
</tr>
<tr>
<td>Amortization of debt discount and deferred financing costs</td>
<td>21,619</td>
</tr>
<tr>
<td>Impairment of non-current asset</td>
<td>22,720</td>
</tr>
<tr>
<td>Impairment of in-process research and development recovery</td>
<td>—</td>
</tr>
<tr>
<td>Loss on sale of long-term investments</td>
<td>—</td>
</tr>
<tr>
<td>Foreign exchange and other adjustments</td>
<td>(1,466)</td>
</tr>
<tr>
<td>Changes in operating assets and liabilities:</td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>61,828</td>
</tr>
<tr>
<td>Inventories</td>
<td>108,371</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>5,110</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>16,521</td>
</tr>
<tr>
<td>Accrued trade discounts and rebates</td>
<td>205,487</td>
</tr>
<tr>
<td>Accrued expenses and accrued royalties</td>
<td>(104,819)</td>
</tr>
<tr>
<td>Deferred revenues</td>
<td>4,468</td>
</tr>
<tr>
<td>Other non-current assets and liabilities</td>
<td>5,720</td>
</tr>
<tr>
<td><strong>Net cash provided by operating activities</strong></td>
<td>280,208</td>
</tr>
</tbody>
</table>

| **CASH FLOWS FROM INVESTING ACTIVITIES:** |         |         |         |
| Payments for acquisitions, net of cash acquired | (167,220) | (1,356,271) | (1,022,361) |
| Proceeds from divestiture, net of cash divested | 69,371  | —       | —       |
| Purchases of property and equipment | (4,334) | (15,731) | (7,182) |
| Change in restricted cash | 564    | (3,679) | (1,122) |
| Proceeds from liquidation of available-for-sale investments | —       | —       | 64,623  |
| Purchases of long-term investments | —       | —       | (71,813) |
| Proceeds from sale of long-term investments | —       | —       | —       |
| **Net cash used in investing activities** | (101,619) | (1,375,881) | (955,848) |

| **CASH FLOWS FROM FINANCING ACTIVITIES:** |         |         |         |
| Net proceeds from term loans | 1,693,512 | 364,297 | 391,506 |
| Repayment of term loans | (1,618,617) | (4,000) | (299,000) |
| Payment of contingent consideration | (20,000) | —       | —       |
| Repurchase of ordinary shares | (992)    | —       | —       |
| Proceeds from the issuance of ordinary shares in connection with warrant exercises | 1,789  | 8      | 18,124  |
| Proceeds from the issuance of ordinary shares through an employee stock purchase plan | 7,082  | 6,548  | 4,452   |
| Proceeds from the issuance of ordinary shares in connection with stock option exercises | 2,167  | 3,875  | 5,217   |
| Payment of employee withholding taxes relating to share-based awards | (6,533) | (5,539) | (3,024) |
| Net proceeds from issuance of ordinary shares | —       | —       | 475,685 |
| Net proceeds from issuance of 2024 Senior Notes | —       | 291,893 | —       |
| Net proceeds from issuance of Exchangeable Senior Notes | —       | —       | 387,181 |
| Net proceeds from issuance of 2023 Senior Notes | —       | —       | 462,340 |
| **Net cash provided by financing activities** | 58,408  | 657,674 | 1,442,481 |

| Effect of foreign exchange rate changes on cash and cash equivalents | 5,316  | (1,210) | (3,024) |
| Net increase (decrease) in cash and cash equivalents | 242,313 | (350,561) | 640,809 |
| Cash and cash equivalents, beginning of the year | 509,055 | 859,616 | 218,807 |
| **Cash and cash equivalents, end of the year** | $751,368 | $509,055 | $859,616 |
The accompanying notes are an integral part of these consolidated financial statements.

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NOTE 1 – BASIS OF PRESENTATION

Unless otherwise indicated or the context otherwise requires, references to the “Company”, “we”, “us” and “our” refer to Horizon Pharma plc and its consolidated subsidiaries, including its predecessor, Horizon Pharma, Inc. (“HPI”).

During the years ended December 31, 2017, 2016 and 2015, the Company completed the following acquisitions and divestitures:

• On June 30, 2017, the Company completed its acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International GmbH (“Boehringer Ingelheim International”) in all territories outside of the United States, Canada and Japan.

• On June 23, 2017, the Company completed the sale of its European subsidiary that owned the marketing rights to PROCYSBI® (cysteamine bitartrate) delayed-release capsules and QUINSAIR™ (levofloxacin inhalation solution) in Europe, the Middle East and Africa (“EMEA”) regions (the “Chiesi divestiture”) to Chiesi Farmaceutici S.p.A. (“Chiesi”).

• On May 8, 2017, the Company completed its acquisition of River Vision Development Corp. (“River Vision”), which added the late development-stage rare disease biologic medicine candidate teprotumumab to the Company’s research and development pipeline.

• On October 25, 2016, the Company completed its acquisition of Raptor Pharmaceutical Corp. (“Raptor”), which added the rare disease medicines PROCYSBI and QUINSAIR to the Company’s medicine portfolio.

• On January 13, 2016, the Company completed its acquisition of Crealta Holdings LLC (“Crealta”), which added the rare disease medicine KRYSTEXXA® and the primary care medicine MIGERGOT® to the Company’s medicine portfolio.

• On May 7, 2015, the Company completed its acquisition of Hyperion Therapeutics, Inc. (“Hyperion”), which added the rare disease medicines RAVICTI® and BUPHENYL® to the Company’s medicine portfolio.

The consolidated financial statements presented herein include the results of operations of the acquired Hyperion, Crealta and Raptor businesses from the applicable dates of acquisition. See Note 4 for further details of business acquisitions and divestitures.
The Company is a biopharmaceutical company focused on researching, developing and commercializing innovative medicines that address unmet treatment needs for rare and rheumatic diseases. By fostering a growing pipeline of medicines in development and exploring all potential uses for currently marketed medicines, the Company strives to make a powerful difference for patients, their caregivers and physicians. The Company markets eleven medicines through its orphan, rheumatology and primary care business units. The Company’s marketed medicines are:

### Orphan Business Unit
- **RAVICTI** (glycerol phenylbutyrate) Oral Liquid
- **PROCYSBI** (cysteamine bitartrate) delayed-release capsules
- **ACTIMMUNE®** (interferon gamma-1b); marketed as **IMUKIN®** outside the United States, Canada and Japan
- **BUPHENYL** (sodium phenylbutyrate) Tablets and Powder; marketed as **AMMONAPS®** in certain European countries and Japan
- **QUINSAIR** (levofloxacin inhalation solution)

### Rheumatology Business Unit
- **KRYSTEXXA** (pegloticase)
- **RAYOS®** (prednisone) delayed-release tablets; marketed as **LODOTRA®** outside the United States

### Primary Care Business Unit
- **PENNSAID®** (diclofenac sodium topical solution) 2% w/w (“PENNSAID 2%”)
- **DUEXIS®** (ibuprofen/famotidine)
- **VIMOVO®** (naproxen/esomeprazole magnesium)
- **MIGERGOT** (ergotamine tartrate & caffeine suppositories)

The Company is a public limited company formed under the laws of Ireland. The Company operates through a number of international and U.S. subsidiaries with principal business purposes to either perform research and development or manufacturing operations, serve as distributors of the Company’s medicines, hold intellectual property assets or provide services and financial support to the Company.

### NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Basis of Presentation
The accompanying consolidated financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America (“GAAP”).

Certain reclassifications have been made to prior-period financial statements to conform to the 2017 presentation. Beginning in the first quarter of 2017, the Company modified its presentation of certain operating expenses. Previously, the Company presented “general and administrative” expenses as one line item in its consolidated statement of comprehensive income (loss), and “selling and marketing” expenses as another. For the year ended December 31, 2017 and prior-period comparisons, the Company now combines these two line items into one line item, titled “selling, general and administrative” expenses.

#### Principles of Consolidation
The consolidated financial statements include the Company’s accounts and those of its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated.

#### Segment Information
The Company has determined that it operates in one operating segment, which focuses on researching, developing and commercializing innovative medicines that address unmet treatment needs. The Company’s operating segment is reported in a manner consistent with the internal reporting provided to the chief operating decision maker (“CODM”). The Company’s CODM has been identified as its chief executive officer.
Use of Estimates

The preparation of the accompanying consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Foreign Currency Translation and Transactions

The reporting currency of the Company and its subsidiaries is the U.S. dollar.

The U.S. dollar is the functional currency for the Company’s Ireland and U.S.-based businesses and the majority of its subsidiaries. The Company has foreign subsidiaries that have the Euro and the Canadian Dollar as their functional currency. Foreign currency-denominated assets and liabilities of these subsidiaries are translated into U.S. dollars based on exchange rates prevailing at the end of the period, revenues and expenses are translated at average exchange rates prevailing during the corresponding period, and shareholders’ equity accounts are translated at historical exchange rates as of the date of any equity transaction. The effects of foreign exchange gains and losses arising from the translation of assets and liabilities of those entities where the functional currency is not the U.S. dollar are included as a component of accumulated other comprehensive (loss) income.

Gains and losses resulting from foreign currency transactions are reflected within the Company’s results of operations.

Revenue Recognition

Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the price is fixed or determinable; and collectability is reasonably assured. Some of the Company’s agreements contain multiple elements and in accordance with these agreements, the Company may be eligible for upfront license fees, marketing or commercial milestones and payment for medicine deliveries.

Revenue From Medicine Deliveries

Revenue from medicine deliveries comprises substantially all of the Company’s gross sales. The Company recognizes revenue from the sale of its medicines when delivery has occurred, title has transferred, the selling price is fixed or determinable, collectability is reasonably assured and the Company has no further performance obligations. In addition, revenue is only recognized when the right of return no longer exists (which is the earlier of the medicine being dispensed through patient prescriptions or the expiration of the right of return) or when medicine returns can be reasonably estimated. Due to the Company’s ability to reasonably estimate and determine allowances for co-pay and other patient assistance, medicine returns, rebates and discounts based on its own internal data for DUEXIS and RAYOS or data relating to prior sales of its acquired medicines which was received in connection with the acquisition of those medicines, the Company recognizes revenue at the point of sale to wholesale pharmaceutical distributors and pharmacies for all currently distributed medicines.

Revenue From Upfront License Fees

The Company recognizes revenues from the receipt of non-refundable, upfront license fees. In situations where the licensee is able to obtain stand-alone value from the license and no further performance obligations exist on the Company’s part, revenues are recognized on the earlier of when payments are received or collection is reasonably assured. Where continuing involvement by the Company is required in the form of technology transfer, medicine manufacturing or technical support, revenues are deferred and recognized over the term of the agreement.

Revenue From Milestone Receipts

Milestone payments are recognized as revenue based on achievement of the associated milestones, as defined in the relevant agreements. Revenue from a milestone achievement is recognized when earned, as evidenced by acknowledgment from the Company’s partner, provided that (1) the milestone event is substantive and its achievability was not reasonably assured at the inception of the agreement, (2) the milestone represents the culmination of an earnings process and (3) the milestone payment is non-refundable. If any of these criteria are not met, revenue from the milestone achievement is recognized over the remaining minimum period of the Company’s performance obligations under the agreement.
Medicine Sales Discounts and Allowances

The Company records allowances for medicine returns, rebates and discounts at the time of sale to wholesale pharmaceutical distributors and pharmacies. The Company is required to make significant judgments and estimates in determining some of these allowances. If actual results differ from its estimates, the Company will be required to make adjustments to these allowances in the future. Medicine returns and discounts are included in “accounts receivable” on the consolidated balance sheet. Accrued rebates are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Commercial Rebates

The Company participates in certain commercial rebate programs. Under these rebate programs, the Company pays a rebate to the commercial entity or third-party administrator of the program. The Company accrues estimated rebates based on contract prices, estimated percentages of medicine sold to qualified patients and estimated levels of inventory in the distribution channel and records the rebate as a reduction of revenue. Accrued commercial rebates are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Distribution Service Fees

The Company includes distribution service fees paid to its wholesalers for distribution and inventory management services as a reduction to revenue. The Company accrues estimated distribution fees based on contractually determined amounts, typically as a percentage of revenue. Accrued distribution service fees are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Patient Access Programs

The Company offers discount card and other programs such as its HorizonCares program to patients under which the patient receives a discount on his or her prescription. In certain circumstances when a patient’s prescription is rejected by a managed care vendor, the Company will pay for the full cost of the prescription. The Company reimburses pharmacies for this discount through third-party vendors. The Company reduces gross sales by the amount of actual co-pay and other patient assistance in the period based on the invoices received. The Company also records an accrual to reduce gross sales for estimated co-pay and other patient assistance on units sold to distributors that have not yet been prescribed/dispensed to a patient. The estimate is based on contract prices, estimated percentages of medicine that will be prescribed to qualified patients, average assistance paid based on reporting from the third-party vendors and estimated levels of inventory in the distribution channel. Accrued co-pay and other patient assistance fees are included in “accrued trade discounts and rebates” on the consolidated balance sheet. Patient assistance programs include both co-pay assistance and fully bought down prescriptions.

Sales Returns

Consistent with industry practice, the Company maintains a return policy that allows customers to return medicine within a specified period prior to and subsequent to the medicine expiration date. Generally, medicine may be returned for a period beginning six months prior to its expiration date and up to one year after its expiration date. The right of return expires on the earlier of one year after the medicine expiration date or the time that the medicine is dispensed to the patient. The majority of medicine returns result from medicine dating, which falls within the range set by the Company’s policy, and are settled through the issuance of a credit to the customer. The estimate of the provision for returns is based upon the Company’s historical experience with actual returns, which is applied to the level of sales for the period that corresponds to the period during which the customer may return medicines. This period is known to the Company based on the shelf life of medicines at the time of shipment. The Company records sales returns as an allowance against accounts receivable and a reduction of revenue.

Prompt Pay Discounts

As an incentive for prompt payment, the Company offers a 2% cash discount to customers. The Company expects that all customers will comply with the contractual terms to earn the discount. The Company records the discount as an allowance against accounts receivable and a reduction of revenue.
Government Rebates

The Company participates in certain federal government rebate programs, such as Medicare and Medicaid. The Company accrues estimated rebates based on percentages of medicine sold to qualified patients, estimated rebate percentages and estimated levels of inventory in the distribution channel that will be sold to qualified patients and records the rebates as a reduction of revenue. Accrued government rebates are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Government Chargebacks

The Company provides discounts to federal government qualified entities with whom the Company has contracted. These federal entities purchase medicines from the wholesale pharmaceutical distributors at a discounted price, and the wholesale pharmaceutical distributors then charge back to the Company the difference between the current retail price and the contracted price that the federal entities paid for the medicines. The Company accrues estimated chargebacks based on contract prices and sell-through sales data obtained from third-party information and records the chargeback as a reduction of revenue. Accrued government chargebacks are included in “accrued trade discounts and rebates” on the consolidated balance sheet.

Bad Debt Expense

The Company’s medicines are sold to wholesale pharmaceutical distributors and pharmacies. The Company monitors its accounts receivable balances to determine the impact, if any, of such factors as changes in customer concentration, credit risk and the realizability of its accounts receivable, and records a bad debt reserve when applicable.

Inventories

Inventories are stated at the lower of cost or market value, using the first-in, first-out convention. Inventories consist of raw materials, work-in-process and finished goods. The Company has entered into manufacturing and supply agreements for the manufacture or purchase of raw materials and production supplies. The Company’s inventories include the direct purchase cost of materials and supplies and manufacturing overhead costs. The Company reviews its inventory balance and purchase obligations to assess if it has obsolete or excess inventory and records a charge to “cost of goods sold” when applicable.

Inventories acquired in business combinations are recorded at their estimated fair values. “Step-up” represents the write-up of inventory from the lower of cost or market value (the historical book value as previously recorded on the acquired company’s balance sheet) to fair market value at the acquisition date. Inventory step-up expense is recorded in the consolidated statement of comprehensive (loss) income based on actual sales, or usage, using the first-in, first-out convention.

Inventories exclude medicine sample inventory, which is included in other current assets and is expensed as a component of “selling, general and administrative” expense when shipped to sales representatives.

Cost of Goods Sold

The Company recognizes cost of goods sold in connection with its sales of each of its distributed medicines. Cost of goods sold includes all costs directly related to the acquisition of the Company’s medicines from its third-party manufacturers, including freight charges and other direct expenses such as insurance and supply chain costs. Cost of goods sold also includes amortization of intellectual property as described in the intangible assets accounting policy below, inventory step-up expense, drug substance harmonization costs, share-based compensation, charges relating to discontinuation of clinical trials, royalty payments to third parties, royalty accretion expense, changes in estimates associated with the contingent royalty liability as described in the accrued contingent royalty accounting policy below and loss on inventory purchase commitments.
Pre-clinical Studies and Clinical Trial Accruals

The Company’s pre-clinical studies and clinical trials have historically been conducted by third-party contract research organizations and other vendors. Pre-clinical study and clinical trial expenses are based on the services received from these contract research organizations and vendors. Payments depend on factors such as the milestones accomplished, successful enrollment of certain numbers of patients and site initiation. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, the Company adjusts the accrual accordingly.

Net (Loss) Income Per Share

Basic net (loss) income per share is computed by dividing net (loss) income by the weighted-average number of ordinary shares outstanding during the period. Diluted earnings per share (“EPS”) reflects the potential dilution beyond shares for basic EPS that could occur if securities or other contracts to issue ordinary shares were exercised, converted into ordinary shares, or resulted in the issuance of ordinary shares that would have shared in the Company’s earnings.

Cash and Cash Equivalents

The Company considers all highly liquid investments, readily convertible to cash, that mature within three months or less from date of purchase to be cash equivalents. Cash and cash equivalents primarily consist of cash balances and money market funds. The Company generally invests excess cash in money market funds and other financial instruments with short-term durations, based upon operating requirements.

Restricted Cash

Restricted cash consists primarily of balances in interest-bearing money market accounts required by a vendor for the Company’s sponsored employee business credit card program and collateral for a letter of credit.

Fair Value of Financial Instruments

The carrying amounts of the Company’s financial instruments, including cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued expenses, approximate their fair values due to their short maturities.

Business Combinations

The Company accounts for business combinations in accordance with the guidance in Accounting Standards Codification Topic 805, Business Combinations (“ASC 805”) in which acquired assets and liabilities are measured at their respective estimated fair values as of the acquisition date. The Company may be required, as in the case of intangible assets, contingent royalties or derivatives, to determine the fair value associated with these amounts by estimating the fair value using an income approach under the discounted cash flow method, which may include revenue projections and other assumptions made by the Company to determine the fair value.

Provision for Income Taxes

The Company accounts for income taxes based upon an asset and liability approach. Deferred tax assets and liabilities represent the future tax consequences of the differences between the financial statement carrying amounts of assets and liabilities versus the tax basis of assets and liabilities. Under this method, deferred tax assets are recognized for deductible temporary differences, and operating loss and tax credit carryforwards. Deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The impact of tax rate changes on deferred tax assets and liabilities is recognized in the year that the change is enacted. The Company also accounts for the uncertainty in income taxes by utilizing a comprehensive model for the recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken or are expected to be taken on an income tax return. Deferred tax assets and deferred tax liabilities are netted by jurisdiction on the Company’s consolidated balance sheets.

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On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”) which provides guidance on accounting for the tax effects of the U.S. H.R. 1, “An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018”, informally titled the Tax Cuts and Jobs Act (“the Tax Act”). SAB 118 provides a measurement period that should not extend beyond one year from the date of enactment for companies to complete the accounting under ASC Topic 740, Income Taxes. In accordance with SAB 118, the Company reflects the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that the Company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, the Company records a provisional estimate in the consolidated financial statements. As of December 31, 2017, the Company has not completed its accounting for the effects of the Tax Act. However, the Company has made reasonable estimates of the effects on its income tax provision with respect to certain items, primarily the revaluation of its existing U.S. deferred tax balances and the write-off of its U.S. deferred tax assets resulting from interest expense carryforwards under Section 163(j) of the Internal Revenue Code. In other cases, the Company has not been able to make reasonable estimates and continues to account for those items based on its existing accounting under the provisions of the tax laws that were in effect prior to enactment of the Tax Act. As described in Note 22, the Company recognized a net income tax benefit of $74.9 million for the year ended December 31, 2017, associated with the items the Company could reasonably estimate. This benefit reflects the revaluation of its U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of the deferred tax asset related to its U.S. interest expense carryforwards. The Company is still analyzing the Tax Act and refining its calculations and the results of this analysis could potentially impact the measurement of its income tax balances and income tax expense for the year ended December 31, 2017.

Property and Equipment, Net

Property and equipment are stated at cost less accumulated depreciation. Depreciation is recognized using the straight-line method over the estimated useful lives of the related assets for financial reporting purposes and an accelerated method for income tax reporting purposes. Upon retirement or sale of an asset, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations. Repair and maintenance costs are charged to expenses as incurred and improvements are capitalized.

Leasehold improvements are amortized on a straight-line basis over the term of the applicable lease, or the useful life of the assets, whichever is shorter.

Depreciation and amortization periods for the Company’s property and equipment are as follows:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery and equipment</td>
<td>5 to 7 years</td>
</tr>
<tr>
<td>Furniture and fixtures</td>
<td>3 to 5 years</td>
</tr>
<tr>
<td>Computer equipment</td>
<td>3 years</td>
</tr>
<tr>
<td>Software</td>
<td>3 years</td>
</tr>
<tr>
<td>Trade show equipment</td>
<td>3 years</td>
</tr>
</tbody>
</table>

The Company capitalizes software development costs associated with internal use software, including external direct costs of materials and services and payroll costs for employees devoting time to a software project. Costs incurred during the preliminary project stage, as well as costs for maintenance and training, are expensed as incurred.

Software includes internal-use software acquired and modified to meet the Company’s internal requirements. Amortization commences when the software is ready for its intended use.

Intangible Assets

Definite-lived intangible assets are amortized over their estimated useful lives. The Company reviews its intangible assets when events or circumstances may indicate that the carrying value of these assets exceeds their fair value. The Company measures fair value based on the estimated future discounted cash flows associated with these assets in addition to other assumptions and projections that the Company deems to be reasonable and supportable. The estimated useful lives, from the date of acquisition, for all identified intangible assets that are subject to amortization are between five and thirteen years.

The Company determined that no impairment of its definite-lived intangible assets existed as of December 31, 2017.

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Indefinite-lived intangible assets consist of capitalized in-process research and development ("IPR&D"). IPR&D assets represent capitalized incomplete research projects that the Company acquired through business combinations. Such assets are initially measured at their acquisition date fair values and are tested for impairment, until completion or abandonment of research and development efforts associated with the projects. An IPR&D asset is considered abandoned when research and development efforts associated with the asset have ceased, and there are no plans to sell or license the asset or derive value from the asset. At that point, the asset is considered to be impaired and is written off. Upon successful completion of each project, the Company will make a determination about the then remaining useful life of the intangible asset and begin amortization. The Company tests its indefinite-lived intangible assets, including IPR&D assets, for impairment annually during the fourth quarter and more frequently if events or changes in circumstances indicate that it is more likely than not that the asset is impaired.

Following an impairment charge recorded in the fourth quarter of 2016, the Company had no indefinite-lived intangible assets as of December 31, 2017 and 2016. See Note 8 for further details of the impairment charge.

**Goodwill**

Goodwill represents the excess of the purchase price of acquired businesses over the estimated fair value of the identifiable net assets acquired. Goodwill is not amortized but is tested for impairment at least annually at the reporting unit level or more frequently if events or changes in circumstances indicate that the asset might be impaired. Impairment loss, if any, is recognized based on a comparison of the fair value of the asset to its carrying value, without consideration of any recoverability. The Company tests goodwill for impairment annually during the fourth quarter and whenever indicators of impairment exist by first assessing qualitative factors to determine whether it is more likely than not that the fair value is less than its carrying amount. If the Company concludes it is more likely than not that the fair value of a reporting unit is less than its carrying amount, a quantitative impairment test is performed. If the Company concludes that goodwill is impaired, it will record an impairment charge in its consolidated statement of comprehensive (loss) income. Based upon the Company’s most recent annual impairment test performed in the fourth quarter of 2017, the Company concluded goodwill was not impaired.

**Research and Development Expenses**

Research and development expenses include, but are not limited to, payroll and other personnel expenses, consultant expenses, expenses incurred under agreements with contract research organizations to conduct clinical trials, expenses incurred to manufacture clinical trial materials and acquired in-process research and development assets recorded to research and development expense. Research and development expenses were $225.0 million, $60.7 million and $41.9 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Advertising Expenses**

We expense the costs of advertising as incurred. Advertising expenses were $19.2 million, $14.4 million and $6.1 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Deferred Financing Costs**

Costs incurred in connection with debt financings have been capitalized to “Long-term debt, net, net of current” and “Exchangeable notes, net” in the Company’s consolidated balance sheets as deferred financing costs, and are charged to interest expense using the effective interest method over the terms of the related debt agreements. These costs include document preparation costs, commissions, fees and expenses of investment bankers and underwriters, and accounting and legal fees.

**Concentration of Credit Risk and Other Risks and Uncertainties**

Financial instruments that may potentially subject the Company to significant concentrations of credit risk consist of cash and cash equivalents. The Company’s cash and cash equivalents are invested primarily in money market funds and bank deposits in the United States, Bermuda, Ireland, Switzerland, Luxembourg, Germany, the United Kingdom and Canada that management believes are creditworthy. At times, deposits in these banks may exceed the amount of insurance provided on such deposits. To date, the Company has not experienced any losses on its investments of cash and cash equivalents.
The purchase cost of ACTIMMUNE under a contract with Boehringer Ingelheim RCV GmbH & Co. KG ("Boehringer Ingelheim") as well as sales contracts relating to LODOTRA and QUINSAIR, and sales of RAVICTI and PROCYSBI outside the United States, are principally denominated in Euros or the Canadian dollar and are subject to foreign currency risk. The Company also incurs certain operating expenses in currencies other than the U.S. dollar in relation to its operations and foreign subsidiaries in Ireland, Switzerland, Germany and Canada. The Company does not currently utilize and has not in the past utilized any foreign currency hedging strategies to mitigate the effect of its foreign currency exchange rate risk.

Historically, the Company’s accounts receivable balances have been highly concentrated with a select number of customers, consisting primarily of large wholesale pharmaceutical distributors who, in turn, sell the medicines to pharmacies, hospitals and other customers. As of December 31, 2017 and 2016, the Company’s top three customers accounted for approximately 79% and 78%, respectively, of the Company’s total outstanding accounts receivable balances.

The Company depends on single-source suppliers and manufacturers for certain of its medicines, medicine candidates and their active pharmaceutical ingredients.

Comprehensive (Loss) Income

Comprehensive (loss) income is composed of net (loss) income and other comprehensive (loss) income ("OCI"). OCI includes certain changes in shareholders’ equity that are excluded from net (loss) income, which consist of foreign currency translation adjustments and pension remeasurements. The Company reports the effect of significant reclassifications out of accumulated OCI on the respective line items in net income if the amount being reclassified is required under GAAP to be reclassified in its entirety to net income. For other amounts that are not required under GAAP to be reclassified in their entirety to net income in the same reporting period, the Company cross-references other disclosures required under GAAP that provide additional detail about those amounts.

Share-Based Compensation

The Company accounts for employee share-based compensation by measuring and recognizing compensation expense for all share-based payments based on estimated grant date fair values. The Company uses the straight-line method to allocate compensation cost to reporting periods over each awardee’s requisite service period, which is generally the vesting period. The Company adopted ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting ("ASU No. 2016-09") on January 1, 2017 and has elected to retain a forfeiture rate after adoption.

Accrued Contingent Royalties

The Company’s accrued contingent royalties consist of the contingent royalty obligations assumed by the Company related to the Company’s acquisitions of rights to certain of its medicines. At the time of each acquisition, the Company assigned an estimated fair value to its contingent liability for royalties. The estimated royalty liability is based on anticipated revenue streams utilizing the income approach under the discounted cash flow method. The estimated liability for royalties is increased or decreased over time to reflect the change in its present value and accretion expense is recorded as part of cost of goods sold. The Company evaluates the adequacy of the estimated contingent royalty liability at least annually in the fourth quarter, or whenever events or changes in circumstances indicate that an evaluation of the estimate is necessary. As part of its evaluation, the Company adjusts the carrying value of the liability to the present value of the revised estimated cash flows using the original discount rate. Any adjustment to the liability is recorded as an increase or reduction in cost of goods sold. The royalty liability is included in current and long-term accrued royalties on the consolidated balance sheets.

Contingencies

From time to time, the Company may become involved in claims and other legal matters arising in the ordinary course of business. The Company records accruals for loss contingencies to the extent that it concludes that it is probable that a liability has been incurred and the amount of the related loss can be reasonably estimated. Legal fees and other expenses related to litigation are expensed as incurred and included in “selling, general and administrative” expenses.
Recent Accounting Pronouncements

From time to time, the Company adopts new accounting pronouncements issued by the Financial Accounting Standards Board (“FASB”) or other standard-setting bodies.

Effective January 1, 2017, the Company adopted ASU No. 2016-09, Revenue from Contracts with Customers (“ASU No. 2016-09”). The new standard aims to achieve a consistent application of revenue recognition within the United States, resulting in a single revenue model to be applied by reporting companies under GAAP. Under the new model, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires that reporting companies disclose the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The new standard is required to be applied retrospectively to each prior reporting period presented or modified retrospectively with the cumulative effect of initially applying it recognized at the date of initial application. The new standard is effective for the Company as of January 1, 2018, and the Company expects to utilize the modified retrospective method. The performance obligations identified by the Company under ASC Topic 606, Revenue From Contracts With Customers, are similar to the unit of account and performance obligation determination under ASC Topic 605, Revenue Recognition. Based on its review of current customer contracts, the Company’s assessment was that the implementation of this guidance did not have a material impact on its consolidated financial statements as the timing of revenue recognition for its primary revenue stream, product sales, is not expected to significantly change. Certain of the Company’s contracts for sales outside the United States include contingent amounts of variable consideration that the Company was precluded from recognizing because of the requirement for amounts to be “fixed or determinable”. As such, the Company assessed that the new standard required a cumulative-effect adjustment of certain deferred revenues that were originally expected to be recognized in the future. Upon adoption, the Company expects to reclassify approximately $11.0 million of deferred revenue directly to retained earnings.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory (“ASU No. 2016-16”). ASU No. 2016-16 was issued to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party which has resulted in diversity in practice and increased complexity within financial reporting. ASU No. 2016-16 requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs and does not require new disclosures. ASU No. 2016-16 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. The new standard is effective for the Company as of January 1, 2018, and the adoption of ASU No. 2016-16 is expected to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. Upon adoption, the Company expects to reclassify approximately $9.0 million of deferred tax assets directly to retained earnings.
In May 2017, the FASB issued ASU No. 2017-09, Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting (“ASU No. 2017-09”). The amendment amends the scope of modification accounting for share-based payment arrangements, provides guidance on the types of changes to the terms of conditions of share-based payment awards to which an entity would be required to apply modification accounting under ASC Topic 718, Compensation-Stock Compensation. The ASU is effective for annual reporting periods, including interim periods within those annual reporting periods, beginning after December 15, 2017. The Company will account for future modification under this guidance.

In February 2017, the FASB issued ASU No. 2017-05, (“Subtopic 610-20”), Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets (“ASU No. 2017-05”) which provides clarification regarding the scope of the asset derecognition guidance and accounting for partial sales of nonfinancial assets. The update defines an in-substance nonfinancial asset and clarifies that an entity should identify each distinct nonfinancial asset or in-substance nonfinancial asset promised to a counterparty and derecognize each asset when a counterparty obtains control of it. All businesses and nonprofit activities within the scope of Subtopic 610-20 are excluded from the amendments in this update. This guidance will be effective for annual and interim periods beginning after December 15, 2017 and is required to be applied at the same time as ASU No. 2014-09 (described below) is applied. The guidance can be applied using one of two methods: retrospectively to each prior reporting period presented or modified retrospectively with the cumulative effect of initially applying the guidance recognized against retained earnings as of the beginning of the fiscal year of adoption. The Company does not expect the adoption of ASU No. 2017-05 to have a material impact on the Company’s consolidated financial statements and related disclosures.

In February 2018, the FASB issued ASU No. 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (Topic 220), (“ASU No. 2018-02”), which permits a company to reclassify the income tax effects of the Tax Act on items within other comprehensive income (“OCI”) to retained earnings. ASU No. 2018-02 requires certain new disclosures, some of which are applicable for all companies and is effective for fiscal years beginning after December 15, 2018, and interim periods during those fiscal years. The guidance can be applied using one of two transition methods, retrospectively to each period or periods in which the income tax effects of the Tax Act related to items remaining in OCI are recognized, or at the beginning of the period of adoption. The Company is currently evaluating the impact of adoption of ASU No. 2018-02 on its consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash (“ASU No. 2016-18”), which addresses diversity in practice related to the classification and presentation of changes in restricted cash on the statement of cash flows. ASU No. 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU No. 2016-18 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. The Company does not expect the adoption of ASU No. 2016-18 to have a material impact on the Company’s consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (“ASU No. 2016-15”). The amendments in this ASU provide guidance on the following eight specific cash flow classification issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. Current GAAP does not include specific guidance on these eight cash flow classification issues. The amendments in ASU No. 2016-15 are effective for reporting periods beginning after December 15, 2017. The Company does not expect the adoption of ASU No. 2016-15 to have a material impact on the Company’s consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) (“ASU No. 2016-02”). Under ASU No. 2016-02, an entity will be required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. ASU No. 2016-02 offers specific accounting guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. ASU No. 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, with early adoption permitted. The Company is currently in the process of evaluating the impact of adoption of ASU No. 2016-02 on its consolidated financial statements and related disclosures.
In January 2017, the FASB issued ASU No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment (“ASU No. 2017-04”), to eliminate the second step of the goodwill impairment test. ASU No. 2017-04 requires an entity to measure a goodwill impairment loss as the amount by which the carrying value of a reporting unit exceeds its fair value. Additionally, an entity should include the income tax effects from any tax deductible goodwill on the carrying value of the reporting unit when measuring a goodwill impairment loss, if applicable. ASU No. 2017-04 is effective for fiscal years beginning after December 15, 2019 and interim periods within those years. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company does not expect the adoption of ASU No. 2017-04 to have a material impact on the Company’s consolidated financial statements and related disclosures.

Other recent authoritative guidance issued by the FASB (including technical corrections to the Accounting Standards Codification), the American Institute of Certified Public Accountants, and the Securities and Exchange Commission did not, or are not expected to, have a material impact on the Company’s consolidated financial statements and related disclosures.

NOTE 3 – NET (LOSS) INCOME PER SHARE

The following table presents basic net (loss) income per share for the years ended December 31, 2017, 2016 and 2015 (in thousands, except share and per share data):

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic earnings per share calculation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>$(410,526)</td>
<td>$(166,834)</td>
<td>$39,532</td>
</tr>
<tr>
<td>Weighted average of ordinary shares outstanding</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>148,788,020</td>
</tr>
<tr>
<td>Basic net (loss) income per share</td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>0.27</td>
</tr>
</tbody>
</table>

The following table presents diluted net (loss) income per share for the years ended December 31, 2017, 2016 and 2015 (in thousands, except share and per share data):

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diluted earnings per share calculation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>$(410,526)</td>
<td>$(166,834)</td>
<td>$39,532</td>
</tr>
<tr>
<td>Weighted average of ordinary shares outstanding</td>
<td>163,122,663</td>
<td>160,699,543</td>
<td>155,923,251</td>
</tr>
<tr>
<td>Diluted net (loss) income per share</td>
<td>$(2.52)</td>
<td>$(1.04)</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Basic net (loss) income per share is computed by dividing net (loss) income by the weighted-average number of ordinary shares outstanding during the period. Diluted net (loss) income per share reflects the potential dilution beyond shares for basic net (loss) income per share that could occur if securities or other contracts to issue ordinary shares were exercised, converted into ordinary shares, or resulted in the issuance of ordinary shares that would have shared in the Company’s earnings.

The outstanding securities listed in the table below were excluded from the computation of diluted (loss) income per ordinary share for the years ended December 31, 2017, 2016 and 2015 due to being anti-dilutive:

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock options</td>
<td>12,887,595</td>
<td>7,515,297</td>
<td>2,853,821</td>
</tr>
<tr>
<td>Restricted stock units</td>
<td>1,095,768</td>
<td>492,030</td>
<td>817,168</td>
</tr>
<tr>
<td>Performance stock units</td>
<td>2,742,301</td>
<td>5,247,987</td>
<td>1,074</td>
</tr>
<tr>
<td>Employee stock purchase plan</td>
<td>63,445</td>
<td>56,805</td>
<td>1,046,275</td>
</tr>
<tr>
<td>Warrants</td>
<td>388,841</td>
<td>1,123,737</td>
<td>2,416,894</td>
</tr>
<tr>
<td></td>
<td><strong>17,177,950</strong></td>
<td><strong>14,435,856</strong></td>
<td><strong>7,135,232</strong></td>
</tr>
</tbody>
</table>
The potentially dilutive impact of the March 2015 private placement of $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022 (the "Exchangeable Senior Notes") by Horizon Pharma Investment Limited ("Horizon Investment"), a wholly owned subsidiary of the Company, is determined using a method similar to the treasury stock method. Under this method, no numerator or denominator adjustments arise from the principal and interest components of the Exchangeable Senior Notes because the Company has the intent and ability to settle the Exchangeable Senior Notes’ principal and interest in cash. Instead, the Company is required to increase the diluted net (loss) income per share denominator by the variable number of shares that would be issued upon conversion if it settled the conversion spread obligation with shares. For diluted net (loss) income per share purposes, the conversion spread obligation is calculated based on whether the average market price of the Company’s ordinary shares over the reporting period is in excess of the exchange price of the Exchangeable Senior Notes. There was no calculated spread added to the denominator for the years ended December 31, 2017, 2016 and 2015.

NOTE 4 – ACQUISITIONS, DIVESTITURES AND OTHER ARRANGEMENTS

Acquisitions

Acquisition of River Vision

On May 8, 2017, the Company acquired 100% of the equity interests in River Vision for upfront cash payments totaling approximately $150.3 million, including cash acquired of $6.3 million, with additional potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Pursuant to ASC 805 (as amended by ASU No. 2017-01), the Company accounted for the River Vision acquisition as the purchase of an in-process research and development (“IPR&D”) asset and, pursuant to ASC Topic 730, Research and Development, recorded the purchase price as research and development expense during the year ended December 31, 2017. Further, the Company recognized approximately $13.1 million of federal net operating losses, $2.8 million of state net operating losses and $5.8 million of federal tax credits. The acquired tax attributes were set up as deferred tax assets which were further netted within the net deferred tax liabilities of the U.S. group, offset by a deferred credit recorded in long-term liabilities.

Acquisition of Additional Rights to Interferon Gamma-1b

On June 30, 2017, the Company completed its acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International in all territories outside of the United States, Canada and Japan, as the Company previously held marketing rights to interferon gamma-1b in these territories. Boehringer Ingelheim International commercialized interferon gamma-1b as IMUKIN in an estimated thirty countries, primarily in Europe and the Middle East. In May 2016, the Company paid Boehringer Ingelheim International €5.0 million ($5.6 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1132) for such rights and upon closing in June 2017, the Company paid Boehringer Ingelheim International an additional €19.5 million ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406). The Company currently markets interferon gamma-1b as ACTIMMUNE in the United States. The €5.0 million upfront amount paid in May 2016 had initially been included in “other assets” in the Company’s consolidated balance sheet. Following the discontinuation of the Friedreich’s ataxia (“FA”) program in December 2016, the Company recorded an impairment charge of €5.0 million ($5.3 million when converted using a Euro-to-Dollar exchange rate at date of impairment of 1.052) to fully write off the asset in its consolidated statements of comprehensive loss during the year ended December 31, 2016 as projections for future net sales of IMUKIN in these territories did not exceed the related costs. Upon closing, during the year ended December 31, 2017, the Company accounted for the additional €19.5 million payment ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406) as the acquisition of an asset which was immediately impaired, and recorded the payment as a “selling, general and administrative” expense in its consolidated statement of comprehensive loss.
Acquisition of Raptor

On October 25, 2016, the Company completed its acquisition of Raptor in which the Company acquired all of the issued and outstanding shares of Raptor’s common stock for $9.00 per share. The acquisition added two medicines, PROCYSBI and QUINSAIR, to the Company’s medicine portfolio. Following completion of the acquisition, Raptor became a wholly owned subsidiary of the Company and converted to a limited liability company, changing its name to Horizon Pharmaceutical LLC. The Company financed the transaction through $300.0 million of aggregate principal amount of 8.75% Senior Notes due 2024 (the “2024 Senior Notes”), $375.0 million aggregate principal amount of loans pursuant to an amendment to the Company’s existing credit agreement, as described in Note 16, and cash on hand. The total consideration for the acquisition was approximately $860.8 million, including cash acquired of $24.9 million and $56.0 million paid to settle Raptor’s outstanding debt, and was composed of the following (in thousands):

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$841,494</td>
</tr>
<tr>
<td>Net settlements on the exercise of stock options and restricted stock units</td>
<td>$19,268</td>
</tr>
<tr>
<td><strong>Total consideration</strong></td>
<td><strong>$860,762</strong></td>
</tr>
</tbody>
</table>

During the year ended December 31, 2016, the Company incurred $15.7 million, in Raptor acquisition-related transaction costs including advisory, legal and other professional and consulting fees, which were recorded for as “selling, general and administrative” expenses in the consolidated statement of comprehensive loss.

Pursuant to ASC 805, the Company accounted for the Raptor acquisition as a business combination using the acquisition method of accounting. Identifiable assets and liabilities of Raptor, including identifiable intangible assets, were recorded based on their estimated fair values as of the date of the closing of the acquisition. The excess of the purchase price over the fair value of the net assets acquired was recorded as goodwill. Significant judgment was required in determining the estimated fair values of developed technology intangible assets, inventories and certain other assets and liabilities. Such valuation required estimates and assumptions including, but not limited to, estimating future cash flows and direct costs in addition to developing the appropriate discount rates and current market profit margins. The Company’s management believes the fair values recognized for the assets acquired and the liabilities assumed were based on reasonable estimates and assumptions.

During the year ended December 31, 2017, the Company recorded measurement period adjustments related to accrued expenses, accrued trade discounts and rebates and deferred tax liabilities as a result of new information regarding facts existing at the acquisition date, resulting in a net decrease to goodwill of $2.9 million.

The following table summarizes the preliminary fair values assigned to the assets acquired and the liabilities assumed by the Company, along with the resulting goodwill before and after the measurement period adjustments (in thousands):

<table>
<thead>
<tr>
<th>(Liabilities assumed) and assets acquired:</th>
<th>Preliminary</th>
<th>Adjustment</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable and accrued expenses</td>
<td>($28,345)</td>
<td>($240)</td>
<td>($28,585)</td>
</tr>
<tr>
<td>Accrued trade discounts and rebates</td>
<td>(6,377)</td>
<td>1,350</td>
<td>(5,027)</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>(237,166)</td>
<td>1,743</td>
<td>(235,423)</td>
</tr>
<tr>
<td>Contingent and accrued royalties</td>
<td>(104,705)</td>
<td></td>
<td>(104,705)</td>
</tr>
<tr>
<td>Other non-current liability</td>
<td>(25,500)</td>
<td></td>
<td>(25,500)</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>24,897</td>
<td></td>
<td>24,897</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>1,350</td>
<td></td>
<td>1,350</td>
</tr>
<tr>
<td>Accounts receivable, net</td>
<td>17,767</td>
<td></td>
<td>17,767</td>
</tr>
<tr>
<td>Inventories</td>
<td>74,463</td>
<td></td>
<td>74,463</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>4,194</td>
<td></td>
<td>4,194</td>
</tr>
<tr>
<td>Property and equipment</td>
<td>3,373</td>
<td></td>
<td>3,373</td>
</tr>
<tr>
<td>Developed technology</td>
<td>946,000</td>
<td></td>
<td>946,000</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>1,765</td>
<td></td>
<td>1,765</td>
</tr>
<tr>
<td>Goodwill</td>
<td>189,046</td>
<td>(2,853)</td>
<td>186,193</td>
</tr>
<tr>
<td><strong>Fair value of consideration paid</strong></td>
<td><strong>$860,762</strong></td>
<td></td>
<td><strong>$860,762</strong></td>
</tr>
</tbody>
</table>

Inventories acquired included raw materials, work-in-process and finished goods for PROCYSBI and QUINSAIR. Inventories were recorded at their estimated fair values. The fair value of finished goods was determined based on the

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estimated selling price, net of selling costs and a margin on the selling costs. The fair value of work-in-process was determined based on estimated selling price, net of selling costs and costs to complete the manufacturing, and a margin on the selling and manufacturing costs. The fair value of raw materials was estimated to equal the replacement cost. A step-up in the value of inventory of $67.0 million was recorded in connection with the acquisition. During the year ended December 31, 2017, the Company recorded inventory step-up expense of $44.0 million, related to PROCYSBI and QUINSAIR, of which $3.2 million was recorded to “gain on divestiture” in the consolidated statement of comprehensive loss during the year ended December 31, 2017. During the year ended December 31, 2016, the Company recorded inventory step-up expense of $22.4 million related to PROCYSBI and QUINSAIR. As at December 31, 2017 inventory step-up relating to PROCYSBI has been fully expensed.

Other tangible assets and liabilities were valued at their respective carrying amounts as management believes that these amounts approximated their acquisition date fair values.

Other non-current liability of $25.5 million represents the fair value of an assumed contingent liability arising from contingent payments associated with development, regulatory and commercial milestones following Raptor’s acquisition of QUINSAIR. During the year ended December 31, 2017, the Company paid $20.0 million relating to milestones in connection with this assumed contingent consideration liability.

Identifiable intangible assets and liabilities acquired include developed technology and contingent royalties. The estimated fair values of the developed technology and contingent royalties represent valuations performed with the assistance of an independent appraisal firm based on management’s estimates, forecasted financial information and reasonable and supportable assumptions.

Developed technology intangible assets reflect the estimated fair value of Raptor’s rights to PROCYSBI. The fair value of developed technology was determined using an income approach. The income approach explicitly recognizes that the fair value of an asset is premised upon the expected receipt of future economic benefits such as earnings and cash inflows based on current sales projections and estimated direct costs for Raptor’s medicines. Indications of value were developed by discounting these benefits to their acquisition-date worth at a discount rate of 12.5%. The fair value of the PROCYSBI developed technology was capitalized as of the Raptor acquisition date and is subsequently being amortized over approximately thirteen years and nine years for the U.S. rights and ex-U.S. rights, respectively, which are the periods in which over 90% of the estimated cash flows are expected to be realized. The Company assigned no fair value to QUINSAIR developed technology as projections of future net sales do not exceed the related costs. See Note 8 for details of developed technology sold in the Chiesi divestiture.

The Company assigned a fair value of $102.0 million to a contingent liability for royalties potentially payable under previously existing agreements related to PROCYSBI. The royalties for PROCYSBI are payable under the terms of an amended and restated license agreement with The Regents of the University of California, San Diego (“UCSD”). See Note 18 for details of the percentages of royalties payable under this agreement. The initial fair value of this liability was determined using a discounted cash flow analysis incorporating the estimated future cash flows of royalty payments resulting from future sales. The discount rate used was the same as for the fair value of the developed technology.

Deferred tax assets and liabilities arise from acquisition accounting adjustments where book values of certain assets and liabilities differ from their tax bases. Deferred tax assets and liabilities are recorded at the currently enacted rates which will be in effect at the time that the temporary differences are expected to reverse in the country where the underlying assets and liabilities are located. Raptor’s developed technology as of the acquisition date was located primarily in the United States where a U.S. tax rate of 36.6% was used and a significant deferred tax liability was recorded. Goodwill represents the excess of the acquisition consideration over the estimated fair value of net assets acquired and was recorded in the consolidated balance sheet as of the acquisition date. The Company does not expect any portion of this goodwill to be deductible for tax purposes.

Acquisition of Crealta

On January 13, 2016, the Company completed its acquisition of all the membership interests of Crealta. The acquisition added two medicines, KRYSTEXXA and MIGERGOT, to the Company’s medicine portfolio. The total consideration for the acquisition was approximately $539.7 million, including cash acquired of $24.9 million and $70.9 million paid to settle Crealta’s outstanding debt, and was composed of the following (in thousands):

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During the years ended December 31, 2016 and 2015, the Company incurred $3.5 million and $1.9 million, respectively, in Crelta acquisition-related transaction costs including investment advisory costs, legal and other professional and consulting fees, which were accounted for as “selling, general and administrative” expenses in the consolidated statements of comprehensive (loss) income.

Pursuant to ASC 805, the Company accounted for the Crelta acquisition as a business combination using the acquisition method of accounting. Identifiable assets and liabilities of Crelta, including identifiable intangible assets, were recorded based on their estimated fair values as of the date of the closing of the acquisition. The excess of the purchase price over the fair value of the net assets acquired was recorded as goodwill. Significant judgment was required in determining the estimated fair values of developed technology intangible assets, inventories and certain other assets and liabilities. Such valuation required estimates and assumptions including, but not limited to, estimating future cash flows and direct costs in addition to developing the appropriate discount rates and current market profit margins. The Company’s management believes the fair values recognized for the assets acquired and the liabilities assumed were based on reasonable estimates and assumptions.

During the year ended December 31, 2016, the Company recorded measurement period adjustments related to developed technology, inventory and deferred tax liabilities, which adjustments resulted in a net increase in goodwill of $8.1 million. The measurement period adjustments were the result of an adjustment for inventory that was subsequently discovered to have been damaged and defective as of the acquisition date, a net working capital true-up adjustment and the alignment of Crelta’s inventory and obsolescence reserve policy to the Company’s policy.

The following table summarizes the preliminary fair values assigned to the assets acquired and the liabilities assumed by the Company along with the resulting goodwill before and after the measurement period adjustments (in thousands):

<table>
<thead>
<tr>
<th>(Liabilities assumed) and assets acquired</th>
<th>Preliminary</th>
<th>Adjustment</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable and accrued expenses</td>
<td>$ (4,543)</td>
<td>$ —</td>
<td>$ (4,543)</td>
</tr>
<tr>
<td>Accrued trade discounts and rebates</td>
<td>(1,424)</td>
<td>—</td>
<td>(1,424)</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>(20,835)</td>
<td>694</td>
<td>(20,141)</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>(6,900)</td>
<td>—</td>
<td>(6,900)</td>
</tr>
<tr>
<td>Contingent royalty liabilities</td>
<td>(51,300)</td>
<td>—</td>
<td>(51,300)</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>24,893</td>
<td>—</td>
<td>24,893</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>10,014</td>
<td>—</td>
<td>10,014</td>
</tr>
<tr>
<td>Inventories</td>
<td>169,054</td>
<td>(19,691)</td>
<td>149,363</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>1,382</td>
<td>—</td>
<td>1,382</td>
</tr>
<tr>
<td>Developed technology</td>
<td>417,300</td>
<td>10,900</td>
<td>428,200</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>275</td>
<td>—</td>
<td>275</td>
</tr>
<tr>
<td>Goodwill</td>
<td>1,791</td>
<td>8,122</td>
<td>9,913</td>
</tr>
</tbody>
</table>

Fair value of consideration paid

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>Adjustments</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ 536,181</td>
<td>$ 25</td>
<td>$ 536,206</td>
</tr>
<tr>
<td>Net settlements on the exercise of stock options and restricted units</td>
<td>3,526</td>
<td>—</td>
<td>3,526</td>
</tr>
<tr>
<td><strong>Total consideration</strong></td>
<td>$ 539,707</td>
<td>$ 25</td>
<td>$ 539,732</td>
</tr>
</tbody>
</table>

Inventories acquired included raw materials, work-in-process and finished goods for KRYSTEXXA and MIGERGOT. Inventories were recorded at their preliminary estimated fair values. The fair value of finished goods was determined based on the estimated selling price, net of selling costs and a margin on the selling costs. The fair value of work-in-process was determined based on estimated selling price, net of selling costs and costs to complete the manufacturing, and a margin on the selling and manufacturing costs. The fair value of raw materials was estimated to equal the replacement cost. A step-up in the value of inventory of $144.3 million was recorded in connection with the acquisition. During the year ended December 31, 2017, the Company recorded inventory step-up expense of $78.3 million related to KRYSTEXXA.

Other tangible assets and liabilities were valued at their respective carrying amounts as management believes that these amounts approximated their acquisition date fair values.
Other non-current liabilities represented an assumed $6.9 million probable contingent liability which was released to “other income (expense)” in the consolidated statement of comprehensive loss during the year ended December 31, 2016.

Identifiable intangible assets and liabilities acquired include developed technology and contingent royalties. The estimated fair values of the developed technology and contingent royalties represent valuations performed with the assistance of an independent appraisal firm based on management’s estimates, forecasted financial information and reasonable and supportable assumptions.

Developed technology intangible assets reflect the estimated fair value of Crealta’s rights to its currently marketed medicines, KRYSTEXXA and MIGERGOT. The fair value of developed technology was determined using an income approach. The income approach explicitly recognizes that the fair value of an asset is premised upon the expected receipt of future economic benefits such as earnings and cash inflows based on current sales projections and estimated direct costs for Crealta’s medicines. Indications of value were developed by discounting these benefits to their acquisition-date worth at a discount rate of 27% for KRYSTEXXA and 23% for MIGERGOT. The fair value of the KRYSTEXXA and MIGERGOT developed technologies were capitalized as of the Crealta acquisition date and are subsequently being amortized over approximately twelve and ten years, respectively, which are the periods in which over 90% of the estimated cash flows are expected to be realized.

The Company has assigned a fair value of $51.3 million to a contingent liability for royalties potentially payable under previously existing agreements related to KRYSTEXXA and MIGERGOT. The royalties for KRYSTEXXA are payable under the terms of a license agreement with Duke University (“Duke”) and Mountain View Pharmaceuticals (“MVP”). See Note 18 for details of the percentages of royalties payable under such agreements. The initial fair value of this liability was determined using a discounted cash flow analysis incorporating the estimated future cash flows of royalty payments resulting from future sales. The discount rate used was the same as for the fair value of the developed technology.

The deferred tax liability recorded represents deferred tax liabilities assumed as part of the acquisition, net of deferred tax assets, related to net operating tax loss carryforwards of Crealta.

Goodwill represents the excess of the acquisition consideration over the estimated fair value of net assets acquired and was recorded in the consolidated balance sheet as of the acquisition date. The Company does not expect any portion of this goodwill to be deductible for tax purposes.

**Divestiture of PROCYSBI and QUINSAIR rights in EMEA Regions**

On June 23, 2017, the Company completed the Chiesi divestiture for an upfront payment of $72.5 million, which reflects $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds.

Pursuant to ASU No. 2017-01, the Company accounted for the Chiesi divestiture as a sale of a business. The Company determined that the sale of the business and its assets in connection with the Chiesi divestiture did not constitute a strategic shift and that it did not and will not have a major effect on its operations and financial results. Accordingly, the operations associated with the Chiesi divestiture are not reported in discontinued operations.

The gain on divestiture was determined as follows (in thousands):

<table>
<thead>
<tr>
<th>For the Year Ended December 31, 2017</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash proceeds</td>
<td>$72,462</td>
</tr>
<tr>
<td>Add reimbursement of royalties</td>
<td>$27,101</td>
</tr>
<tr>
<td>Less net assets sold:</td>
<td></td>
</tr>
<tr>
<td>Developed technology</td>
<td>$(47,261)</td>
</tr>
<tr>
<td>Goodwill</td>
<td>$(16,285)</td>
</tr>
<tr>
<td>Other</td>
<td>$(24,482)</td>
</tr>
<tr>
<td>Transaction and other costs</td>
<td>$(5,268)</td>
</tr>
<tr>
<td><strong>Gain on divestiture</strong></td>
<td><strong>$ 6,267</strong></td>
</tr>
</tbody>
</table>

Under the terms of its agreement with Chiesi, the Company will continue to pay third parties for the royalties on sales of PROCYSBI and QUINSAIR in EMEA, and Chiesi will reimburse the Company for those royalties. At the date of divestiture, the Company recorded an asset of $27.1 million to “other assets”, which represented the estimated amounts that
are expected to be reimbursed from Chiesi for the PROCYSBI and QUINSAIR royalties. These estimated royalties are accrued in “accrued expenses” and “other long-term liabilities”.

Transaction and other costs primarily relate to professional and license fees attributable to the divestiture.

Other Arrangements

Collaboration and option agreement

On November 8, 2016, the Company entered into a collaboration and option agreement with a privately held life-science entity. Under the terms of the agreement, the privately held life-science entity will conduct certain research and pre-clinical and clinical development activities. Upon execution of the agreement, the Company paid $0.1 million for the option to acquire certain assets of the privately held life-science entity for $25.0 million, which is exercisable on specified key dates. Under the collaboration and option agreement, the Company is required to pay up to $9.8 million upon the attainment of various milestones, primarily to fund clinical development costs for the medicine candidate. The initial upfront amount paid of $0.1 million has been included in “other assets” in the Company’s consolidated balance sheet as of December 31, 2017 and 2016. During the years ended December 31, 2017 and 2016, $1.5 million and $1.1 million, respectively, was recorded as “research and development” expenses in the consolidated statement of comprehensive loss related to milestones. The Company has determined that the privately held life-science entity is a variable interest entity (“VIE”) as it does not have enough equity to finance its activities without additional financial support. As the Company does not have the power to direct the activities of the VIE that most significantly affect its economic performance, it is not the primary beneficiary of, and does not consolidate the financial results of the VIE. The Company will reassess the appropriate accounting treatment for this arrangement throughout the life of the agreement and modify these accounting conclusions accordingly.

Licensing agreement

On December 12, 2017, the Company entered into an agreement to license HZN-003 (formerly MEDI4945), a potential next-generation biologic for uncontrolled gout, from MedImmune LLC (“MedImmune”), the global biologics research and development arm of the AstraZeneca Group. HZN-003 is a pre-clinical, genetically engineered uricase derivative with optimized uricase and optimized PEGylation technology that has the potential to improve the response rate to the biologic as well as the potential for subcutaneous dosing. Under the terms of the agreement, the Company agreed to pay MedImmune an upfront cash payment of $12.0 million with additional potential future milestone payments of up to $153.5 million contingent on the satisfaction of certain development and sales thresholds. The $12.0 million upfront payment was accounted for as the acquisition of an asset and was recorded as “research and development” expenses in the consolidated statement of comprehensive loss during the year ended December 31, 2017 and included in “accrued expenses” as of December 31, 2017. The upfront payment was subsequently paid in January 2018.

Pro Forma Information (Unaudited)

The following table represents consolidated financial information for the Company on a pro forma basis. The pro forma adjustments assume that the Crealta and Raptor acquisitions occurred as of January 1, 2015 and the Hyperion acquisition occurred as of January 1, 2014.

The results of Raptor from October 25, 2016 to December 31, 2016 and the results of Crealta from January 13, 2016 to December 31, 2016 are included in the 2016 as reported figures and the results of Hyperion from May 7, 2015 to December 31, 2016 are included in the 2015 and 2016 as reported figures.

The historical financial information has been adjusted to give effect to pro forma items that are directly attributable to the Hyperion, Crealta and Raptor acquisitions, and are expected to have a continuing impact on the consolidated results. These items include, among others, adjustments to record the amortization of definite-lived intangible assets, interest expense, debt discount and deferred financing costs associated with the debt in connection with the acquisitions.

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Additionally, the following table sets forth unaudited financial information and has been compiled from historical financial statements and other information, but is not necessarily indicative of the results that actually would have been achieved had the transactions occurred on the dates indicated or that may be achieved in the future (in thousands, except per share data):

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As reported</td>
<td>Pro forma adjustments</td>
</tr>
<tr>
<td>Net sales</td>
<td>$ 981,120</td>
<td>$ 109,298</td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>(166,834)</td>
<td>(201,765)</td>
</tr>
<tr>
<td>Basic net (loss) income per share</td>
<td>(1.04)</td>
<td>(1.26)</td>
</tr>
<tr>
<td>Diluted net (loss) income per share</td>
<td>(1.04)</td>
<td>(1.26)</td>
</tr>
</tbody>
</table>

The Company’s consolidated statement of comprehensive loss for the year ended December 31, 2016 includes KRYSTEXXA and MIGERGOT net sales as a result of the acquisition of Crealta in January 2016 of $91.1 million and $4.7 million, respectively, and PROCYSBI and QUINSAIR net sales as a result of the acquisition of Raptor in October 2016 of $25.3 million and $1.0 million, respectively. The Company’s consolidated statement of comprehensive income for the year ended December 31, 2015 includes RAVICTI and BUPHENYL net sales as a result of the acquisition of Hyperion in May 2015 of $86.9 million and $13.5 million, respectively.

Hyperion, Crealta and Raptor have been integrated into the Company’s business and as a result of these integration efforts, the Company cannot distinguish between these operations and those of the Company’s legacy business.

NOTE 5 – INVENTORIES

Inventories are stated at the lower of cost or market value. Inventories consist of raw materials, work-in-process and finished goods. The Company has entered into manufacturing and supply agreements for the manufacture of finished goods or the purchase of raw materials and production supplies. The Company’s inventories include the direct purchase cost of materials and supplies and manufacturing overhead costs.

The components of inventories as of December 31, 2017 and 2016 consisted of the following (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Raw materials</td>
<td>$ 4,553</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>27,589</td>
</tr>
<tr>
<td>Finished goods</td>
<td>29,513</td>
</tr>
<tr>
<td><strong>Inventories, net</strong></td>
<td><strong>$ 61,655</strong></td>
</tr>
</tbody>
</table>
Finished goods at December 31, 2017 included $17.0 million of stepped-up KRYSTEXXA inventory. The Company recorded $78.3 million of KRYSTEXXA inventory step-up expense during the year ended December 31, 2017. Finished goods at December 31, 2016 included $27.7 million of stepped-up KRYSTEXXA inventory. Work-in-process at December 31, 2016 included $67.6 million of stepped-up KRYSTEXXA inventory.

The Company expects that the KRYSTEXXA inventory step-up will be fully expensed by the end of the first quarter of 2018. Following that period, the Company expects the costs of goods sold related to KRYSTEXXA to decrease significantly to levels consistent with the historical cost of goods sold of Crealta.

During the year ended December 31, 2017, the Company recorded $40.8 million of PROCYSBI and QUINSAIR inventory step-up expense. In addition, during the year ended December 31, 2017, the Company recorded $3.2 million of inventory step-up expense to “gain on divestiture” relating to PROCYSBI and QUINSAIR in connection with the Chiesi divestiture in June 2017. Finished goods at December 31, 2016 included $38.1 million of stepped-up PROCYSBI and QUINSAIR inventory. Work-in-process at December 31, 2016 included $5.9 million of stepped-up PROCYSBI and QUINSAIR inventory.

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on the Company’s gross profit, gross margin percentage and net income (loss) for all affected periods, the Company discloses balance sheet and income statement amounts related to inventory step-up.

**NOTE 6 – PREPAID EXPENSES AND OTHER CURRENT ASSETS**

Prepaid expenses and other current assets as of December 31, 2017 and 2016 consisted of the following (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Medicine samples inventory</td>
<td>$11,415</td>
</tr>
<tr>
<td>Rabbi trust assets</td>
<td>6,490</td>
</tr>
<tr>
<td>Other prepaid expenses and other current assets</td>
<td>25,497</td>
</tr>
<tr>
<td><strong>Prepaid expenses and other current assets</strong></td>
<td><strong>$43,402</strong></td>
</tr>
</tbody>
</table>

**NOTE 7 – PROPERTY AND EQUIPMENT**

Property and equipment as of December 31, 2017 and 2016 consisted of the following (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Software</td>
<td>$14,956</td>
</tr>
<tr>
<td>Leasehold improvements</td>
<td>9,415</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>4,819</td>
</tr>
<tr>
<td>Computer equipment</td>
<td>2,235</td>
</tr>
<tr>
<td>Other</td>
<td>2,508</td>
</tr>
<tr>
<td><strong>Total Property and Equipment</strong></td>
<td><strong>$33,933</strong></td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>(13,672)</td>
</tr>
<tr>
<td>Construction in process</td>
<td>144</td>
</tr>
<tr>
<td><strong>Property and equipment, net</strong></td>
<td><strong>$20,405</strong></td>
</tr>
</tbody>
</table>

The Company capitalizes development costs associated with internal use software, including external direct costs of materials and services and payroll costs for employees devoting time to a software project. Costs incurred during the preliminary project stage, as well as costs for maintenance and training, are expensed as incurred.

Depreciation expense for the years ended December 31, 2017, 2016 and 2015 was $6.6 million, $5.0 million and $5.4 million, respectively.
NOTE 8 – GOODWILL AND INTANGIBLE ASSETS

Goodwill

The gross carrying amount of goodwill as of December 31, 2017 was as follows (in thousands):

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at December 31, 2015</td>
<td>$253,811</td>
</tr>
<tr>
<td>Goodwill recognized on acquisition of Crealta</td>
<td>9,913</td>
</tr>
<tr>
<td>Goodwill recognized on acquisition of Raptor</td>
<td>189,046</td>
</tr>
<tr>
<td>Adjustment relating to the acquisition of Hyperion in the prior year</td>
<td>(7,191)</td>
</tr>
<tr>
<td><strong>Balance at December 31, 2016</strong></td>
<td><strong>445,579</strong></td>
</tr>
<tr>
<td>Goodwill derecognized on Chiesi divestiture</td>
<td>(16,285)</td>
</tr>
<tr>
<td>Adjustment relating to the acquisition of Raptor in the prior year</td>
<td>(2,853)</td>
</tr>
<tr>
<td><strong>Balance at December 31, 2017</strong></td>
<td><strong>426,441</strong></td>
</tr>
</tbody>
</table>

During the year ended December 31, 2017, in connection with the Chiesi divestiture, the Company recorded a reduction to goodwill of $16.3 million.

During the year ended December 31, 2016, the Company recognized goodwill with a preliminary value of $189.1 million in connection with the Raptor acquisition, which represented the excess of the purchase price over the fair value of the net assets acquired. During the year ended December 31, 2017, the Company recorded measurement period adjustments related to deferred tax liabilities, accrued trade discounts and rebates and accrued expenses, which resulted in a net decrease in goodwill of $2.9 million, to $186.2 million.

During the year ended December 31, 2016, the Company recognized goodwill with a value of $9.9 million in connection with the Crealta acquisition, which represented the excess of the purchase price over the fair value of the net assets acquired.

During the year ended December 31, 2016, the Company recorded an adjustment related to deferred tax liabilities which resulted in a decrease to goodwill of $7.2 million. The adjustment was the result of a correction of an error in the Hyperion pre-acquisition deferred tax calculation. The Company concluded that this misstatement was not material, individually or in the aggregate, to any of the reporting periods impacted. As such, the correction for this error was made during the year ended December 31, 2016.

As of December 31, 2017, there were no accumulated goodwill impairment losses. See Note 4 for further details of goodwill acquired and disposed of in business acquisitions and divestitures.

Intangible Assets

As of December 31, 2017, the Company’s intangible assets consisted of developed technology related to ACTIMMUNE, BUPHENYL, KRYSTEXXA, MIGERGOT, PENNSAID 2%, PROCYSBI, RAVICTI, RAYOS and VIMOVO in the United States, and AMMONAPS, BUPHENYL, LODOTRA and PROCYSBI outside the United States, as well as customer relationships for ACTIMMUNE.

During the year ended December 31, 2017, in connection with the Chiesi divestiture, the Company recorded a reduction in the net book value of developed technology related to PROCYSBI of $47.3 million.

During the year ended December 31, 2016, in connection with the acquisition of Raptor, the Company capitalized $946.0 million of developed technology related to PROCYSBI.

During the year ended December 31, 2016, in connection with the acquisition of Crealta, the Company capitalized $402.2 million of developed technology related to KRYSTEXXA and $26.0 million of developed technology related to MIGERGOT.

See Note 4 for further details of intangible assets acquired and disposed of in business acquisitions and divestitures.
Prior to the fourth quarter of 2016, the Company had IPR&D of $66.0 million related to one research and development project to evaluate ACTIMMUNE in the treatment of FA. During December 2016, the Company discontinued this project and recorded an impairment charge of $66.0 million to “impairment of in-process research and development” in its consolidated statements of comprehensive loss during the year ended December 31, 2016, to fully write off the value of the asset on its consolidated balance sheet.

The Company tests its intangible assets for impairment when events or circumstances may indicate that the carrying value of these assets exceeds their fair value. The Company does not believe there have been any circumstances or events that would indicate that the carrying value of any of its intangible assets, except for IPR&D as described above, was impaired at December 31, 2017 or 2016.

As of December 31, 2017 and 2016, amortizable intangible assets consisted of the following (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31, 2017</th>
<th></th>
<th>As of December 31, 2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost Basis</td>
<td>Accumulated Amortization</td>
<td>Net Book Value</td>
<td>Cost Basis</td>
</tr>
<tr>
<td>Developed technology</td>
<td>$3,115,695</td>
<td>(671,746)</td>
<td>$2,443,949</td>
<td>$3,166,695</td>
</tr>
<tr>
<td>Customer relationships</td>
<td>8,100</td>
<td>(2,659)</td>
<td>5,441</td>
<td>8,100</td>
</tr>
<tr>
<td><strong>Amortizable intangible assets</strong></td>
<td><strong>$3,123,795</strong></td>
<td><strong>(674,405)</strong></td>
<td><strong>$2,449,390</strong></td>
<td><strong>$3,174,795</strong></td>
</tr>
</tbody>
</table>

Amortization expense for the years ended December 31, 2017, 2016 and 2015 was $276.8 million, $216.9 million and $132.9 million, respectively. As of December 31, 2017, estimated future amortization expense was as follows (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$274,084</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>261,092</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>261,068</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>253,373</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>251,551</td>
<td></td>
</tr>
<tr>
<td>Thereafter</td>
<td>1,148,222</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,449,390</strong></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE 9 - OTHER ASSETS**

Included in other assets at December 31, 2017, is $24.6 million which represents the long-term portion of the estimated amounts that are expected to be reimbursed from Chiesi for PROCYSBI and QUINSAIR royalties.

**NOTE 10 – ACCRUED EXPENSES**

Accrued expenses as of December 31, 2017 and 2016 consisted of the following (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31, 2017</th>
<th></th>
<th>As of December 31, 2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll-related expenses</td>
<td>$56,338</td>
<td>$66,417</td>
<td>Consulting and professional services</td>
<td>27,542</td>
</tr>
<tr>
<td>Accrued interest</td>
<td>14,127</td>
<td>18,938</td>
<td>Accrued upfront payment related to license agreement</td>
<td>12,000</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>12,872</td>
<td>31,296</td>
<td>Accrued other</td>
<td>27,827</td>
</tr>
<tr>
<td><strong>Accrued expenses</strong></td>
<td><strong>$137,834</strong></td>
<td><strong>182,765</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accrued litigation settlement at December 31, 2016 included $32.5 million in relation to a litigation settlement with Express Scripts, Inc., which was paid in two equal installments in January 2017 and April 2017.
During the year ended December 31, 2017, the Company entered into an agreement to license HZN-003 from MedImmune. Under the terms of the agreement, the Company agreed to pay MedImmune an upfront cash payment of $12.0 million, which was recorded as “research and development” expenses in the consolidated statement of comprehensive loss during the year ended December 31, 2017 and was included in “accrued expenses” as of December 31, 2017.

Accrued other as of December 31, 2017 and 2016 included $2.1 million and $9.5 million, respectively, related to a loss on inventory purchase commitments. During the year ended December 31, 2016, the Company committed to purchase additional units of ACTIMMUNE from Boehringer Ingelheim RCV GmbH & Co KG (“Boehringer Ingelheim”). These additional units of ACTIMMUNE were intended to cover anticipated demand if the Phase 3 trial, Safety, Tolerability and Efficacy of ACTIMMUNE Dose Escalation in Friedreich’s Ataxia study (the “FA program”) had been successful. Following the discontinuation of the FA program during the year ended December 31, 2016, the Company recorded a loss of $14.3 million in “cost of goods sold” in the consolidated statement of comprehensive loss for firm, non-cancellable and unconditional purchase commitments for quantities in excess of the Company’s current forecasts for future demand. During the year ended December 31, 2017, the Company renegotiated its purchase commitments with Boehringer Ingelheim and reassessed its excess commitments based on updated forecasts for future demand and recorded additional expense of $1.7 million to “cost of goods sold”. “Other long-term liabilities” as of December 31, 2017 and 2016 included $7.8 million and $4.8 million, respectively, related to this loss on inventory purchase commitments. During the year ended December 31, 2016, the Company recorded $4.0 million related to costs to be incurred to discontinue the clinical trial. Accrued other as of December 31, 2016 included $4.0 million related to these costs. During the year ended December 31, 2017, the Company recorded a reduction of $1.5 million to “research and development” expenses reflecting lower costs to discontinue the clinical trial than previously estimated.

NOTE 11 – ACCRUED TRADE DISCOUNTS AND REBATES

Accrued trade discounts and rebates as of December 31, 2017 and 2016 consisted of the following (in thousands):

<p>|                                      | As of December 31, |</p>
<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued wholesaler fees and commercial rebates</td>
<td>$190,215</td>
<td>$47,460</td>
</tr>
<tr>
<td>Accrued co-pay and other patient assistance</td>
<td>230,533</td>
<td>188,504</td>
</tr>
<tr>
<td>Accrued government rebates and chargebacks</td>
<td>81,005</td>
<td>61,592</td>
</tr>
<tr>
<td><strong>Accrued trade discounts and rebates</strong></td>
<td>$501,753</td>
<td>$297,556</td>
</tr>
<tr>
<td>Invoiced wholesaler fees and commercial rebates, co-pay and other patient assistance, and government rebates and chargebacks in accounts payable</td>
<td>15,042</td>
<td>16,830</td>
</tr>
<tr>
<td><strong>Total customer-related accruals and allowances</strong></td>
<td>$516,795</td>
<td>$314,386</td>
</tr>
</tbody>
</table>

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The following table summarizes changes in the Company’s customer-related accruals and allowances during the years ended December 31, 2017 and 2016 (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>Wholesaler Fees and Commercial Rebates</th>
<th>Co-Pay and Other Patient Assistance</th>
<th>Government Rebates and Chargebacks</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at December 31, 2015</td>
<td>$21,112</td>
<td>$114,201</td>
<td>$48,456</td>
<td>$183,769</td>
</tr>
<tr>
<td>Current provisions relating to sales during the year ended December 31, 2016</td>
<td>133,012</td>
<td>1,701,287</td>
<td>278,877</td>
<td>2,113,176</td>
</tr>
<tr>
<td>Adjustments relating to prior-year sales</td>
<td>671</td>
<td>0</td>
<td>(6,875)</td>
<td>(6,204)</td>
</tr>
<tr>
<td>Payments relating to sales during the year ended December 31, 2016</td>
<td>(87,144)</td>
<td>(114,201)</td>
<td>(41,581)</td>
<td>(176,926)</td>
</tr>
<tr>
<td>Crealta acquisition on January 13, 2016</td>
<td>492</td>
<td>0</td>
<td>932</td>
<td>1,424</td>
</tr>
<tr>
<td>Raptor acquisition on October 25, 2016</td>
<td>155</td>
<td>96</td>
<td>6,126</td>
<td>6,377</td>
</tr>
<tr>
<td><strong>Balance at December 31, 2016</strong></td>
<td>$47,651</td>
<td>$205,143</td>
<td>$61,592</td>
<td>$314,386</td>
</tr>
<tr>
<td>Measurement period adjustment</td>
<td>0</td>
<td>0</td>
<td>(1,350)</td>
<td>(1,350)</td>
</tr>
<tr>
<td>Current provisions relating to sales during the year ended December 31, 2017</td>
<td>635,919</td>
<td>1,907,669</td>
<td>331,559</td>
<td>2,875,147</td>
</tr>
<tr>
<td>Adjustments relating to prior-year sales</td>
<td>5,580</td>
<td>(59)</td>
<td>(4,905)</td>
<td>616</td>
</tr>
<tr>
<td>Payments relating to sales during the year ended December 31, 2017</td>
<td>(445,621)</td>
<td>(1,675,344)</td>
<td>(237,574)</td>
<td>(2,358,539)</td>
</tr>
<tr>
<td>Crealta acquisition on January 13, 2016</td>
<td>492</td>
<td>0</td>
<td>932</td>
<td>1,424</td>
</tr>
<tr>
<td>Raptor acquisition on October 25, 2016</td>
<td>155</td>
<td>96</td>
<td>6,126</td>
<td>6,377</td>
</tr>
<tr>
<td><strong>Balance at December 31, 2017</strong></td>
<td>$190,485</td>
<td>$232,325</td>
<td>$93,985</td>
<td>$516,795</td>
</tr>
</tbody>
</table>

NOTE 12 – ACCRUED ROYALTIES

Changes to the liability for royalties for medicines acquired through business combinations during the years ended December 31, 2017 and 2016 consisted of the following (in thousands):

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance as of December 31, 2015</td>
<td>$175,219</td>
</tr>
<tr>
<td>Accrued royalties - current portion as of December 31, 2015</td>
<td>51,700</td>
</tr>
<tr>
<td>Accrued royalties, net of current as of December 31, 2015</td>
<td>123,519</td>
</tr>
<tr>
<td>Assumed KRYSTEXXA and MIGERGOT contingent royalty liabilities</td>
<td>51,300</td>
</tr>
<tr>
<td>Assumed KRYSTEXXA and MIGERGOT accrued royalties</td>
<td>1,401</td>
</tr>
<tr>
<td>Assumed PROCYSBI contingent royalty liabilities</td>
<td>102,000</td>
</tr>
<tr>
<td>Assumed PROCYSBI and QUINSAIR accrued royalties</td>
<td>2,705</td>
</tr>
<tr>
<td>Remeasurement of royalty liabilities</td>
<td>386</td>
</tr>
<tr>
<td>Royalty payments</td>
<td>(39,448)</td>
</tr>
<tr>
<td>Accretion expense</td>
<td>40,616</td>
</tr>
<tr>
<td>Other royalty expense</td>
<td>95</td>
</tr>
<tr>
<td><strong>Balance as of December 31, 2016</strong></td>
<td>$334,274</td>
</tr>
<tr>
<td>Accrued royalties - current portion as of December 31, 2016</td>
<td>61,981</td>
</tr>
<tr>
<td>Accrued royalties, net of current as of December 31, 2016</td>
<td>272,293</td>
</tr>
<tr>
<td>Reclassification to other long-term liabilities</td>
<td>(5,233)</td>
</tr>
<tr>
<td>Remeasurement of royalty liabilities</td>
<td>21,774</td>
</tr>
<tr>
<td>Royalty payments</td>
<td>(45,739)</td>
</tr>
<tr>
<td>Accretion expense</td>
<td>51,127</td>
</tr>
<tr>
<td>Other royalty expense</td>
<td>310</td>
</tr>
<tr>
<td><strong>Balance as of December 31, 2017</strong></td>
<td>$356,513</td>
</tr>
<tr>
<td>Accrued royalties - current portion as of December 31, 2017</td>
<td>65,328</td>
</tr>
<tr>
<td><strong>Accrued royalties, net of current as of December 31, 2017</strong></td>
<td>$291,185</td>
</tr>
</tbody>
</table>

The reclassification to other long-term liabilities in the table above relates to the reclassification of a contingent royalty liability for PROCYSBI to other long-term liabilities as a result of the Chiesi divestiture.
During the year ended December 31, 2017, based on higher sales of certain of the Company’s medicines versus its previous expectations and estimates for future sales of these medicines, the Company recorded total charges of $64.7 million and $0.6 million to “cost of goods sold” and “selling, general and administrative” expenses, respectively, (primarily composed of $40.5 million and $24.2 million related to KYRSTEXXA and RAVICTI, respectively). The Company also recorded a reduction of $43.5 million to cost of goods sold related to certain of its other medicines as a result of updated estimates of future sales of these medicines (primarily composed of $23.2 million, $11.7 million and $7.0 million related to PROCYSBI, VIMOVO and ACTIMMUNE, respectively).

NOTE 13 – LONG-TERM INVESTMENTS

During the third quarter of 2015, the Company purchased 2,250,000 shares of common stock of Depomed, Inc. (“Depomed”), representing 3.75% of Depomed’s then outstanding common stock. The shares were acquired at a cost of $71.8 million. During the fourth quarter of 2015, following the Company’s decision to withdraw its offer to acquire Depomed, the Company sold all of its shares in Depomed, receiving sales proceeds of $42.8 million and the Company recognized a realized loss of $29.0 million in the consolidated statement of comprehensive income.

There were no gains or losses on long-term investments during the years ended December 31, 2017 or 2016.

NOTE 14 – SEGMENT AND OTHER INFORMATION

The Company has determined that it operates in one operating segment, which focuses on researching, developing and commercializing innovative medicines that address unmet treatment needs. The Company’s operating segment is reported in a manner consistent with the internal reporting provided to the CODM. The Company’s CODM has been identified as its chief executive officer.

The following table presents a summary of total net sales by medicine (in thousands):

<table>
<thead>
<tr>
<th>Medicine</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAVICTI</td>
<td>$193,918</td>
<td>$151,532</td>
<td>$86,875</td>
</tr>
<tr>
<td>PENNSAID 2%</td>
<td>191,050</td>
<td>304,433</td>
<td>147,010</td>
</tr>
<tr>
<td>KRYSTEXXA</td>
<td>156,483</td>
<td>91,102</td>
<td>—</td>
</tr>
<tr>
<td>PROCYSBI</td>
<td>137,740</td>
<td>25,268</td>
<td>—</td>
</tr>
<tr>
<td>DUEXIS</td>
<td>121,161</td>
<td>173,728</td>
<td>190,357</td>
</tr>
<tr>
<td>ACTIMMUNE</td>
<td>110,993</td>
<td>104,624</td>
<td>107,444</td>
</tr>
<tr>
<td>VIMOVO</td>
<td>57,666</td>
<td>121,315</td>
<td>166,672</td>
</tr>
<tr>
<td>RAYOS</td>
<td>52,125</td>
<td>47,356</td>
<td>40,329</td>
</tr>
<tr>
<td>BUPHENYL</td>
<td>20,792</td>
<td>16,879</td>
<td>13,458</td>
</tr>
<tr>
<td>MIGERGOT</td>
<td>5,439</td>
<td>4,651</td>
<td>—</td>
</tr>
<tr>
<td>LODOTRA</td>
<td>5,393</td>
<td>4,193</td>
<td>4,899</td>
</tr>
<tr>
<td>QUINSAIR</td>
<td>3,442</td>
<td>1,039</td>
<td>—</td>
</tr>
<tr>
<td>Litigation settlement</td>
<td>—</td>
<td>(65,000)</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total net sales</strong></td>
<td><strong>$1,056,231</strong></td>
<td><strong>$981,120</strong></td>
<td><strong>$757,044</strong></td>
</tr>
</tbody>
</table>

The following table presents a summary of total net sales by geography (in thousands, except for percentages):

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>$1,026,527 97%</td>
<td>$964,041 98%</td>
<td>$744,036 98%</td>
</tr>
<tr>
<td>Rest of world</td>
<td>29,704 3%</td>
<td>17,079 2%</td>
<td>13,008 2%</td>
</tr>
<tr>
<td><strong>Total net sales</strong></td>
<td><strong>$1,056,231</strong></td>
<td><strong>$981,120</strong></td>
<td><strong>$757,044</strong></td>
</tr>
</tbody>
</table>
The following table presents the amount and percentage of gross sales from customers that represented more than 10% of the Company’s gross sales included in its single operating segment, and all other customers as a group (in thousands, except percentages):

<table>
<thead>
<tr>
<th></th>
<th>Year ended December 31,</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>% of Gross Sales</td>
<td>Amount</td>
<td>% of Gross Sales</td>
<td>Amount</td>
</tr>
<tr>
<td>Customer A</td>
<td>$1,205,268</td>
<td>30%</td>
<td>$1,413,774</td>
<td>44%</td>
<td>$607,771</td>
</tr>
<tr>
<td>Customer B</td>
<td>1,165,591</td>
<td>29%</td>
<td>667,031</td>
<td>21%</td>
<td>166,661</td>
</tr>
<tr>
<td>Customer C</td>
<td>567,583</td>
<td>14%</td>
<td>355,920</td>
<td>11%</td>
<td>207,009</td>
</tr>
<tr>
<td>Other Customers</td>
<td>1,119,397</td>
<td>27%</td>
<td>797,463</td>
<td>24%</td>
<td>1,075,853</td>
</tr>
<tr>
<td>Gross Sales</td>
<td>$4,057,839</td>
<td>100%</td>
<td>$3,234,188</td>
<td>100%</td>
<td>$2,057,294</td>
</tr>
</tbody>
</table>

The following table presents total tangible long-lived assets by location (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>As of December 31,</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>$17,089</td>
<td>$19,542</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3,316</td>
<td>3,942</td>
<td></td>
</tr>
<tr>
<td>Total long-lived assets (1)</td>
<td>$20,405</td>
<td>$23,484</td>
<td></td>
</tr>
</tbody>
</table>

(1) Long-lived assets consist of property and equipment.

NOTE 15 – FAIR VALUE MEASUREMENTS

The following tables and paragraphs set forth the Company’s financial instruments that are measured at fair value on a recurring basis within the fair value hierarchy. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company’s assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability. The following describes three levels of inputs that may be used to measure fair value:

- **Level 1**—Observable inputs such as quoted prices in active markets for identical assets or liabilities.
- **Level 2**—Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- **Level 3**—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company utilizes the market approach to measure fair value for its money market funds. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

As of December 31, 2017, the Company’s restricted cash included bank time deposits which were measured at fair value using Level 2 inputs and their carrying values were approximately equal to their fair values. Level 2 inputs, obtained from various third-party data providers, represent quoted prices for similar assets in active markets, or these inputs were derived from observable market data, or if not directly observable, were derived from or corroborated by observable market data.

Other current assets and other long-term liabilities recorded at fair value on a recurring basis are composed of investments held in a rabbi trust and the related deferred liability for deferred compensation arrangements. Quoted prices for this investment, primarily in mutual funds, are available in active markets. Thus, the Company’s investments related to deferred compensation arrangements and the related long-term liability are classified as Level 1 measurements in the fair value hierarchy.
The Company transfers its financial assets and liabilities between fair value hierarchies at the end of each reporting period. There were no transfers between the different levels of the fair value hierarchy in 2017 or in 2016.

**Assets and liabilities measured at fair value on a recurring basis**

The following table sets forth the Company’s financial assets and liabilities at fair value as of December 31, 2017 and 2016 (in thousands):

<table>
<thead>
<tr>
<th>December 31, 2017</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank time deposits</td>
<td>$ —</td>
<td>$ 3,000</td>
<td>$ —</td>
<td>$ 3,000</td>
</tr>
<tr>
<td>Money market funds</td>
<td>687,000</td>
<td>—</td>
<td>—</td>
<td>687,000</td>
</tr>
<tr>
<td>Other current assets</td>
<td>6,490</td>
<td>—</td>
<td>—</td>
<td>6,490</td>
</tr>
<tr>
<td><strong>Total assets at fair value</strong></td>
<td>$ 693,490</td>
<td>$ 3,000</td>
<td>—</td>
<td>$ 696,490</td>
</tr>
<tr>
<td><strong>Liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>(6,490)</td>
<td>—</td>
<td>—</td>
<td>(6,490)</td>
</tr>
<tr>
<td><strong>Total liabilities at fair value</strong></td>
<td>$ (6,490)</td>
<td>—</td>
<td>—</td>
<td>$ (6,490)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>December 31, 2016</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank time deposits</td>
<td>$ —</td>
<td>$ 3,000</td>
<td>$ —</td>
<td>$ 3,000</td>
</tr>
<tr>
<td>Money market funds</td>
<td>170,000</td>
<td>—</td>
<td>—</td>
<td>170,000</td>
</tr>
<tr>
<td>Other current assets</td>
<td>3,038</td>
<td>—</td>
<td>—</td>
<td>3,038</td>
</tr>
<tr>
<td><strong>Total assets at fair value</strong></td>
<td>$ 173,038</td>
<td>$ 3,000</td>
<td>—</td>
<td>$ 176,038</td>
</tr>
<tr>
<td><strong>Liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>(3,038)</td>
<td>—</td>
<td>—</td>
<td>(3,038)</td>
</tr>
<tr>
<td><strong>Total liabilities at fair value</strong></td>
<td>$ (3,038)</td>
<td>—</td>
<td>—</td>
<td>$ (3,038)</td>
</tr>
</tbody>
</table>

**NOTE 16 – DEBT AGREEMENTS**

The Company’s outstanding debt balances as of December 31, 2017 and 2016 consisted of the following (in thousands):

<table>
<thead>
<tr>
<th>As of December 31,</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 Term Loan Facility</td>
<td>$ 845,750</td>
<td>$ —</td>
</tr>
<tr>
<td>2015 Term Loan Facility</td>
<td>—</td>
<td>394,000</td>
</tr>
<tr>
<td>2016 Incremental Loan Facility</td>
<td>—</td>
<td>375,000</td>
</tr>
<tr>
<td>2023 Senior Notes</td>
<td>475,000</td>
<td>475,000</td>
</tr>
<tr>
<td>2024 Senior Notes</td>
<td>300,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Exchangeable Senior Notes</td>
<td>400,000</td>
<td>400,000</td>
</tr>
<tr>
<td><strong>Total face value</strong></td>
<td>$ 2,020,750</td>
<td>$ 1,944,000</td>
</tr>
<tr>
<td>Debt discount</td>
<td>(108,054)</td>
<td>(126,352)</td>
</tr>
<tr>
<td>Deferred financing fees</td>
<td>(11,041)</td>
<td>(10,155)</td>
</tr>
<tr>
<td><strong>Total long-term debt</strong></td>
<td>$ 1,901,655</td>
<td>$ 1,807,493</td>
</tr>
<tr>
<td>Less: current maturities</td>
<td>10,625</td>
<td>7,750</td>
</tr>
<tr>
<td><strong>Long-term debt, net of current maturities</strong></td>
<td>$ 1,891,030</td>
<td>$ 1,799,743</td>
</tr>
</tbody>
</table>
Scheduled maturities with respect to the Company’s long-term debt are as follows (in thousands):

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$10,625</td>
</tr>
<tr>
<td>2019</td>
<td>8,500</td>
</tr>
<tr>
<td>2020</td>
<td>8,500</td>
</tr>
<tr>
<td>2021</td>
<td>8,500</td>
</tr>
<tr>
<td>2022</td>
<td>406,375</td>
</tr>
<tr>
<td>Thereafter</td>
<td>1,578,250</td>
</tr>
<tr>
<td>Total</td>
<td>$2,020,750</td>
</tr>
</tbody>
</table>

## 2017 Term Loan Facilities

On October 23, 2017, HPI and Horizon Pharma USA, Inc. (“HPUSA” and, together with HPI, in such capacity, the “Borrowers”), wholly owned subsidiaries of the Company, borrowed approximately $845.8 million aggregate principal amount of loans (the “October 2017 Refinancing Loans”) pursuant to an amendment (the “October 2017 Refinancing Amendment”) to the credit agreement, dated as of May 7, 2015, by and among the Borrowers, the Company and certain of its subsidiaries as guarantors, the lenders party thereto from time to time and Citibank, N.A., as administrative agent and collateral agent, as amended by Amendment No. 1, dated as of October 25, 2016 (the “2016 Credit Agreement”), and Amendment No. 2, dated March 29, 2017 (the “March 2017 Credit Agreement”) (the “2017 Term Loan Facility”). As used herein, all references to the “Credit Agreement” are references to the March 2017 Credit Agreement, as amended by the October 2017 Refinancing Amendment.

The October 2017 Refinancing Loans were incurred as a separate new class of term loans under the Credit Agreement with substantially the same terms as the previously outstanding senior secured term loans incurred on March 29, 2017 under the March 2017 Credit Agreement (the “October 2017 Refinanced Loans”) to effectuate a repricing of the October 2017 Refinanced Loans. The Borrowers used the proceeds of the October 2017 Refinancing Loans to repay the October 2017 Refinanced Loans, which totaled approximately $845.8 million. The October 2017 Refinancing Loans bear interest, at the Borrowers’ option, at a rate equal to either the London Inter-Bank Offer Rate (“LIBOR”), plus an applicable margin of 3.25% per year (subject to a LIBOR floor of 1.00%), or the adjusted base rate plus 2.25%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1.00%, (b) prime rate, (c) fed funds plus 0.5%, and (d) 2.00%. The Credit Agreement provides for (i) the October 2017 Refinancing Loans, (ii) one or more uncommitted additional incremental loan facilities subject to the satisfaction of certain financial and other conditions, and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The Credit Agreement allows for the Company and certain of its subsidiaries to become borrowers under incremental or refinancing facilities.

The Company elected to exercise its reinvestment rights under the mandatory prepayment provisions of the March 2017 Credit Agreement with respect to the net proceeds from the Chiesi divestiture. To the extent the Company does not apply such net proceeds to permitted acquisitions (including the acquisition of rights to products and products lines) and/or the acquisition of capital assets within 365 days of the receipt thereof (or commit to so apply and then apply within 180 days after the end of such 365-day period), the Borrowers under the March 2017 Credit Agreement would be required to make a mandatory prepayment under the March 2017 Credit Agreement in an amount equal to the unapplied net proceeds. Until such time, the net proceeds are not legally restricted for use. As of December 31, 2017, the Company had applied a portion of such net proceeds to the acquisition of additional rights to interferon gamma-1b and to the agreement to license HZN-003. See Note 4 for further details of this acquisition and license agreement.

The obligations under the Credit Agreement (including obligations in respect of the October 2017 Refinancing Loans) and any swap obligations and cash management obligations owing to a lender (or an affiliate of a lender) thereunder are guaranteed by the Company and each of the Company’s existing and subsequently acquired or formed direct and indirect subsidiaries (other than certain immaterial subsidiaries, subsidiaries whose guarantee would result in material adverse tax consequences and subsidiaries whose guarantee is prohibited by applicable law). The obligations under the Credit Agreement (including obligations in respect of the October 2017 Refinancing Loans) and any such swap and cash management obligations are secured, subject to customary permitted liens and other agreed upon exceptions, by a perfected security interest in (i) all tangible and intangible assets of the Borrowers and the guarantors, except for certain customary excluded assets, and (ii) all of the capital stock owned by the Borrowers and guarantors thereunder (limited, in the case of the stock of certain non-U.S. subsidiaries of the Borrowers, to 65% of the capital stock of such subsidiaries). The Borrowers and the guarantors under the Credit Agreement are individually and collectively referred to herein as a “Loan Party” and the “Loan Parties,” as applicable.
Borrowers under the Credit Agreement are permitted to make voluntary prepayments of the loans under the Credit Agreement at any time without payment of a premium, except that with respect to the October 2017 Refinancing Loans, a 1.00% premium will apply to a repayment of the October 2017 Refinancing Loans in connection with a repurchasing of, or any amendment to the Credit Agreement in a repurchasing of, such loans effected on or prior to the date that is six months following October 23, 2017. The Borrowers are required to make mandatory prepayments of loans under the Credit Agreement (without payment of a premium) with (a) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (b) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions), (c) net cash proceeds from issuances of debt (other than certain permitted debt), and (d) 50% of the Company’s excess cash flow (subject to decrease to 25% or 0% if the Company’s first lien leverage ratio is less than 2.25:1 or 1.75:1, respectively). The October 2017 Refinancing Loans will amortize in equal quarterly installments beginning on December 31, 2017, in an aggregate annual amount equal to 1.00% of the original principal amount of the October 2017 Refinanced Loans (i.e. $850.0 million), with any remaining balance payable on March 29, 2024, the final maturity date of the October 2017 Refinancing Loans.

The Credit Agreement contains customary representations and warranties and customary affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness and dividends and other distributions.

Events of default under the Credit Agreement include: (i) the failure by any Borrower to timely make payments due under the Credit Agreement; (ii) material misrepresentations or misstatements in any representation or warranty by any Loan Party when made; (iii) failure by any Loan Party to comply with the covenants under the Credit Agreement and other related agreements; (iv) certain defaults under a specified amount of other indebtedness of the Company or its subsidiaries; (v) insolvency or bankruptcy-related events with respect to the Company or any of its material subsidiaries; (vi) certain undischarged judgments against the Company or any of its restricted subsidiaries; (vii) certain ERISA-related events reasonably expected to have a material adverse effect on the Company and its restricted subsidiaries taken as a whole; (viii) certain security interests or liens under the loan documents ceasing to be, or being asserted by the Company or its restricted subsidiaries not to be, in full force and effect; (ix) any loan document or material provision thereof ceasing to be, or any challenge or assertion by any Loan Party that such loan document or material provision is not, in full force and effect; and (x) the occurrence of a change of control. If one or more events of default occurs and continues beyond any applicable cure period, the administrative agent may, with the consent of the lenders holding a majority of the loans and commitments under the facilities, or will, at the request of such lenders, terminate the commitments of the lenders to make further loans and declare all of the obligations of the Loan Parties under the March 2017 Credit Agreement to be immediately due and payable.

The interest on the Company’s 2017 Term Loan Facility is variable and as of December 31, 2017, the interest rate on the 2017 Term Loan Facility was 4.75% and the effective interest rate was 5.16%.

As of December 31, 2017, the fair value of the amounts outstanding under the 2017 Term Loan Facility was approximately $848.9 million, categorized as a Level 2 instrument, as defined in Note 15.

2016 Incremental Loan Facility and 2015 Term Loan Facility

On May 7, 2015, HPI, as borrower, and the Company and certain of its subsidiaries, as guarantors, entered into a credit agreement (the “2015 Credit Agreement”) with CITIBank, N.A., as administrative and collateral agent, and the lenders from time to time party thereto providing for (i) a six-year $400.0 million term loan facility (the “2015 Term Loan Facility”); (ii) an uncommitted accordion facility subject to the satisfaction of certain financial and other conditions; and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The senior secured term loans (the “2015 Loans”) under the 2015 Term Loan Facility bore interest, at each borrower’s option, at a rate equal to either the LIBOR, plus an applicable margin of 3.50% per year (subject to a 1.00% LIBOR floor), or the adjusted base rate plus 2.50%. The adjusted base rate was defined as the greater of (a) LIBOR (using one-month interest period) plus 1.00%, (b) prime rate, (c) fed funds plus 0.5%, and (d) 2.00%. HPI borrowed the full $400.0 million available on the 2015 Term Loan Facility on May 7, 2015 as a LIBOR-based borrowing.

On October 25, 2016 and in connection with the financing for the acquisition of Raptor, HPI and HPUSA (together, in such capacity, the “Incremental Borrowers”) entered into an amendment to the 2015 Credit Agreement (the “2016 Amendment”) with CITIBank, N.A., as administrative and collateral agent, and Bank of America, N.A., as the incremental B-1 lender thereunder, pursuant to which the Incremental Borrowers borrowed $375.0 million aggregate principal amount of loans (the “2016 Incremental Loan Facility”). The 2016 Incremental Loan Facility was incurred as a separate class of term loans under the 2015 Credit Agreement with the same terms as the loans under the 2015 Term Loan Facility, except as described below.

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The senior secured term loans (the “2016 Loans”) under the 2016 Incremental Loan Facility bore interest, at the Incremental Borrowers’ option, at a rate equal to either LIBOR plus an applicable margin of 4.50% per year (subject to a LIBOR floor of 1.00%), or the adjusted base rate plus 3.50%. The terms of the 2015 Loans provided for an amendment such that the effective yield of the 2015 Loans would not be less than the effective yield of the 2016 Loans minus 0.50%. Consequently, the issuance of the 2016 Loans resulted in an increase of the interest rate applicable to the 2015 Loans, as of October 25, 2016, to LIBOR plus 4.00%, subject to a LIBOR floor of 1.00% (an initial interest rate of 5.00%).

On March 29, 2017, the Borrowers used the proceeds of the October 2017 Refinanced Loans under the 2017 Term Loan Facility to repay the 2015 Loans and 2016 Loans, which collectively totaled $769.0 million.

The 2015 Loans and the 2016 Loans were repaid, and a portion of the repayment was accounted for as a debt modification and a portion was accounted for as a debt extinguishment. Under debt extinguishment accounting, the Company recorded a charge of $0.5 million to “loss on debt extinguishment” in the consolidated statements of comprehensive loss, which reflected the write-off of the unamortized portion of debt discount and deferred financing costs previously incurred and a one percent prepayment penalty fee. Under debt modification accounting, the Company capitalized an incremental $5.8 million of debt discount and deferred financing fees.

2023 Senior Notes

On April 29, 2015, Horizon Pharma Financing Inc. (“Horizon Financing”), a wholly owned subsidiary of the Company, completed a private placement of $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023 (the “2023 Senior Notes”) to certain investment banks acting as initial purchasers who subsequently resold the 2023 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act, and in offshore transactions to non-U.S. persons in reliance on Regulation S under the Securities Act. The net proceeds from the offering of the 2023 Senior Notes were approximately $462.3 million, after deducting the initial purchasers’ discount and offering expenses payable by Horizon Financing.

In connection with the closing of the Hyperion acquisition on May 7, 2015, Horizon Financing merged with and into HPI and, as a result, the 2023 Senior Notes became HPI’s general unsecured senior obligations. The obligations under the 2023 Senior Notes are fully and unconditionally guaranteed on a senior unsecured basis by the Company and all of the Company’s direct and indirect subsidiaries that are guarantors from time to time under the Credit Agreement.

The 2023 Senior Notes accrue interest at an annual rate of 6.625% payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2015. The 2023 Senior Notes will mature on May 1, 2023, unless earlier repurchased or redeemed.

Except as described below, the 2023 Senior Notes may not be redeemed before May 1, 2018. Thereafter, some or all of the 2023 Senior Notes may be redeemed at any time at specified redemption prices, plus accrued and unpaid interest to the redemption date. At any time prior to May 1, 2018, some or all of the 2023 Senior Notes may be redeemed at a price equal to 100% of the aggregate principal amount thereof, plus a make-whole premium and accrued and unpaid interest to the redemption date. Also prior to May 1, 2018, up to 35% of the aggregate principal amount of the 2023 Senior Notes may be redeemed at a redemption price of 106.625% of the aggregate principal amount thereof, plus accrued and unpaid interest, with the net proceeds of certain equity offerings. In addition, the 2023 Senior Notes may be redeemed in whole but not in part at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date, if on the next date on which any amount would be payable in respect of the 2023 Senior Notes, HPI or any guarantor is or would be required to pay additional amounts as a result of certain tax-related events.

If the Company undergoes a change of control, HPI will be required to make an offer to purchase all of the 2023 Senior Notes at a price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest to, but not including, the repurchase date. If the Company or certain of its subsidiaries engages in certain asset sales, HPI will be required under certain circumstances to make an offer to purchase the 2023 Senior Notes at 100% of the principal amount thereof, plus accrued and unpaid interest to the repurchase date.
The indenture governing the 2023 Senior Notes contains covenants that limit the ability of the Company and its restricted subsidiaries to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales, merge, consolidate with or merge or sell all or substantially all of their assets, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries, and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to the Company. Certain of the covenants will be suspended during any period in which the notes receive investment grade ratings. The indenture governing the 2023 Senior Notes also includes customary events of default.

As of December 31, 2017, the interest rate on the 2023 Senior Notes was 6.63% and the effective interest rate 6.68%.

As of December 31, 2017, the fair value of the 2023 Senior Notes was approximately $473.8 million, categorized as a Level 2 instrument, as defined in Note 15.

**2024 Senior Notes**

On October 25, 2016, HPI and HPUSA (together, in such capacity, the “2024 Issuers”), completed a private placement of $300.0 million aggregate principal amount of the 2024 Senior Notes to certain investment banks acting as initial purchasers who subsequently resold the 2024 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act. The net proceeds from the offering of the 2024 Senior Notes were approximately $291.9 million, after deducting the initial purchasers’ discount and offering expenses payable by the 2024 Issuers.

The obligations under the 2024 Senior Notes are the 2024 Issuers’ general unsecured senior obligations and are fully and unconditionally guaranteed on a senior unsecured basis by the Company and all of the Company’s direct and indirect subsidiaries that are guarantors from time to time under the Credit Agreement.

The Company used the net proceeds from the offering of the 2024 Senior Notes as well as $375.0 million principal amount of 2016 Loans under the 2016 Incremental Loan Facility to fund a portion of the acquisition of Raptor, repay Raptor’s outstanding debt, and pay any prepayment premiums, fees and expenses in connection with the foregoing.

The 2024 Senior Notes accrue interest at an annual rate of 8.750% payable semiannually in arrears on May 1 and November 1 of each year, beginning on May 1, 2017. The 2024 Senior Notes will mature on November 1, 2024, unless earlier repurchased or redeemed.

Except as described below, the 2024 Senior Notes may not be redeemed before November 1, 2019. Thereafter, some or all of the 2024 Senior Notes may be redeemed at any time at specified redemption prices, plus accrued and unpaid interest to the redemption date. At any time prior to November 1, 2019, some or all of the 2024 Senior Notes may be redeemed at a price equal to 100% of the aggregate principal amount thereof, plus a make-whole premium and accrued and unpaid interest to the redemption date. Also prior to November 1, 2019, up to 35% of the aggregate principal amount of the 2024 Senior Notes may be redeemed at a redemption price of 108.75% of the aggregate principal amount thereof, plus accrued and unpaid interest, with the net proceeds of certain equity offerings. In addition, the 2024 Senior Notes may be redeemed in whole but not in part at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date, if on the next date on which any amount would be payable in respect of the 2024 Senior Notes, the 2024 Issuers or any guarantor is or would be required to pay additional amounts as a result of certain tax-related events.

If the Company undergoes a change of control, the 2024 Issuers will be required to make an offer to purchase all of the 2024 Senior Notes at a price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest to, but not including, the repurchase date. If the Company or certain of its subsidiaries engages in certain asset sales, the 2024 Issuers will be required under certain circumstances to make an offer to purchase the 2024 Senior Notes at 100% of the principal amount thereof, plus accrued and unpaid interest to the repurchase date.
The indenture governing the 2024 Senior Notes contains covenants that limit the ability of the Company and its restricted subsidiaries to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales, merge, consolidate with or merge or sell all or substantially all of their assets, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries, and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to the Company. Certain of the covenants will be suspended during any period in which the notes receive investment grade ratings. The indenture also includes customary events of default.

As of December 31, 2017, the interest rate on the 2024 Senior Notes was 8.75% and the effective interest rate 9.20%.

As of December 31, 2017, the fair value of the 2024 Senior Notes was approximately $316.5 million, categorized as a Level 2 instrument, as defined in Note 15.

**Exchangeable Senior Notes**

On March 13, 2015, Horizon Investment completed a private placement of $400.0 million aggregate principal amount of Exchangeable Senior Notes to certain investment banks acting as initial purchasers who subsequently resold the Exchangeable Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act. The net proceeds from the offering of the Exchangeable Senior Notes were approximately $387.2 million, after deducting the initial purchasers’ discount and offering expenses payable by Horizon Investment.

The Exchangeable Senior Notes are fully and unconditionally guaranteed, on a senior unsecured basis, by the Company (the “Guarantee”). The Exchangeable Senior Notes and the Guarantee are Horizon Investment’s and the Company’s senior unsecured obligations. The Exchangeable Senior Notes accrue interest at an annual rate of 2.50% payable semiannually in arrears on March 15 and September 15 of each year, beginning on September 15, 2015. The Exchangeable Senior Notes will mature on March 15, 2022, unless earlier exchanged, repurchased or redeemed. The initial exchange rate is 34.8979 ordinary shares of the Company per $1,000 principal amount of the Exchangeable Senior Notes (equivalent to an initial exchange price of approximately $28.66 per ordinary share). The exchange rate will be subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest. In addition, following certain corporate events that occur prior to the maturity date or upon a tax redemption, Horizon Investment will increase the exchange rate for a holder who elects to exchange its Exchangeable Senior Notes in connection with such a corporate event or a tax redemption in certain circumstances.

Other than as described below, the Exchangeable Senior Notes may not be redeemed by the Company.

**Issuer Redemptions:**

**Optional Redemption for Changes in the Tax Laws of a Relevant Taxing Jurisdiction:** Horizon Investment may redeem the Exchangeable Senior Notes at its option, prior to March 15, 2022, in whole but not in part, in connection with certain tax-related events.

**Provisional Redemption on or After March 15, 2019:** On or after March 15, 2019, Horizon Investment may redeem for cash all or a portion of the Exchangeable Senior Notes if the last reported sale price of ordinary shares of the Company has been at least 130% of the exchange price then in effect for at least twenty trading days whether or not consecutive) during any thirty consecutive trading day period ending on, and including, the trading day immediately preceding the date on which Horizon Investment provide written notice of redemption. The redemption price will be equal to 100% of the principal amount of the Exchangeable Senior Notes to be redeemed, plus accrued and unpaid interest to, but not including, the redemption date; provided that if the redemption date occurs after a regular record date and on or prior to the corresponding interest payment date, Horizon Investment will pay the full amount of accrued and unpaid interest due on such interest payment date to the record holder of the Exchangeable Senior Notes on the regular record date corresponding to such interest payment date, and the redemption price payable to the holder who presents an Exchangeable Senior Note for redemption will be equal to 100% of the principal amount of such Exchangeable Senior Note.

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**Holder Exchange Rights:**

Holders may exchange all or any portion of their Exchangeable Senior Notes at their option at any time prior to the close of business on the business day immediately preceding December 15, 2021 only upon satisfaction of one or more of the following conditions:

1. **Exchange upon Satisfaction of Sale Price Condition** – During any calendar quarter commencing after the calendar quarter ended June 30, 2015 (and only during such calendar quarter), if the last reported sale price of ordinary shares of the Company for at least twenty trading days (whether or not consecutive) during the period of thirty consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable exchange price on each applicable trading day.

2. **Exchange upon Satisfaction of Trading Price Condition** – During the five business day period after any ten consecutive trading day period in which the trading price per $1,000 principal amount of Exchangeable Senior Notes for each trading day of such period was less than 98% of the product of the last reported sale price of ordinary shares of the Company and the applicable exchange rate on such trading day.

3. **Exchange upon Notice of Redemption** – Prior to the close of business on the business day immediately preceding December 15, 2021, if Horizon Investment provides a notice of redemption, at any time prior to the close of business on the second scheduled trading day immediately preceding the redemption date.

As of December 31, 2017, none of the above conditions had been satisfied and no exchange of Exchangeable Senior Notes had been triggered.

On or after December 15, 2021, a holder may exchange all or any portion of its Exchangeable Senior Notes at any time prior to the close of business on the second scheduled trading day immediately preceding the maturity date regardless of the foregoing conditions.

Upon exchange, Horizon Investment will settle exchanges of the Exchangeable Senior Notes by paying or causing to be delivered, as the case may be, cash, ordinary shares or a combination of cash and ordinary shares, at its election.

The Company recorded the Exchangeable Senior Notes under the guidance in ASC Topic 470-20, *Debt with Conversion and Other Options*, and separated them into a liability component and equity component. The carrying amount of the liability component of $268.9 million was determined by measuring the fair value of a similar liability that does not have an associated equity component. The carrying amount of the equity component of $119.1 million represented by the embedded conversion option was determined by deducting the fair value of the liability component of $268.9 million from the initial proceeds of $387.2 million ascribed to the convertible debt instrument as a whole. The initial debt discount of $131.1 million is being charged to interest expense over the life of the Exchangeable Senior Notes using the effective interest rate method.

As of December 31, 2017, the interest rate on the Exchangeable Senior Notes was 2.50% and the effective interest rate was 8.88%.

As of December 31, 2017, the fair value of the Exchangeable Senior Notes was approximately $372.0 million, categorized as a Level 2 instrument, as defined in Note 15.

**NOTE 17 – OTHER LONG-TERM LIABILITIES**

Included in other long-term liabilities at December 31, 2017 and 2016, is $26.4 million and $25.5 million, respectively, representing the fair value of the long-term portion of the contingent liability for royalties potentially payable under agreements related to PROCYSBI and QUINSAIR.

See Note 10 for details of amounts included in other long-term liabilities at December 31, 2017 and 2016, related to a loss on inventory purchase commitments.
NOTE 18 – COMMITMENTS AND CONTINGENCIES

Lease Obligations

The Company has the following office space lease agreements in place for real properties:

<table>
<thead>
<tr>
<th>Location</th>
<th>Approximate Square Footage</th>
<th>Lease Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin, Ireland</td>
<td>18,900</td>
<td>November 3, 2029</td>
</tr>
<tr>
<td>Lake Forest, Illinois (1)</td>
<td>160,000</td>
<td>March 31, 2024</td>
</tr>
<tr>
<td>Novato, California (2)</td>
<td>61,000</td>
<td>August 31, 2021</td>
</tr>
<tr>
<td>Deerfield, Illinois (3)</td>
<td>32,300</td>
<td>June 30, 2018</td>
</tr>
<tr>
<td>Brisbane, California</td>
<td>20,100</td>
<td>November 30, 2019</td>
</tr>
<tr>
<td>Mannheim, Germany</td>
<td>14,300</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>Chicago, Illinois</td>
<td>6,500</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>Other</td>
<td>13,300</td>
<td>March 31, 2018 to May 31, 2020</td>
</tr>
</tbody>
</table>

(1) In connection with the Lake Forest lease, the Company has provided a $2.0 million letter of credit to the landlord, through a commercial bank.

(2) During March 2017, the Company vacated an area of the office space in Novato, California. During March and April 2017, the Company entered into sublease arrangements for this space with third parties.

(3) During January 2016, the Company vacated the premises in Deerfield, Illinois and began occupying the premises in Lake Forest, Illinois. During April 2017, the Company entered into a sublease arrangement for a portion of this space with a third party. During June 2017, the Company terminated a portion of the lease, resulting in 32,300 square feet remaining.

The Company recognizes rent expense on a monthly basis over the lease term based on a straight-line method. Rent expense was $6.4 million, $5.1 million and $2.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

As of December 31, 2017, minimum future cash payments due under lease obligations were as follows (in thousands):

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>7,356</td>
</tr>
<tr>
<td>2019</td>
<td>6,659</td>
</tr>
<tr>
<td>2020</td>
<td>5,951</td>
</tr>
<tr>
<td>2021</td>
<td>5,350</td>
</tr>
<tr>
<td>2022</td>
<td>4,092</td>
</tr>
<tr>
<td>Thereafter</td>
<td>11,994</td>
</tr>
<tr>
<td>Total</td>
<td>41,402</td>
</tr>
</tbody>
</table>

Purchase Commitments

In November 2010, Raptor and Patheon entered into a manufacturing services agreement, which the Company assumed as a result of its acquisition of Raptor. Under the agreement, which was amended in April 2012 and June 2013, Patheon is obligated to manufacture PROCYSBI for the Company through December 31, 2019. The Company must provide Patheon with rolling, non-binding forecasts of PROCYSBI, with a portion of the forecast being a firm written order. In November 2010, Raptor and Cambrex Profarmaco Milano (“Cambrex”) entered into an active pharmaceutical ingredient (“API”) supply agreement, which the Company assumed as a result of its acquisition of Raptor. Under the agreement, which was amended in April 2013 and August 2016, Cambrex is obligated to manufacture PROCYSBI API for the Company through November 30, 2020. The Company must provide Cambrex with rolling, non-binding forecasts, with a portion of the forecast being the minimum floor of the firm order that must be placed. At December 31, 2017, the Company had a binding purchase commitment with Patheon for PROCYSBI of $1.8 million, which is to be delivered through April 2018 and with Cambrex for PROCYSBI API of $2.4 million, which is to be delivered through December 2020.

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In July 2013, Vidara Therapeutics International Public Limited Company (“Vidara”) and Boehringer Ingelheim entered into an exclusive supply agreement, which the Company assumed in September 2014 and amended effective as of September 5, 2014, and June 1, 2015. That supply agreement was replaced with an exclusive global supply agreement between the Company and Boehringer Ingelheim Biopharmaceuticals GmbH (“Boehringer Ingelheim Biopharmaceuticals”) effective June 30, 2017. Under the agreement, Boehringer Ingelheim Biopharmaceuticals is required to manufacture and supply ACTIMMUNE and IMUKIN to the Company. The Company is required to purchase minimum quantities of finished medicine during the term of the agreement, which term extends to at least June 30, 2024. During the year ended December 31, 2016, the Company committed to purchase additional amounts of ACTIMMUNE from Boehringer Ingelheim. These additional amounts were intended to cover anticipated demand if the results of the FA program of ACTIMMUNE for the treatment of FA had been successful. As of December 31, 2017, the minimum binding purchase commitment to Boehringer Ingelheim Biopharmaceuticals was $24.3 million (converted using a Dollar-to-Euro exchange rate of 1.2003) through July 2024. Following the discontinuation of the FA program, the Company recorded a loss of $14.3 million in “cost of goods sold” in the consolidated statement of comprehensive loss during the year ended December 31, 2016 for firm, non-cancellable and unconditional purchase commitments for quantities in excess of the Company’s current forecasts for future demand. During the year ended December 31, 2017, the Company renegotiated the purchase commitments with Boehringer Ingelheim and reassessed its excess commitments based on updated forecasts for future demand and recorded an additional net expense of $1.7 million to “cost of goods sold”. During the year ended December 31, 2016, the Company also committed to incur an additional $14.9 million for the harmonization of the drug substance manufacturing process with Boehringer Ingelheim. These additional costs were incurred and will be incurred during the years 2017 through 2021. During the year ended December 31, 2017, the Company recorded $12.1 million, in its consolidated statement of comprehensive loss related to the harmonization of the drug substance manufacturing process.

In March 2007, Savient Pharmaceuticals, Inc. (as predecessor in interest to Crealta), entered into a commercial supply agreement with Bio-Technology General (Israel) Ltd (“BTG Israel”) for the production of the bulk KRYSTEXXA medicine (“bulk product”). The Company assumed this agreement as part of the Crealta acquisition and amended the agreement in September 2016. Under this agreement, the Company has agreed to purchase certain minimum annual order quantities and is obligated to purchase at least eighty percent of its annual world-wide bulk product requirements from BTG Israel. The term of the agreement runs until December 31, 2026. Additionally, other binding commitments relating to the manufacture of KRYSTEXXA of $2.8 million were in place at December 31, 2017. In October 2014, in connection with the acquisition of the U.S. rights to PENNSAID 2% from Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.) (“Nuvo”), the Company and Nuvo entered into an exclusive supply agreement. Under the supply agreement, which was amended in February 2016, January 2017 and February 2018, Nuvo is obligated to manufacture and supply PENNSAID 2% to the Company. The term of the supply agreement is through December 31, 2029, but the agreement may be terminated earlier by either party for any uncured material breach by the other party of its obligations under the supply agreement or upon the bankruptcy or similar proceeding of the other party. At least ninety days prior to the first day of each calendar month during the term of the supply agreement, the Company submits a binding written purchase order to Nuvo for PENNSAID 2% in minimum batch quantities.

In August 2007, the Company entered into a manufacturing and supply agreement with Jagotec AG ("Jagotec"), which was amended in March 2011 and in January 2017. Under the agreement, Jagotec or its affiliates are required to manufacture and supply RAYOS/LODOTRA exclusively to the Company in bulk. The earliest the agreement can expire is December 31, 2023, and the minimum purchase commitment is in force until December 2023. At December 31, 2017, the minimum purchase commitment based on tablet pricing in effect under the agreement was $6.7 million through December 2023. Additionally, purchase orders relating to the manufacture of RAYOS/LODOTRA of $0.5 million were outstanding at December 31, 2017.

In July 2013, Vidara Therapeutics International Public Limited Company (“Vidara”) and Boehringer Ingelheim entered into an exclusive supply agreement, which the Company assumed in September 2014 and amended effective as of September 5, 2014, and June 1, 2015. That supply agreement was replaced with an exclusive global supply agreement between the company and Boehringer Ingelheim Biopharmaceuticals GmbH (“Boehringer Ingelheim Biopharmaceuticals”) effective June 30, 2017. Under the agreement, Boehringer Ingelheim Biopharmaceuticals is required to manufacture and supply ACTIMMUNE and IMUKIN to the Company. The Company is required to purchase minimum quantities of finished medicine during the term of the agreement, which term extends to at least June 30, 2024. During the year ended December 31, 2016, the Company committed to purchase additional amounts of ACTIMMUNE from Boehringer Ingelheim. These additional amounts were intended to cover anticipated demand if the results of the FA program of ACTIMMUNE for the treatment of FA had been successful. As of December 31, 2017, the minimum binding purchase commitment to Boehringer Ingelheim Biopharmaceuticals was $24.3 million (converted using a Dollar-to-Euro exchange rate of 1.2003) through July 2024. Following the discontinuation of the FA program, the Company recorded a loss of $14.3 million in “cost of goods sold” in the consolidated statement of comprehensive loss during the year ended December 31, 2016 for firm, non-cancellable and unconditional purchase commitments for quantities in excess of the Company’s current forecasts for future demand. During the year ended December 31, 2017, the Company renegotiated the purchase commitments with Boehringer Ingelheim and reassessed its excess commitments based on updated forecasts for future demand and recorded an additional net expense of $1.7 million to “cost of goods sold”. During the year ended December 31, 2016, the Company also committed to incur an additional $14.9 million for the harmonization of the drug substance manufacturing process with Boehringer Ingelheim. These additional costs were incurred and will be incurred during the years 2017 through 2021. During the year ended December 31, 2017, the Company recorded $12.1 million, in its consolidated statement of comprehensive loss related to the harmonization of the drug substance manufacturing process.

In March 2007, Savient Pharmaceuticals, Inc. (as predecessor in interest to Crealta), entered into a commercial supply agreement with Bio-Technology General (Israel) Ltd (“BTG Israel”) for the production of the bulk KRYSTEXXA medicine (“bulk product”). The Company assumed this agreement as part of the Crealta acquisition and amended the agreement in September 2016. Under this agreement, the Company has agreed to purchase certain minimum annual order quantities and is obligated to purchase at least eighty percent of its annual world-wide bulk product requirements from BTG Israel. The term of the agreement runs until December 31, 2026. Additionally, other binding commitments relating to the manufacture of KRYSTEXXA of $2.8 million were in place at December 31, 2017. In October 2014, in connection with the acquisition of the U.S. rights to PENNSAID 2% from Nuvo Pharmaceuticals Inc. (formerly known as Nuvo Research Inc.) (“Nuvo”), the Company and Nuvo entered into an exclusive supply agreement. Under the supply agreement, which was amended in February 2016, January 2017 and February 2018, Nuvo is obligated to manufacture and supply PENNSAID 2% to the Company. The term of the supply agreement is through December 31, 2029, but the agreement may be terminated earlier by either party for any uncured material breach by the other party of its obligations under the supply agreement or upon the bankruptcy or similar proceeding of the other party. At least ninety days prior to the first day of each calendar month during the term of the supply agreement, the Company submits a binding written purchase order to Nuvo for PENNSAID 2% in minimum batch quantities. At December 31, 2017, the Company had a binding purchase commitment with Nuvo for PENNSAID 2% of $2.7 million, which was delivered through February 2018.

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In May 2011, the Company entered into a manufacturing and supply agreement with Sanofi-Aventis U.S. LLC (“Sanofi-Aventis U.S.”), and amended the agreement effective as of September 25, 2013. Pursuant to the agreement, as amended, Sanofi-Aventis U.S. is obligated to manufacture and supply DUEXIS to the Company in final, packaged form, and the Company is obligated to purchase DUEXIS exclusively from Sanofi-Aventis U.S. for the commercial requirements of DUEXIS in North America, South America and certain countries and territories in Europe, including the European Union (“EU”) member states and Scandinavia. The agreement term extends until May 2019, and automatically renews for successive two-year terms unless terminated by either party upon two years’ prior written notice. At December 31, 2017, the Company had a binding purchase commitment to Sanofi-Aventis U.S. for DUEXIS of $7.1 million, which is to be delivered through June 2018.

Excluding the above, additional purchase orders and other commitments relating to the manufacture of RAVICTI, BUPHENYL, QUINSAIR, VIMOVO and MIGERGOT of $12.4 million were outstanding at December 31, 2017. Additionally, at December 31, 2017, the Company had a binding purchase commitment related to process validation activities for teprotumumab of $2.8 million.

Royalty and Milestone Agreements

RAVICTI

Under the terms of an asset purchase agreement with Ucyclyd Pharma, Inc. (“Ucyclyd”), the Company is obligated to pay to Ucyclyd tiered mid to high single-digit royalties on its global net sales of RAVICTI. Under the terms of a license agreement with Saul W. Brusilow, M.D. and Brusilow Enterprises, Inc. (“Brusilow”), the Company is obligated to pay low single-digit royalties to Brusilow on net sales of RAVICTI that are covered by a valid claim of a licensed patent.

PROCYSBI

Under the terms of an amended and restated license agreement with UCSD, the Company is obligated to pay to UCSD tiered low to mid-single-digit royalties on its net sales of PROCYSBI, including a minimum annual royalty in an amount less than $0.1 million. The Company must also pay UCSD a percentage in the mid-teens of any fees it receives from its sublicensees under the agreement that are not earned royalties. The Company may also be obligated to pay UCSD aggregate developmental milestone payments of $0.3 million and aggregate regulatory milestone payments of $1.8 million for each orphan indication, and aggregate developmental milestone payments of $0.8 million and aggregate regulatory milestone payments of $3.5 million for each non-orphan indication.

ACTIMMUNE

Under a license agreement, as amended, with Genentech Inc. (“Genentech”), who was the original developer of ACTIMMUNE, the Company is, or was, obligated to pay royalties to Genentech on its net sales of ACTIMMUNE as follows:

• For the period from November 26, 2014 through May 5, 2018, a royalty in the 20% to 30% range for the first $3.7 million in net sales achieved in any calendar year and in the 1% to 9% range for all additional net sales in any year; and
• From May 6, 2018 and for so long as the Company continues to commercially sell ACTIMMUNE, an annual royalty in the low single digits as a percentage of annual net sales.

Under the terms of an assignment and option agreement with Connetics Corporation (which was the predecessor parent company to InterMune Pharmaceuticals Inc. and is now part of GlaxoSmithKline), (“Connetics”), the Company is obligated to pay low single-digit royalties to Connetics on the Company’s net sales of ACTIMMUNE in the United States.

BUPHENYL

Under the terms of an amended and restated collaboration agreement with Ucyclyd, the Company is obligated to pay to Ucyclyd tiered mid to high single-digit royalties on its net sales in the United States of BUPHENYL to urea cycle disorder patients outside of the U.S. Food and Drug Administration (“FDA”) approved labeled age range for RAVICTI.
Under the terms of a license agreement with Duke and MVP, the Company is obligated to pay Duke a mid-single-digit royalty on its global net sales of KRYSTEXXA and a royalty of between 5% and 15% on any global sublicense revenue. The Company is also obligated to pay MVP a mid-single-digit royalty on its net sales of KRYSTEXXA outside of the United States and a royalty of between 5% and 15% on any sublicense revenue outside of the United States.

RAYOS/LODOTRA

Jagotec is entitled to receive a mid-single digit percentage royalty on adjusted gross sales of RAYOS/LODOTRA and on any sub-licensing income, which includes any payments not calculated based on the adjusted gross sales of RAYOS/LODOTRA, such as license fees, lump sums and milestone payments.

VIMOVO

The Company is required to pay Aralez Pharmaceuticals Inc. (“Aralez”) a ten percent royalty on net sales of VIMOVO and other medicines sold by the Company, its affiliates or sublicensees during the royalty term that contain gastroprotective agents in a single fixed combination oral solid dosage form with nonsteroidal anti-inflammatory drugs, subject to minimum annual royalty obligations of $7.5 million. These minimum royalty obligations will continue for each year during which one of Aralez’s patents covers such medicines in the United States and there are no competing medicines in the United States. The royalty rate may be reduced to a mid-single digit royalty rate as a result of loss of market share to competing medicines. The Company’s obligation to pay royalties to Aralez will expire upon the later of (a) expiration of the last-to-expire of certain patents covering such medicines in the United States, and (b) ten years after the first commercial sale of such medicines in the United States.

The royalty obligations described above are included in accrued royalties on the Company’s consolidated balance sheets.

For all of the royalty agreements entered into by the Company, a total expense of $82.3 million was recorded during the year ended December 31, 2017, of which $81.6 million was recorded in “cost of goods sold” and $0.7 million was recorded in “selling, general and administrative” expenses in the consolidated statements of comprehensive loss. During the year ended December 31, 2016 and 2015, a total expense of $46.5 million and $45.5 million, respectively, was recorded in cost of goods sold in the consolidated statements of comprehensive loss.

Other Agreements

On November 8, 2016, the Company entered into a collaboration and option agreement with a privately held life-science entity. Under the terms of the agreement, the privately held life-science entity will conduct certain research and pre-clinical and clinical development activities. Upon execution of the agreement, the Company paid $0.1 million for the option to acquire certain of the privately held life-science entity’s assets for $25.0 million, which is exercisable on specified key dates. Under the collaboration and option agreement, the Company is required to pay up to $9.8 million upon the attainment of various milestones, primarily to fund clinical development costs for the medicine candidate. The Company paid an aggregate of $2.6 million in relation to these milestones during the years ended December 31, 2017 and 2016.

On May 8, 2017, the Company acquired River Vision for upfront cash payments totaling approximately $150.3 million, including cash acquired of $6.3 million, and potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Under the agreement, the Company is required to pay up to $325.0 million upon the attainment of various milestones related to FDA approval and net sales thresholds. The agreement also includes a royalty payment of three percent of the portion of annual worldwide net sales exceeding $300.0 million (if any). Under a separate agreement, the Company is also required to pay up to CHF103.0 million ($105.7 million when converted using a CHF-to-Dollar exchange rate at December 31, 2017 of 1.0263) upon the attainment of various milestones related to approval, filing and net sales thresholds. During the year ended December 31, 2017, CHF2.0 million ($2.0 million when converted using a CHF-to-Dollar exchange rate at the date of payment of 1.0169) was paid in relation to these milestones. The agreement also includes a royalty payment of between nine percent and twelve percent of the portion of annual worldwide net sales.
On December 12, 2017, the Company entered into an agreement to license HZN-003 (formerly MEDI4945), a rheumatology pipeline program with the objective of enhancing the Company’s leadership position in the uncontrolled gout market, from MedImmune. Under the terms of the agreement, the Company paid MedImmune an upfront cash payment of $12.0 million. Under the license agreement, the Company is required to pay up to $153.5 million upon the attainment of various milestones linked to the initiation of clinical trials and the attainment of net sales thresholds, and royalties on net sales.

Contingencies

The Company is subject to claims and assessments from time to time in the ordinary course of business. The Company’s management does not believe that any such matters, individually or in the aggregate, will have a material adverse effect on the Company’s business, financial condition, results of operations or cash flows. In addition, the Company from time to time has billing disputes with vendors in which amounts invoiced are not in accordance with the terms of their contracts.

In November 2015, the Company received a subpoena from the U.S. Attorney’s Office for the Southern District of New York requesting documents and information related to its patient access programs and other aspects of its marketing and commercialization activities. The Company is unable to predict how long this investigation will continue or its outcome, but it anticipates that it will continue to incur significant costs in connection with the investigation, regardless of the outcome. The Company may also become subject to similar investigations by other governmental agencies. The investigation by the U.S. Attorney’s Office and any additional investigations of the Company’s patient access programs and sales and marketing activities may result in damages, fines, penalties or other administrative sanctions against the Company.

Indemnification

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company’s exposure under these agreements is unknown because it involves claims that may be made against the Company in the future, but have not yet been made. In connection with the federal securities class action litigation (described in Note 19 below), the Company has received notice from the Underwriter Defendants (as defined below) of their intention to seek indemnification and has received and paid several invoices from the Underwriter Defendants. On November 14, 2016, all defendants moved to dismiss the plaintiffs’ amended complaint. Plaintiffs filed their opposition to the motion to dismiss on December 21, 2016. On January 18, 2018, the District Court dismissed all Plaintiffs’ claims against all Defendants, and denied the Plaintiffs any further opportunity to amend their complaint. On February 16, 2018, plaintiffs filed a notice of appeal to the District Court’s ruling. The Company may record charges in the future as a result of these indemnification obligations.

In accordance with its memorandum and articles of association, the Company has indemnification obligations to its officers and directors for certain events or occurrences, subject to certain limits, while they are serving at the Company’s request in such capacity. Additionally, the Company has entered into, and intends to continue to enter into, separate indemnification agreements with its directors and executive officers. These agreements, among other things, require the Company to indemnify its directors and executive officers for certain expenses, including attorneys’ fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of the Company’s directors or executive officers, or any of the Company’s subsidiaries or any other company or enterprise to which the person provides services at the Company’s request. In connection with the federal securities class action litigation (described in Note 19 below), the Company has paid legal fees and costs on behalf of itself and the current and former officers and directors of the Company who are named as defendants in that litigation. The Company also has a director and officer insurance policy that enables it to recover a portion of any amounts paid for current and future potential claims. All of the Company’s officers and directors have also entered into separate indemnification agreements with HPI.

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NOTE 19 - LEGAL PROCEEDINGS

RAVICTI

On March 17, 2014, Hyperion received notice from Par Pharmaceutical, Inc. ("Par Pharmaceutical") that it had filed an ANDA with the FDA seeking approval for a generic version of the Company’s medicine RAVICTI. The ANDA contained a Paragraph IV Patent Certification alleging that two of the patents covering RAVICTI, U.S. Patent No. 8,404,215, titled “Methods of therapeutic monitoring of nitrogen scavenging drugs,” which expires in March 2032 (the “‘215 patent”), and U.S. Patent No. 8,642,012, titled “Methods of treatment using ammonia scavenging drugs,” which expires in September 2030 (the “‘012 patent”), are invalid and/or will not be infringed by Par Pharmaceutical's manufacture, use or sale of the medicine for which the ANDA was submitted. Par Pharmaceutical did not challenge the validity, enforceability, or infringement of the Company’s primary composition of matter patent for RAVICTI, U.S. Patent No. 5,968,979 titled “Triglycerides and ethyl esters of phenylalkanoic acid and phenylalkanoic acid useful in treatment of various disorders,” which would have expired on February 7, 2015, but as to which Hyperion was granted an interim term of extension until February 7, 2016 and to which the U.S. PTO has granted a final term extension of 1,267 days, which extends the expiration date to July 28, 2018. Hyperion filed suit in the United States District Court for the Eastern District of Texas, Marshall Division, against Par Pharmaceutical on April 23, 2014 seeking an injunction to prevent the approval of Par Pharmaceutical’s ANDA and/or to prevent Par Pharmaceutical from selling a generic version of RAVICTI, and the Company has taken over and is responsible for this patent litigation. On September 15, 2015, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,095,559 (the “‘559 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. On March 14, 2016, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,254,278 (the “‘278 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. On June 3, 2016, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,326,966 (the “‘966 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. The Company filed suit in the United States District Court for the District of New Jersey against Par Pharmaceutical on June 30, 2016 (the “Par New Jersey action”), seeking an injunction to prevent the approval of Par Pharmaceutical’s ANDA and/or to prevent Par Pharmaceutical from selling a generic version of RAVICTI. The lawsuit alleges that Par Pharmaceutical has infringed the ‘559 patent, the ‘278 patent and the ‘966 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. The Par New Jersey action has been stayed pending the resolution of the PTAB’s IPR of the ‘559 patent.

On April 29, 2015, Par Pharmaceutical filed Petitions for IPR of U.S. Patent 8,404,215 and U.S. Patent 8,642,012, two of the patents involved in the above mentioned RAVICTI cases. On November 4, 2015, the PTAB issued decisions instituting such IPRs. On September 29, 2016, the PTAB found all of the claims in U.S. Patent 8,404,215 to be unpatentable. The Company did not appeal the PTAB’s final written decision with respect to U.S. Patent 8,404,215. On November 3, 2016, the PTAB issued a final written decision holding all of the claims of U.S. Patent 8,642,012 patentable. On December 29, 2016, Par Pharmaceutical filed a notice of appeal with the Federal Circuit to appeal the final written decision of the PTAB concerning the patentability of U.S. Patent 8,642,012. On September 4, 2015, the Company received notice from Lupin of Lupin’s Paragraph IV Patent Certification against the ‘215 patent and the ‘012 patent, advising that Lupin had filed an ANDA with the FDA for a generic version of RAVICTI. On November 6, 2015, the Company also received Notice of Lupin’s Paragraph IV Patent Certification against the ‘559 patent. Lupin has not advised the Company as to the timing or status of the FDA’s review of its filing. On October 19, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin seeking an injunction to prevent the approval of the ANDA. The lawsuit alleges that Lupin has infringed the ‘215 patent, the ‘012 patent and the ‘559 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. On April 6, 2016, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Lupin alleging that Lupin has infringed the ‘559 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to expiration of the ‘559 patent. The commencement of the patent infringement lawsuit stays, or bars, FDA approval of Lupin’s ANDA for 30 months or until an earlier district court decision that the subject patents are not infringed or are invalid. On April 18, 2016, the Company received notice from Lupin of Lupin’s Paragraph IV Patent Certification against the ‘278 patent. On July 6, 2016, the Company received notice from Lupin of Lupin’s Paragraph IV Patent Certification against the ‘966 patent. The Company filed suit in the United States District Court for the District of New Jersey against Lupin on July 21, 2016, seeking an injunction to prevent the approval of Lupin’s ANDA and/or to prevent Lupin from selling a generic version of RAVICTI. The lawsuit alleges that Lupin has infringed the ‘278 patent and the ‘966 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. The Lupin New Jersey actions have been stayed pending the resolution of the PTAB’s IPR of the ‘559 patent.
On April 1, 2016, Lupin filed a Petition for IPR of U.S. Patent 9,095,559, a patent currently at issue in the Lupin RAVICTI case. On September 30, 2016, the PTAB issued a decision instituting the IPR. On September 26, 2017, the PTAB issued its final written decision, ruling that the challenged claims of the ’559 patent are unpatentable. The Company filed a Notice of Appeal on November 22, 2017. On September 28, 2017, the PTAB issued its orders granting Lupin’s petitions to institute an IPR of the ’278 and the ’966 patents. The PTAB must issue a final written decision on the IPRs no later than September 28, 2018.


RAYOS

On July 15, 2013, the Company received a Paragraph IV Patent Certification from Teva Pharmaceuticals Industries Limited (formerly known as Actavis Laboratories FL, Inc., which itself was formerly known as Watson Laboratories, Inc. – Florida) (“Teva”), advising that Teva had filed an Abbreviated New Drug Application (“ANDA”) with the FDA for a generic version of RAYOS, containing up to 5 mg of prednisone. On August 26, 2013, the Company, together with Jagotec, filed suit in the United States District Court for the District of New Jersey against Teva, Actavis Pharma, Inc., Andrx Corp., and Actavis, Inc. seeking an injunction to prevent the approval of the ANDA.

On October 1, 2015, the Company’s subsidiary Horizon Pharma Switzerland GmbH, as well as Jagotec, entered into a license and settlement agreement (the “Teva settlement agreement”) with Teva relating to the Company’s and Jagotec’s patent infringement litigation against Teva. Under the Teva settlement agreement, the Company and Jagotec granted Teva a non-exclusive license to manufacture and commercialize Teva’s generic version of RAYOS tablets in the United States after December 23, 2022 (the “Teva generic entry date”); however, Teva may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party RAYOS patent litigation, the entry of other generic versions of RAYOS tablets or certain substantial reductions in RAYOS prescriptions over specified periods of time. The Company and Jagotec also agreed that during the 180 days after the Teva generic entry date, the license granted to Teva would be exclusive with respect to any third-party generic version of RAYOS tablets. The court entered the stipulation of dismissal and closed the case on December 4, 2015.

PENNSAID 2%

On November 13, 2014, the Company received a Paragraph IV Patent Certification from Watson Laboratories, Inc., now known as Actavis Laboratories UT, Inc. (“Actavis UT”), advising that Actavis UT had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On December 23, 2014, the Company filed suit in the United States District Court for the District of New Jersey against Actavis Laboratories UT, Inc., and Actavis plc (collectively “Actavis”) seeking an injunction to prevent the approval of the ANDA. The lawsuit alleged that Actavis has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, and 8,871,809 by filing an ANDA seeking approval from the FDA to market a generic version of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the FDA’s Orange Book (“Orange Book”).


On August 18, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patents 9,339,551, 9,339,552, 9,370,501 and 9,375,412. All four patents of such patents are listed in the Orange Book and have claims that cover PENNSAID 2%. This litigation is currently stayed by agreement of the parties.

The Company received from Actavis a Paragraph IV Patent Certification Notice Letter dated September 27, 2016, against Orange Book listed U.S. Patent No. 9,415,029, advising that Actavis had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

On December 2, 2014, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents. 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,741,956 from Paddock Laboratories, LLC (“Paddock”) advising that Paddock had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On January 9, 2015, the Company received from Paddock another Paragraph IV Patent Certification against newly Orange Book listed U.S. Patent No. 8,871,809. On January 13, 2015 and January 14, 2015, the Company filed suits in the United States District Court for the District of New Jersey and the United States District Court for the District of Delaware, respectively, against Paddock seeking an injunction to prevent the approval of the ANDA.

On May 6, 2015, the Company entered into a settlement and license agreement (the “Perrigo settlement agreement”) with Perrigo Company plc and its subsidiary Paddock (collectively, “Perrigo”). The Perrigo settlement agreement provides for a full settlement and release by both the Company and Perrigo of all claims that were or could have been asserted in the litigation and that arise out of the issues that were the subject of the litigation or Perrigo’s generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on May 13, 2015.

Under the Perrigo settlement agreement, the Company granted Perrigo a non-exclusive license to manufacture and commercialize Perrigo’s generic version of PENNSAID 2% in the United States after January 10, 2029; however, Perrigo may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company’s PENNSAID 2% shipments over specified periods of time.

In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Perrigo PENNSAID 2% as its authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Perrigo.

On February 2, 2015, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 from Taro Pharmaceuticals USA, Inc. and Taro Pharmaceutical Industries, Ltd. (collectively, “Taro”) advising that Taro had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On March 13, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Taro seeking an injunction to prevent the approval of the ANDA.

On September 9, 2015, certain subsidiaries of the Company (the “Horizon Subsidiaries”) entered into a settlement and license agreement with Taro (the “Taro settlement agreement”) relating to the Horizon Subsidiaries’ patent infringement litigation against Taro. The Taro settlement agreement provides for a full settlement and release by the Horizon Subsidiaries and Taro of all claims that were or could have been asserted in the litigation and that arise out of the issues that were subject of the litigation or Taro’s generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on November 3, 2015.

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Under the Taro settlement agreement, the Horizon Subsidiaries granted Taro a non-exclusive license to manufacture and commercialize Taro’s generic version of PENNSAID 2% in the United States after January 10, 2029; however, Taro may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company’s PENNSAID 2% shipments over specified periods of time.

On March 18, 2015, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 from Lupin Limited advising that Lupin Limited had filed an ANDA with the FDA for generic version of PENNSAID 2%. On April 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin Limited and Lupin Pharmaceuticals Inc. (collectively, “Lupin”), seeking an injunction to prevent the approval of the ANDA. The lawsuit alleges that Lupin has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.


On March 24, 2015 against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 advising that Teligent had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On May 21, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent seeking an injunction to prevent the approval of the ANDA. The lawsuit alleged that Teligent has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.

The Company entered into a settlement and license agreement with Teligent (the “Teligent settlement agreement”), effective May 9, 2016, relating to the patent infringement litigation against Teligent. The Teligent settlement agreement provides for a full settlement and release by both the Company and Teligent of all claims that were or could have been asserted in the litigation and that arise out of the issues that were subject of the litigation or Teligent’s generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on May 2, 2016.
Under the Teligent settlement agreement, the Company granted Teligent a non-exclusive license to manufacture and commercialize Teligent’s generic version of PENNSAID 2% in the United States after January 10, 2029; however, Teligent may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company’s PENNSAID 2% shipments over specified periods of time. In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Teligent PENNSAID 2% as an authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Teligent.

The Company received from Amneal Pharmaceuticals LLC (“Amneal”) a Paragraph IV Patent Certification dated April 2, 2015 against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 advising that Amneal had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On May 15, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal seeking an injunction to prevent the approval of the ANDA. The lawsuit alleged that Amneal has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.

On June 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,066,913. On August 11, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,101,591. On September 17, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591 and 9,132,110, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On October 27, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,220,784. All three patents, U.S. Patents 9,168,304, 9,168,305, and 9,220,784, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On April 18, 2016, the Company entered into a settlement and license agreement (the “Amneal settlement agreement”) with Amneal relating to the Company’s patent infringement litigation against Amneal. The Amneal settlement agreement provides for a full settlement and release by both the Company and Amneal of all claims that were or could have been asserted in the litigation and that arise out of the issues that were the subject of the litigation or Amneal’s generic version of PENNSAID 2%.

Under the Amneal settlement agreement, the Company granted Amneal a non-exclusive license to manufacture and commercialize Amneal’s generic version of PENNSAID 2% in the United States after January 10, 2029; however, Amneal may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation or the entry of other third-party generic versions of PENNSAID 2% and to take steps necessary to develop inventory of, and prepare to commercialize, Amneal’s generic version of PENNSAID 2% during certain limited periods prior to the license effective date.

In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Amneal with PENNSAID 2% as a non-exclusive, authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Amneal.

The Company received from Apotex Inc. (“Apotex”) a Paragraph IV Patent Certification Notice Letter dated April 1, 2016, against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, 8,871,809, 9,066,913, 9,101,591, 9,132,110, 9,168,304, 9,168,305 and 9,220,784 advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex a second Paragraph IV Patent Certification Notice Letter dated June 30, 2016, against Orange Book listed U.S. Patents 9,339,551 and 9,339,552, advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex a third Paragraph IV Patent Certification Notice Letter dated September 21, 2016, against Orange Book listed U.S. Patent 9,415,029, advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex additional Paragraph IV Patent Certification Notice Letters dated April 20, 2017 and April 27, 2017 against Orange Book listed U.S. Patent 9,539,335 and 9,370,501.

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Currently, patent litigation is pending in the United States District Court for the District of New Jersey and the Court of Appeals for the Federal Circuit against three generic companies intending to market VIMOVO prior to the expiration of certain of the Company’s patents listed in the Orange Book. These cases are in the United States District Court for the District of New Jersey. They are collectively known as the VIMOVO cases, and involve the following sets of defendants: (i) Dr. Reddy’s Laboratories Inc. and Dr. Reddy’s Laboratories Ltd. (collectively, “Dr. Reddy’s”); (ii) Lupin; and (iii) Mylan Pharmaceuticals Inc., Mylan Laboratories Limited, and Mylan Inc. (collectively, “Mylan”). Patent litigation in the United States District Court for the District of New Jersey against a fourth generic company, Actavis Laboratories FL., Inc. and Actavis Pharma, Inc. (collectively, “Actavis Pharma”), was dismissed on November 23, 2017 after the court granted Actavis’ motion to compel enforcement of a settlement agreement. On March 20, 2017, the Company appealed this dismissal decision to the Court of Appeals for the Federal Circuit. Patent litigation in the United States District Court for the District of New Jersey against a fifth generic company, Anchen Pharmaceuticals Inc. (“Anchen”), was dismissed on June 9, 2014 after Anchen recertified under Paragraph III. The Company understands that Dr. Reddy’s has entered into a settlement with AstraZeneca with respect to patent rights directed to Nexium® (esomeprazole) for the commercialization of VIMOVO. The settlement agreement, however, has no effect on the Aralez VIMOVO patents, which are still the subject of patent litigations. As part of the Company’s acquisition of the U.S. rights to VIMOVO, the Company has taken over and is responsible for the patent litigation that includes the Aralez patents licensed to the Company under the amended and restated collaboration and license agreement for the United States with Aralez.

The VIMOVO cases were filed on April 21, 2011, July 25, 2011, October 28, 2011, January 4, 2013, May 10, 2013, June 28, 2013, October 23, 2013, May 13, 2015 and November 24, 2015 and collectively include allegations of infringement of U.S. Patent Nos. 6,926,907, 8,557,285, 8,852,636, and 8,858,996 (the ’996 patent”). On June 18, 2015, the Company amended the complaints to add a charge of infringement of U.S. Patent No. 8,865,190 (the ’190 patent”). On January 7, 2016, Actavis Pharma asserted a counterclaim for declaratory judgment of invalidity and non-infringement of U.S. Patent No. 8,945,621 (the ‘621 patent”). On January 25, 2016, the Company filed a new case against Actavis Pharma including allegations of infringement of U.S. Patent Nos. 9,161,920 and 9,198,888. This case was subsequently consolidated with the Actavis Pharma case involving the ’996 patent, the ’190 patent and U.S. Patent No. 8,852,636. On February 10, 2016, the Company amended the complaints against Dr. Reddy’s, Lupin, and Mylan to add charges of infringement of U.S. Patent Nos. 9,161,920 and 9,198,888. On February 19, 2016, Mylan asserted a counterclaim for declaratory judgment of invalidity and non-infringement of U.S. Patent No. 9,220,698. On August 11, 2016, the Company filed new complaints asserting the ’621 patent and U.S. Patent Nos. 9,220,698, and 9,345,695 against the defendants. On December 6, 2016, the Company asserted U.S. Patent No. 9,393,208 (the “’208 patent”) against Lupin, Mylan, and Actavis in amended complaints, and against Dr. Reddy’s in a new complaint.

“Case I” consists of the cases asserting U.S. Patent Nos. 8,557,285 and 6,926,907. “Case II” consists of the cases asserting the ’996 patent, the ’190 patent and U.S. Patent Nos. 8,852,636, 9,161,920, and 9,198,888. “Case III” consists of the cases asserting U.S. Patent Nos. 8,945,621, 9,220,698, 9,345,695, and the ’208 patent against Lupin and Mylan, and the case asserting U.S. Patent Nos. 8,945,621, 9,220,698, 9,345,695, and the ’208 patent against Dr. Reddy’s.

On December 19, 2016, defendant Actavis filed a motion to compel enforcement of settlement agreement related to Cases I, II, and III. On December 22, 2016, Magistrate Judge Arpert entered a report and recommendation that Actavis’ motion to compel the enforcement of settlement be granted. On December 30, 2016, the Honorable Judge Mary Cooper ordered the adoption of the report and recommendation. On January 10, 2017, an order of dismissal was entered for all claims in Cases I, II and III. The Company appealed the district court’s order enforcing the settlement with Actavis to the Court of Appeals for the Federal Circuit. Briefing before the Federal Circuit has been completed.

The Case I cases were consolidated for discovery. The court issued a claim construction order for Case I and conducted trial beginning on January 12, 2017. On May 12, 2016, the court granted Dr. Reddy’s motion for summary judgment of non-infringement of U.S. Patent No. 6,926,907 with respect to one of Dr. Reddy’s two ANDAs. On January 12, 2017, a six-day bench trial commenced against defendants Dr. Reddy’s and Mylan before Honorable Mary Judge Mary Cooper in the District of New Jersey for Case I. The patents at issue in this trial included two Orange Book listed patents: U.S. Patent Nos. 6,926,907 and 8,557,285. Defendant Lupin formerly entered into a stay pending the entry of judgment in Case I. On June 26, 2017, the court issued its opinion upholding the validity of the ’285 and ’907 patents and finding that Dr. Reddy’s, Mylan’s, and Lupin’s proposed generic naproxen/esomeprazole magnesium products would all infringe at least one of the two patents. The court entered the final judgment on July 21, 2017. Dr. Reddy’s, Mylan and Lupin appealed the District Court’s judgment to the Court of Appeals for the Federal Circuit, and the Company appealed the District Court’s entry of judgment of non-infringement on the ’907 in favor of Dr. Reddy’s.
The Case II and Case III cases have been consolidated for discovery. On January 19, 2017, the court entered a scheduling order for Case II and Case III, which was subsequently updated. The court's scheduling order requires, inter alia, filing and serving of the opening claim construction submissions by May 26, 2017. The court has not issued a claim construction order in Case II. A trial date for Cases II and III has not yet been set. On December 20, 2016, Mylan filed a motion to dismiss the Company's first amended complaint for patent infringement in Case III. On August 18, 2017, the District Court granted Dr. Reddy's and Mylan's motions to dismiss the Company's claims relating to the '621 patent.

On June 5, 2015, the Coalition for Affordable Drugs VII LLC (“Coalition for Affordable Drugs”) filed a Petition for inter partes review (“IPR”) of the '996 patent, one of the patents in litigation in the above referenced VIMOVO cases. On December 17, 2015, the United States Patent and Trademark Office (the “U.S. PTO”) denied such Petition for IPR.

On August 7, 2015, the Coalition for Affordable Drugs filed another Petition for IPR of U.S. Patent No. 8,852,636, one of the patents in litigation in the above referenced VIMOVO cases. On February 11, 2016, the U.S. PTO denied such Petition for IPR.

On August 12, 2015, the Coalition for Affordable Drugs filed another Petition for IPR of the '621 patent, one of the patents in litigation in the above referenced VIMOVO cases. On February 22, 2016, the Patent Trial and Appeal Board (the “PTAB”) issued a decision to institute the IPR. The PTAB hearing for the '621 patent was held on November 16, 2016. The PTAB issued a final written decision finding the '621 patent valid on February 21, 2017.

On August 19, 2015, Lupin filed Petitions for IPR of the '996 patent, the '190 patent and U.S. Patent No. 8,852,636, all patents in litigation in the above referenced VIMOVO cases. On March 1, 2016, the PTAB issued decisions to institute the IPRs for the '996 patent” and the '190 patent. On March 1, 2016, the PTAB denied the Petition for IPR for U.S. Patent No. 8,852,636. The PTAB hearings for the '996 patent and '190 patent were both held on November 29, 2016. On February 28, 2017, the PTAB issued final written decisions on the IPRs of the '996 and '190 patents, upholding the validity of both patents.

On August 24, 2017, Mylan filed a Petition for IPR of the '698 patent. The Company filed its Preliminary Patent Owner Response on December 12, 2017. The parties are awaiting the PTAB's decision on whether to institute an IPR proceeding.


Other

Beginning on March 8, 2016, two federal securities class action lawsuits (captioned Schaffer v. Horizon Pharma plc, et al., Case No. 16-cv-01763-JMF and Banie v. Horizon Pharma plc, et al., Case No. 16-cv-01789-JMF) were filed in the United States District Court for the Southern District of New York against the Company and certain of the Company’s current and former officers (the “Officer Defendants”). On March 24, 2016, the court consolidated the two actions under Schaffer v. Horizon Pharma plc, et al. On June 3, 2016, the court appointed Locals 302 and 612 of the International Union of Operating Engineers-Employers Construction Industry Retirement Trust and the Carpenters Pension Trust Fund for Northern California as lead plaintiffs and Labaton Sucharow LLP as lead counsel. On July 25, 2016, lead plaintiffs and additional named plaintiff Automotive Industries Pension Trust Fund filed their consolidated complaint, which they subsequently amended on October 7, 2016, including additional current and former officers, the Company’s Board of Directors (the “Director Defendants”), and underwriters involved with the Company’s April 2015 public offering (the “Underwriter Defendants”) as defendants. The plaintiffs allege that certain of the Company and the Officer Defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, by making false and/or misleading statements about, among other things: (a) the Company’s financial performance, (b) the Company’s business prospects and drug-pricing practices, (c) the Company’s sales and promotional practices, and (d) the Company's design, implementation, performance, and risks associated with the Company’s Prescriptions-Made-Easy program. The plaintiffs allege that certain of the Company, the Director Defendants and the Underwriter Defendants violated sections 11, 12(a)(2) and 15 of the Securities Act of 1933, as amended (the “Securities Act”), in connection with the Company’s April 2015 public offering. The plaintiffs seek, among other things, an award of damages allegedly sustained by plaintiffs and the putative class, including a reasonable allowance for costs and attorneys’ fees. On November 14, 2016, all defendants moved to dismiss the plaintiffs’ amended complaint. Plaintiffs filed their opposition to the motion to dismiss on December 21, 2016. On January 18, 2018, the District Court dismissed all plaintiffs’ claims against all defendants, and denied the plaintiffs any further opportunity to amend their complaint. On February 16, 2018, plaintiffs filed a notice of appeal to the District Court’s ruling.
NOTE 20 – SHAREHOLDERS' EQUITY

During the year ended December 31, 2017, the Company issued an aggregate of 2.0 million of ordinary shares in connection with stock option exercises, the vesting of restricted stock units, employee share purchase plan purchases and the vesting of performance stock units. The Company received a total of $9.2 million in net proceeds in connection with such issuances.

During the year ended December 31, 2017, the Company issued an aggregate of 391,500 ordinary shares upon the cash exercise of warrants and the Company received proceeds of $1.8 million representing the aggregate exercise price for such warrants. In addition, warrants to purchase an aggregate of 704,285 ordinary shares of the Company were exercised in cashless exercises, resulting in the issuance of 523,520 ordinary shares. As of December 31, 2017, there were no outstanding warrants to purchase ordinary shares of the Company.

During the year ended December 31, 2017, the Company made payments of $6.5 million for employee withholding taxes relating to share-based awards.

On January 1, 2017, the Company adopted ASU No. 2016-09. As a result of the adoption, $7.2 million of excess tax benefits that had not previously been recognized, as the related tax deduction had not reduced current taxes payable, were recorded on a modified retrospective basis through a cumulative effect adjustment to its accumulated deficit as of January 1, 2017.

In May 2016, the Company’s board of directors authorized a share repurchase program pursuant to which the Company may repurchase up to 5,000,000 of its ordinary shares. In May 2017, the Company’s board of directors reauthorized a share repurchase program pursuant to which the Company may repurchase up to 16,000,000 of its ordinary shares. As of December 31, 2017, the Company had repurchased 100,000 of its ordinary shares under this repurchase program, for total consideration of $1.0 million. The timing and amount of future repurchases, if any, will depend on a variety of factors, including the price of the Company’s ordinary shares, alternative investment opportunities, the Company’s cash resources, restrictions under the Credit Agreement and market conditions.

NOTE 21 – EQUITY INCENTIVE PLANS

Employee Stock Purchase Plan

2014 Employee Stock Purchase Plan. On May 17, 2014, HPI’s board of directors adopted the 2014 Employee Stock Purchase Plan (the “2014 ESPP”). On September 18, 2014, at a special meeting of the stockholders of HPI (the “Special Meeting”), HPI’s stockholders approved the 2014 ESPP. Upon consummation of the Company’s merger transaction with Vidara (the “Vidara Merger”), the Company assumed the 2014 ESPP.

As of December 31, 2017, an aggregate of 3,002,169 ordinary shares were authorized and available for future issuance under the 2014 ESPP.

Share-Based Compensation Plans

2005 Stock Plan. In October 2005, HPI adopted the 2005 Stock Plan (the “2005 Plan”). Upon the signing of the underwriting agreement related to HPI’s initial public offering, on July 28, 2011, no further option grants were made under the 2005 Plan. All stock awards granted under the 2005 Plan prior to July 28, 2011 continue to be governed by the terms of the 2005 Plan. Upon consummation of the Vidara Merger, the Company assumed the 2005 Plan.

2011 Equity Incentive Plan. In July 2010, HPI’s board of directors adopted the 2011 Equity Incentive Plan (the “2011 EIP”). In June 2011, HPI’s stockholders approved the 2011 EIP, and it became effective upon the signing of the underwriting agreement related to HPI’s initial public offering on July 28, 2011. Upon consummation of the Vidara Merger, the Company assumed the 2011 EIP, and upon the effectiveness of the Horizon Pharma Public Limited Company 2014 Equity Incentive Plan (the “2014 EIP”), no additional stock awards were or will be made under the 2011 Plan, although all outstanding stock awards granted under the 2011 Plan continue to be governed by the terms of the 2011 Plan.
2014 Equity Incentive Plan and 2014 Non-Employee Equity Plan. On May 17, 2014, HPI’s board of directors adopted the 2014 EIP and the Horizon Pharma Public Limited Company 2014 Non-Employee Equity Plan (the “2014 Non-Employee Equity Plan”). At the Special Meeting, HPI’s stockholders approved the 2014 EIP and 2014 Non-Employee Equity Plan. Upon consummation of the Vidara Merger, the Company assumed the 2014 EIP and 2014 Non-Employee Equity Plan, which serve as successors to the 2011 EIP.

The 2014 EIP provides for the grant of incentive and nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other stock awards that may be settled in cash, shares or other property to the employees of the Company (or a subsidiary company). During the year ended December 31, 2017, the compensation committee of the Company’s board of directors (the “Committee”) approved an amendment to the 2014 EIP to reserve additional shares to be used exclusively for grants of awards to individuals who were not previously employees or non-employee directors of the Company (or following a bona fide period of non-employment with the Company) (the “2017 Inducement Pool”), as an inducement material to the individual’s entry into employment with the Company within the meaning of Rule 5635(c)(4) of the NASDAQ Listing Rules, (“Rule 5635(c) (4)”). The 2014 EIP was amended by the Committee without shareholder approval pursuant to Rule 5635(c)(4).

The 2014 Non-Employee Equity Plan provides for the grant of nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and other forms of stock awards that may be settled in cash, shares or other property to the non-employee directors and consultants of the Company (or a subsidiary company). The Company’s board of directors has authority to suspend or terminate the 2014 Non-Employee Equity Plan at any time.

As of December 31, 2017, an aggregate of 3,885,178 ordinary shares were authorized and available for future grants under the 2014 EIP, of which 356,636 shares relate to the 2017 Inducement Pool. As of December 31, 2017, 499,913 ordinary shares were authorized and available for future grants under the 2014 Non-Employee Equity Plan.

**Stock Options**

The following table summarizes stock option activity during the year ended December 31, 2017:

<table>
<thead>
<tr>
<th>Options</th>
<th>Weighted Average Exercise Price</th>
<th>Weighted Average Contractual Term Remaining (in years)</th>
<th>Aggregate Intrinsic Value (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding as of December 31, 2016</td>
<td>13,627,519</td>
<td>$18.17</td>
<td>7.60</td>
</tr>
<tr>
<td>Granted</td>
<td>2,077,215</td>
<td>16.40</td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(338,467)</td>
<td>6.27</td>
<td></td>
</tr>
<tr>
<td>Forfeited</td>
<td>(644,752)</td>
<td>18.37</td>
<td></td>
</tr>
<tr>
<td>Expired</td>
<td>(446,199)</td>
<td>22.75</td>
<td></td>
</tr>
<tr>
<td>Outstanding as of December 31, 2017</td>
<td>14,275,316</td>
<td>18.04</td>
<td>6.97</td>
</tr>
<tr>
<td>Vested and Expected to vest as of December 31, 2017</td>
<td>13,789,210</td>
<td>18.02</td>
<td>6.92</td>
</tr>
<tr>
<td>Exercisable as of December 31, 2017</td>
<td>9,365,306</td>
<td>$16.96</td>
<td>6.36</td>
</tr>
</tbody>
</table>

Stock options typically have a contractual term of ten years from grant date.
The following table summarizes the Company’s outstanding stock options at December 31, 2017:

<table>
<thead>
<tr>
<th>Exercise Price Ranges</th>
<th>Options Outstanding</th>
<th>Options Exercisable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of options</td>
<td>Weighted Average</td>
</tr>
<tr>
<td></td>
<td>outstanding</td>
<td>Exercise Price</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>742,582</td>
<td>$2.67</td>
</tr>
<tr>
<td>$2.01 - $4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$4.01 - $8.00</td>
<td>1,209,543</td>
<td>6.29</td>
</tr>
<tr>
<td>$8.01 - $12.00</td>
<td>721,063</td>
<td>9.19</td>
</tr>
<tr>
<td>$12.01 - $17.00</td>
<td>2,552,212</td>
<td>14.12</td>
</tr>
<tr>
<td>$17.01 - $22.00</td>
<td>3,252,701</td>
<td>18.11</td>
</tr>
<tr>
<td>$22.01 - $28.00</td>
<td>3,412,700</td>
<td>22.31</td>
</tr>
<tr>
<td>$28.01 - $36.00</td>
<td>2,384,515</td>
<td>29.47</td>
</tr>
<tr>
<td></td>
<td><strong>14,275,316</strong></td>
<td><strong>18.04</strong></td>
</tr>
<tr>
<td></td>
<td>$2.67</td>
<td></td>
</tr>
<tr>
<td>$2.67</td>
<td>1,199,789</td>
<td>6.28</td>
</tr>
<tr>
<td>$6.28</td>
<td>677,499</td>
<td>9.17</td>
</tr>
<tr>
<td>$9.17</td>
<td>1,810,195</td>
<td>14.05</td>
</tr>
<tr>
<td>$14.05</td>
<td>1,018,088</td>
<td>18.83</td>
</tr>
<tr>
<td>$18.83</td>
<td>2,342,100</td>
<td>22.30</td>
</tr>
<tr>
<td>$22.30</td>
<td>1,575,053</td>
<td>29.39</td>
</tr>
<tr>
<td>$29.39</td>
<td><strong>9,365,306</strong></td>
<td><strong>16.96</strong></td>
</tr>
</tbody>
</table>

During the years ended December 31, 2017, 2016 and 2015, the Company granted stock options to purchase an aggregate of 2,077,215, 2,057,247 and 8,010,638 ordinary shares, respectively, with a weighted average grant date fair value of $7.96, $11.58 and $16.07, respectively.

The total intrinsic value of the options exercised during the years ended December 31, 2017, 2016 and 2015 was $2.6 million, $6.9 million and $15.6 million, respectively. The total fair value of stock options vested during the years ended December 31, 2017, 2016 and 2015 was $41.3 million, $55.6 million and $11.4 million, respectively.

The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of each stock option is affected by the Company’s share price on the date of grant, as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the Company’s expected share price volatility over the expected life of the awards and actual and projected stock option exercise behavior. The weighted average fair value per share of stock option awards granted during the years ended December 31, 2017, 2016 and 2015, and assumptions used to value stock options, are as follows:

<table>
<thead>
<tr>
<th>Dividend yield</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-free interest rate</td>
<td>1.8%-2.2%</td>
<td>1.3%-2.2%</td>
<td>1.3% - 2.2%</td>
</tr>
<tr>
<td>Weighted average volatility</td>
<td>49.1%</td>
<td>73.2%</td>
<td>77.1%</td>
</tr>
<tr>
<td>Expected life (in years)</td>
<td>5.99</td>
<td>6.02</td>
<td>6.07</td>
</tr>
<tr>
<td>Weighted average grant date fair value per share of options granted</td>
<td>$7.96</td>
<td>$11.58</td>
<td>$16.07</td>
</tr>
</tbody>
</table>

**Dividend yields**

The Company has never paid dividends and does not anticipate paying any dividends in the near future. Additionally, the Credit Agreement (described in Note 16 above), as well as the indentures governing the 2024 Senior Notes and the 2023 Senior Notes (each as described in Note 16 above), contain covenants that restrict the Company from issuing dividends.

**Risk-Free Interest Rate**

The Company determined the risk-free interest rate by using a weighted average assumption equivalent to the expected term based on the U.S. Treasury constant maturity rate as of the date of grant.

**Volatility**

The Company used an average historical share price volatility of comparable companies to be representative of future share price volatility, as the Company did not have sufficient trading history for its ordinary shares.
**Expected Term**

Given the Company’s limited historical exercise behavior, the expected term of options granted was determined using the “simplified” method since the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. Under this approach, the expected term is presumed to be the average of the vesting term and the contractual life of the option.

**Forfeitures**

As share-based compensation expense recognized in the consolidated statements of comprehensive loss is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures based on actual forfeiture experience, analysis of employee turnover and other factors. The Company adopted ASU No. 2016-09 on January 1, 2017 and has elected to retain a forfeiture rate after adoption.

**Restricted Stock Units**

The following table summarizes restricted stock unit activity for the year ended December 31, 2017:

<table>
<thead>
<tr>
<th>Number of Units</th>
<th>Weighted Average Grant-Date Fair Value Per Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding as of December 31, 2016</td>
<td>3,367,871</td>
</tr>
<tr>
<td>Granted</td>
<td>3,732,035</td>
</tr>
<tr>
<td>Vested</td>
<td>(1,222,920)</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(593,136)</td>
</tr>
<tr>
<td>Outstanding as of December 31, 2017</td>
<td>5,283,850</td>
</tr>
</tbody>
</table>

The grant-date fair value of restricted stock units is the closing price of the Company’s shares on the date of grant.

During the years ended December 31, 2017, 2016 and 2015, the Company granted 3,732,035, 1,384,104 and 2,361,948 restricted stock units to acquire shares of the Company’s ordinary shares to its employees and non-executive directors, respectively, with a weighted average grant date fair value of $12.44, $17.07 and $23.36, respectively. The restricted stock units vest annually, with a vesting period ranging from two to four years. The Company accounts for the restricted stock units as equity-settled awards in accordance with ASC 718. The total fair value of restricted stock units vested during the years ended December 31, 2017, 2016 and 2015 was $18.0 million, $16.2 million and $9.0 million, respectively.

**Performance Stock Unit Awards**

The following table summarizes performance stock unit awards (“PSUs”) activity for the year ended December 31, 2017:

<table>
<thead>
<tr>
<th>Number of Units</th>
<th>Weighted Average Grant-Date Fair Value Per Unit</th>
<th>Average Illiquidity Discount</th>
<th>Recorded Weighted Average Fair Value Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding as of December 31, 2016</td>
<td>12,045,656</td>
<td>12.36</td>
<td>0.0%</td>
</tr>
<tr>
<td>Vested and issued</td>
<td>(25,000)</td>
<td>$ 12.36</td>
<td>0.0%</td>
</tr>
<tr>
<td>Expired (1)</td>
<td>(3,927,440)</td>
<td>14.82</td>
<td>14.9%</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(238,336)</td>
<td>10.86</td>
<td>7.5%</td>
</tr>
<tr>
<td>Outstanding as of December 31, 2017</td>
<td>7,854,880</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) During the year ended December 31, 2017, the first of three tranches of the Company’s outstanding PSUs expired due to failure to meet the Company’s minimum total compounded annual shareholder rate of return (“TSR”) requirement.
In March 2015, the Committee approved the grant of 10,604,000 PSUs to certain members of the Company’s executive committee, senior leadership team and other key employees. Of these PSUs, 7,998,000 were granted subject to shareholder approval of certain amendments of the 2014 EIP, which occurred on May 6, 2015. In May 2015, the Committee granted 1,264,000 PSUs to new and promoted key employees. In the third and fourth quarters of 2015, the Committee granted 1,120,000 PSUs to a new member of the Company’s executive committee and key employees and 388,000 PSUs to non-executive committee members, respectively. In January 2016, the Committee approved the grant of 260,000 PSUs to certain members of the Company’s senior leadership team.

All PSUs outstanding as of December 31, 2017 were granted in 2015 and 2016 and may vest if the Company’s TSR over two performance measurement periods summarized below equals or exceeds a minimum of 15%.

<table>
<thead>
<tr>
<th>Vesting Tranche</th>
<th>Percent of Total PSU Award</th>
<th>Beginning of Performance Measurement Period</th>
<th>End of Performance Measurement Period</th>
<th>Length of Performance Measurement Period (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tranche Two</td>
<td>33.3%</td>
<td>March 23, 2015</td>
<td>March 22, 2018</td>
<td>3.00</td>
</tr>
<tr>
<td>Tranche Three</td>
<td>33.3%</td>
<td>March 23, 2015</td>
<td>June 22, 2018</td>
<td>3.25</td>
</tr>
</tbody>
</table>

These outstanding PSUs may vest in amounts ranging from 25% to 100% based on the achievement of the following TSR over the two performance periods:

<table>
<thead>
<tr>
<th>TSR Achieved</th>
<th>Vesting Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>25%</td>
</tr>
<tr>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>45%</td>
<td>75%</td>
</tr>
<tr>
<td>60%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The TSR is based on the volume weighted average trading price ("VWAP") of the Company’s ordinary shares over the twenty trading days ending on the last day of each of the two performance measurement periods versus the VWAP of the Company’s ordinary shares over the twenty trading days ended March 23, 2015 of $21.50. The PSUs are subject to a post-vesting holding period of one year for 50% of the PSUs and two years for 50% of the PSUs for those who were members of the executive committee at the date of grant, and one year for 50% of the PSUs for all who were not executive committee members at the date of grant.

The Company accounts for the PSUs as equity-settled awards in accordance with ASC 718. Because the value of the PSUs is dependent upon the attainment of a level of TSR, it requires the impact of the market condition to be considered when estimating the fair value of the PSUs. As a result, the Monte Carlo model is applied and the most significant valuation assumptions used include:

<table>
<thead>
<tr>
<th>For the Years Ended December 31,</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valuation date stock price</td>
<td>N/A</td>
<td>$17.72 - $21.07</td>
<td>$16.81 - $35.06</td>
</tr>
<tr>
<td>Expected volatility</td>
<td>N/A</td>
<td>76.8% - 77.6%</td>
<td>64.6% - 72.3%</td>
</tr>
<tr>
<td>Risk-free rate</td>
<td>N/A</td>
<td>1.0% - 1.2%</td>
<td>1.0% - 1.1%</td>
</tr>
</tbody>
</table>

The average estimated fair value of each outstanding PSU is as follows (allocated between groupings based on grant-date classification):

<table>
<thead>
<tr>
<th>Number of Units</th>
<th>Weighted Average Fair Value Per Unit</th>
<th>Average Illiquidity Discount</th>
<th>Recorded Weighted Average Fair Value Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive committee members</td>
<td>6,014,437</td>
<td>$15.16</td>
<td>17.1%</td>
</tr>
<tr>
<td>Non-executive committee members</td>
<td>1,840,443</td>
<td>13.71</td>
<td>7.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,854,880</strong></td>
<td><strong>$14.82</strong></td>
<td><strong>14.9%</strong></td>
</tr>
</tbody>
</table>
During the years ended December 31, 2017, 2016 and 2015, the Company recorded an expense of $49.6 million, $48.6 million and $37.7 million, respectively, related to its PSUs.

**Cash Long-Term Incentive Program**

On November 5, 2014, the Committee approved a performance cash long-term incentive program for the members of the Company’s executive committee and executive leadership team, including its executive officers (the “Cash Bonus Program”). Participants in the Cash Bonus Program were eligible for a specified cash bonus. The Cash Bonus Program pool funding of approximately $15.8 million was determined based on the Company’s actual TSR over the period from November 5, 2014 to May 6, 2015, and the bonus could be earned and payable only if the TSR for the period from November 5, 2014 to November 4, 2017 was greater than 15%. The portion of the total bonus pool payable to individual participants was based on allocations established by the Committee. Participants must have remained employed by the Company through November 4, 2017 unless a participant’s earlier departure from employment was due to death, disability, termination without cause or a change in control transaction. During the year ended December 31, 2017, the TSR did not exceed the minimum target requirement of 15% and the Cash Bonus Program expired without payment.

The Company accounted for the Cash Bonus Program under the liability method in accordance with ASC 718. Because vesting of the bonus pool was dependent upon the attainment of a VWAP of $18.37 or higher over the twenty trading days ended November 4, 2017, the Cash Bonus Program was considered to be subject to a “market condition” for the purposes of ASC 718. ASC 718 required the impact of the market condition to be considered when estimating the fair value of the bonus pool. As a result, the Monte Carlo simulation model was applied and the fair value was revalued at each reporting period. As of December 31, 2016, the estimated fair value was $4.8 million. During November 2017, the Cash Bonus Program expired without payout as the VWAP was not achieved. No amounts were accrued as of December 31, 2017 for the Cash Bonus Program. For the year ended December 31, 2017, the Company recorded a reduction in the expense of $3.5 million to the consolidated statement of comprehensive loss as a result of the valuation of the Cash Bonus Program. The most significant assumptions used when assessing the valuation of the Cash Bonus Program were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valuation date stock price</td>
<td>$16.18</td>
<td>$21.67</td>
</tr>
<tr>
<td>Expected volatility</td>
<td>74.7%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Risk-free rate</td>
<td>0.78%</td>
<td>1.00%</td>
</tr>
</tbody>
</table>

**Share-Based Compensation Expense**

The following table summarizes share-based compensation expense included in the Company’s consolidated statements of comprehensive (loss) income for the years ended December 31, 2017, 2016 and 2015 (in thousands):

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of goods sold</td>
<td>$2,469</td>
<td>$  26</td>
<td>—</td>
</tr>
<tr>
<td>Research and development</td>
<td>9,263</td>
<td>9,413</td>
<td>6,590</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>109,821</td>
<td>104,705</td>
<td>79,196</td>
</tr>
<tr>
<td>Total share-based compensation expense</td>
<td>$121,553</td>
<td>$114,144</td>
<td>$85,786</td>
</tr>
</tbody>
</table>

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During the year ended December 31, 2016, and prior to the adoption of ASU No. 2016-09, no material income tax benefit was recognized relating to share-based compensation expense and no tax benefits were realized from exercised stock options and vested restricted stock units, due to the Company’s net loss position. After the adoption of ASU No. 2016-09, during the year ended December 31, 2017, the Company recognized $2.8 million of tax detriment related to share-based compensation resulting from the current share prices in effect at the time of the exercise of stock options and vesting of restricted stock units. In addition, during the year ended December 31, 2017, $16.4 million of deferred tax assets related to previously recognized share-based compensation expense related to PSUs was charged to income tax expense. As of December 31, 2017, the Company estimates that pre-tax unrecognized compensation expense of $124.9 million for all unvested share-based awards, including stock options, restricted stock units and PSUs, will be recognized through the fourth quarter of 2021. The Company expects to satisfy the exercise of stock options and future distribution of shares for restricted stock units and PSUs by issuing new ordinary shares which have been reserved under the 2014 EIP.

NOTE 22 – INCOME TAXES

The Company’s (loss) income before benefit for income taxes by jurisdiction for the years ended December 31, 2017, 2016 and 2015 is as follows (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>For the Years Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Ireland</td>
<td>$(16,956)</td>
</tr>
<tr>
<td>United States</td>
<td>$(271,102)</td>
</tr>
<tr>
<td>Other foreign</td>
<td>$(225,217)</td>
</tr>
<tr>
<td><strong>Loss before benefit for income taxes</strong></td>
<td><strong>$(513,275)</strong>*</td>
</tr>
</tbody>
</table>

The components of the benefit for income taxes were as follows for the years ended December 31, 2017, 2016 and 2015 (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>For the Years Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Current provision</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>$2,922</td>
</tr>
<tr>
<td>U.S. - Federal and State</td>
<td>12,085</td>
</tr>
<tr>
<td>Other foreign</td>
<td>831</td>
</tr>
<tr>
<td><strong>Total current provision</strong></td>
<td><strong>15,838</strong>*</td>
</tr>
<tr>
<td>Deferred (benefit) provision</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>$(6,294)</td>
</tr>
<tr>
<td>U.S. - Federal and State</td>
<td>$(120,111)</td>
</tr>
<tr>
<td>Other foreign</td>
<td>7,818</td>
</tr>
<tr>
<td><strong>Total deferred benefit</strong></td>
<td><strong>(118,587)</strong>*</td>
</tr>
<tr>
<td><strong>Total benefit for income taxes</strong></td>
<td><strong>$(102,749)</strong>*</td>
</tr>
</tbody>
</table>

Total benefit for income taxes was $102.7 million, $61.3 million and $172.2 million for the years ended December 31, 2017, 2016 and 2015, respectively. The current tax provision of $15.8 million for the year ended December 31, 2017 was primarily attributable to U.S. state income tax liabilities and U.S. federal alternative minimum tax liability. The deferred tax benefit of $118.6 million recognized during the year ended December 31, 2017, was primarily due to a provisional $74.9 million net benefit recorded following the enactment of the Tax Act, which net benefit included a $134.2 million tax benefit from the revaluation of the Company’s U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of a $59.2 million deferred tax asset related to the Company’s U.S. interest expense carryforwards and the U.S. deferred tax benefit incurred on U.S. pre-tax losses.
A reconciliation between the Irish income tax statutory rate to the Company’s effective tax rate for 2017, 2016 and 2015 is as follows (in thousands):

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irish income tax at statutory rate (12.5%)</td>
<td>$(64,159)</td>
<td>$(28,510)</td>
<td>$(16,586)</td>
</tr>
<tr>
<td>Foreign tax rate differential</td>
<td>(9,806)</td>
<td>(1,893)</td>
<td>(30,348)</td>
</tr>
<tr>
<td>Impact of the Tax Act on deferred taxes</td>
<td>(134,182)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Write-off of U.S. deferred tax asset related to interest expense carryforwards due to the Tax Act</td>
<td>59,243</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Notional interest deduction</td>
<td>(27,020)</td>
<td>(35,075)</td>
<td>(22,848)</td>
</tr>
<tr>
<td>Non-deductible in-process research and development costs</td>
<td>51,148</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Share-based compensation</td>
<td>26,811</td>
<td>7,125</td>
<td>3,776</td>
</tr>
<tr>
<td>Transaction costs</td>
<td>341</td>
<td>3,447</td>
<td>3,109</td>
</tr>
<tr>
<td>Disallowed interest</td>
<td>2,990</td>
<td>2,620</td>
<td>2,139</td>
</tr>
<tr>
<td>Disqualified compensation expense</td>
<td>1,305</td>
<td>2,555</td>
<td>3,949</td>
</tr>
<tr>
<td>Uncertain tax positions</td>
<td>4,976</td>
<td>2,837</td>
<td>3,012</td>
</tr>
<tr>
<td>Tax charges on intragroup profit</td>
<td>(8,888)</td>
<td>2,154</td>
<td>(9,955)</td>
</tr>
<tr>
<td>U.S. state income taxes</td>
<td>214</td>
<td>8,579</td>
<td>1,002</td>
</tr>
<tr>
<td>Change in U.S. state effective tax rate</td>
<td>(2,329)</td>
<td>(17,246)</td>
<td>(9,061)</td>
</tr>
<tr>
<td>Change in valuation allowances</td>
<td>(1,378)</td>
<td>(6,117)</td>
<td>(106,834)</td>
</tr>
<tr>
<td>U.S. federal and state tax credits</td>
<td>(3,608)</td>
<td>(3,613)</td>
<td>—</td>
</tr>
<tr>
<td>Interest expense on convertible debt inducements</td>
<td>—</td>
<td>—</td>
<td>(1,218)</td>
</tr>
<tr>
<td>Book loss on debt extinguishment</td>
<td>—</td>
<td>—</td>
<td>6,396</td>
</tr>
<tr>
<td>Other, net</td>
<td>1,593</td>
<td>1,886</td>
<td>1,223</td>
</tr>
<tr>
<td><strong>Benefit for income taxes</strong></td>
<td><strong>(102,749)</strong></td>
<td><strong>(61,251)</strong></td>
<td><strong>(172,244)</strong></td>
</tr>
<tr>
<td><strong>Effective income tax rate</strong></td>
<td><strong>20.0%</strong></td>
<td><strong>26.9%</strong></td>
<td><strong>129.8%</strong></td>
</tr>
</tbody>
</table>

The overall effective income tax rate for 2017 of 20.0% was a higher benefit rate than the Irish statutory rate of 12.5% primarily due to a provisional $74.9 million net benefit recorded following the enactment of the Tax Act, which net benefit included a $134.2 million tax benefit from the revaluation of the Company’s U.S. net deferred tax liability based on the new U.S. federal tax rate of 21 percent, partially offset by the write-off of a $59.2 million deferred tax asset related to the Company’s U.S. interest expense carryforwards. The higher 2017 benefit rate was also attributable to losses incurred in higher tax rate jurisdictions, the benefit realized on the notional interest deduction of $27.0 million, tax charges on intragroup profits of $8.9 million, U.S. federal and state tax credits of $3.6 million and $2.3 million due to a decrease in the U.S. state effective tax rate. These benefits to income taxes are partially offset by non-deductible IPR&D expenses of $51.1 million recorded in connection with the acquisition of River Vision, non-deductible share-based compensation expenses of $26.8 million, including the write-off of $16.4 million of deferred tax assets related to previously recognized share-based compensation expense related to PSUs that expired unvested in December 2017, and an increase in uncertain tax positions of $5.0 million.

The overall effective income tax rate for 2016 of 26.9% was a higher benefit rate than the Irish statutory rate of 12.5% primarily due to the benefit realized on the notional interest deduction, the benefit realized from a change in U.S. state effective tax rate, and changes in valuation allowances. These benefits to income taxes were partially offset by an increase in share-based compensation not deductible for tax purposes and an increase in U.S. state income taxes.

The overall effective income tax rate for 2015 of 129.8% was a higher benefit rate than the Irish statutory rate of 12.5% primarily due to the release of valuation allowances in the United States following the acquisition of Hyperion in 2015, the benefit realized on the foreign rate differential and the benefit realized on the notional interest deduction.
The decrease in the effective income tax rate in 2017 compared to that in 2016 was primarily due to non-deductible IPR&D expenses of $51.1 million recorded in connection with the acquisition of River Vision, an increase in non-deductible share-based compensation of $19.7 million primarily due to the write-off of $16.4 million of deferred tax assets related to previously recognized share-based compensation expense related to PSUs that expired unvested in December 2017, a $14.9 million decrease in benefit from the change in U.S. state effective tax rate, an $8.1 million decrease in the benefit realized on the notional interest deduction and a $4.7 million decrease in the changes in valuation allowances, partially offset by the provisional $74.9 million net impact of the Tax Act on deferred taxes.

The decrease in the effective income tax rate in 2016 compared to 2015 was primarily due to the one-time benefit recognized in 2015 for the release in valuation allowance.

The Company accounts for income taxes based upon an asset and liability approach. Deferred tax assets and liabilities represent the future tax consequences of the differences between the financial statement carrying amounts of assets and liabilities versus the tax basis of assets and liabilities. Under this method, deferred tax assets are recognized for future deductible temporary differences and operating loss and tax credit carryforwards. Deferred tax liabilities are recognized for future taxable temporary differences and operating loss credit carryforwards. Deferred tax liabilities are recognized for future taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The impact of tax rate changes on deferred tax assets and liabilities is recognized in the period in which the change is enacted.

The tax effects of the temporary differences, tax credits and net operating losses that give rise to significant portions of deferred tax assets and liabilities, before jurisdictional netting, are as follows (in thousands):

<table>
<thead>
<tr>
<th>Deferred tax assets:</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net operating loss carryforwards</td>
<td>$65,650</td>
<td>$99,004</td>
</tr>
<tr>
<td>Capital loss carryforwards</td>
<td>2,796</td>
<td>4,631</td>
</tr>
<tr>
<td>Alternative minimum tax credit</td>
<td>13,972</td>
<td>5,922</td>
</tr>
<tr>
<td>U.S. federal and state credits</td>
<td>35,465</td>
<td>48,758</td>
</tr>
<tr>
<td>Accrued compensation</td>
<td>46,420</td>
<td>65,733</td>
</tr>
<tr>
<td>Accruals and reserves</td>
<td>11,089</td>
<td>20,179</td>
</tr>
<tr>
<td>Contingent royalties</td>
<td>33,436</td>
<td>68,628</td>
</tr>
<tr>
<td>Intercompany interest</td>
<td>—</td>
<td>54,703</td>
</tr>
<tr>
<td>Other</td>
<td>2,259</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total deferred tax assets</strong></td>
<td><strong>211,087</strong></td>
<td><strong>367,558</strong></td>
</tr>
<tr>
<td>Valuation allowance</td>
<td>(25,650)</td>
<td>(32,532)</td>
</tr>
<tr>
<td><strong>Deferred tax assets, net of valuation allowance</strong></td>
<td><strong>$185,437</strong></td>
<td><strong>$335,026</strong></td>
</tr>
</tbody>
</table>

Deferral tax liabilities:

<table>
<thead>
<tr>
<th>Deferred tax liabilities:</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventories</td>
<td>$570</td>
<td>$13,077</td>
</tr>
<tr>
<td>Debt discount</td>
<td>23,372</td>
<td>23,050</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>315,970</td>
<td>593,057</td>
</tr>
<tr>
<td>Other</td>
<td>—</td>
<td>1,499</td>
</tr>
<tr>
<td><strong>Total deferred tax liabilities</strong></td>
<td><strong>339,912</strong></td>
<td><strong>630,683</strong></td>
</tr>
<tr>
<td><strong>Net deferred income tax liability</strong></td>
<td><strong>$154,475</strong></td>
<td><strong>$295,657</strong></td>
</tr>
</tbody>
</table>

The Tax Act was enacted in December 2017. On December 22, 2017, the SEC staff issued SAB 118, which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the date of enactment for companies to complete the accounting under ASC 740, Income Taxes. In accordance with SAB 118, the Company reflected the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 was complete. To the extent that the Company's accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, the Company recorded a provisional estimate in the consolidated financial statements. As of December 31, 2017, the Company has not completed its accounting for the effects of the Tax Act. However, the Company has made reasonable estimates of the effects on its income tax provision with respect to certain items, primarily the revaluation of its existing U.S. deferred tax balances and the write-off of its U.S. deferred tax assets resulting from interest expense carryforwards under Section 163(j) of the Internal Revenue Code. In other cases, the Company has not been able to make reasonable estimates and continues to account for those items based on its existing accounting under the provisions of the tax laws that were in effect prior to enactment. The Company recognized a net income
As of December 31, 2017, the Company had net operating loss carryforwards of approximately $114.4 million for U.S. federal, $307.4 million for various U.S. states and $149.3 million for non-U.S. losses. These net operating losses include net operating losses acquired in the acquisition of River Vision during the second quarter of 2017 and are available to reduce future taxable income, if any, in the jurisdiction in which the net operating losses have been generated. Net operating loss carryforwards for U.S. federal income tax purposes that were generated prior to January 1, 2018, have a twenty-year carryforward life and the earliest layers will begin to expire in 2020. Under the Tax Act, U.S. federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such net operating losses is limited. U.S. state net operating losses started to expire in 2016 for the earliest net operating loss layers. It is uncertain if and to what extent various U.S. states will conform to the Tax Act. Net operating loss carryovers in Switzerland have a seven-year carryforward life and started to expire in 2016 due to lack of sufficient taxable income to fully absorb the available carryover loss. Irish net operating losses may be carried forward indefinitely and therefore have no expiration. Utilization of the U.S. net operating loss carryforwards may be subject to annual limitations as prescribed by federal and state statutory provisions. The imposition of the annual limitations may result in a portion of the net operating loss carryforwards expiring unused.

Utilization of certain net operating loss and tax credit carryforwards in the United States is subject to an annual limitation due to ownership change limitations provided by Sections 382 and 383 of the Internal Revenue Code. The Company is limited under the annual limitation of $7.7 million from the year 2018 until 2028 on certain net operating losses generated before an August 2, 2012 ownership change. We continue to carry forward the annual limitation related to Hyperion of $50.0 million resulting from the last ownership change in 2014 as well as the annual limitation related to Raptor of $0.2 million from the year 2018 until 2028 for the ownership change which occurred in 2009. Further, the net operating losses acquired with River Vision are subject to an annual limitation of $12.5 million from 2018 through 2020. The U.S. federal net operating loss carryforward limitation is cumulative such that any use of the carryforwards below the limitation in a particular tax year will result in a corresponding increase in the limitation for the subsequent tax year.

At December 31, 2017, the Company had $56.6 million and $6.2 million of U.S. federal and state income tax credits, respectively, to reduce future tax liabilities. These tax credits include the tax credits acquired in the acquisition of River Vision. The federal income tax credits consisted primarily of orphan drug credits, research and development credits and alternative minimum tax credits. The U.S. state income tax credits consisted primarily of California research and development credits and the Illinois Economic Development for a Growing Economy (“EDGE”) tax credits. Both the U.S. federal orphan drug credits and research and development credits have a twenty-year carryforward life. The U.S. federal orphan drug credits and the U.S. federal research and development credits will both begin to expire in 2030. The U.S. federal alternative minimum tax credits and California research and development credits have indefinite lives and therefore are not subject to expiration. The EDGE credits have a five-year carryforward life following the year of generation and will begin to expire in 2019.

As the Company’s share price was lower than $31.58 for the twenty trading days ended December 23, 2017, a portion of outstanding PSUs expired unvested and $16.4 million of deferred tax assets related to previously recognized share-based compensation expense related to the expired PSUs was written off to income tax expense. Additionally, in relation to the remaining outstanding PSUs, if our share price is lower than $32.70 and $33.86 for the twenty trading days ending March 22, 2018 and June 22, 2018, respectively, approximately $9.3 million and $8.4 million, respectively, of deferred tax assets at December 31, 2017, related to previously recognized share-based compensation expense related to these PSUs will be charged to income tax expense.
Deferred tax valuation allowances decreased by $6.9 million during the year ended December 31, 2017, increased by $1.2 million during the year ended December 31, 2016, and decreased by $80.2 million during the year ended December 31, 2015. For the year ended December 31, 2017, the decrease in valuation allowances resulted primarily from the Chiesi divestiture and the release of valuation allowances related to expired net operating losses in certain jurisdictions, partially offset by the increase resulting from current year activity.

The Company is required to recognize the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The Company accounts for the uncertainty in income taxes by utilizing a comprehensive model for the recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken, or are expected to be taken, on an income tax return. The changes in the Company's uncertain income tax positions for the years ended December 31, 2017, 2016 and 2015, excluding interest and penalties, consisted of the following (in thousands):

<table>
<thead>
<tr>
<th>For the Years Ended December 31,</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning balance – uncertain tax positions</td>
<td>$ 17,747</td>
<td>$ 9,812</td>
<td>$ 775</td>
</tr>
<tr>
<td>Tax positions in the year:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions</td>
<td>2,451</td>
<td>471</td>
<td>2,604</td>
</tr>
<tr>
<td>Acquired uncertain tax positions</td>
<td>—</td>
<td>5,362</td>
<td>6,433</td>
</tr>
<tr>
<td>Tax positions related to prior years:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions</td>
<td>4,145</td>
<td>2,102</td>
<td>—</td>
</tr>
<tr>
<td>Settlements and lapses</td>
<td>(939)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Ending balance – uncertain tax positions</td>
<td>$ 23,404</td>
<td>$ 17,747</td>
<td>$ 9,812</td>
</tr>
</tbody>
</table>

For the year ended December 31, 2017, the increase in uncertain tax positions primarily resulted from the additional federal orphan drug credits generated during the year and the uncertain tax position resulting from certain state nexus exposures. In the Company’s consolidated balance sheet, uncertain tax positions of $6.4 million were included in other long-term liabilities and an additional $17.0 million was offset against deferred tax assets.

At December 31, 2017, penalties of $0.2 million and interest of $1.3 million are included in the balance of the uncertain tax positions and penalties of $0.1 million and interest of $0.6 million were included in the balance of uncertain tax positions at December 31, 2016. The Company classifies interest and penalties with respect to income tax liabilities as a component of income tax expense. The Company assessed that its liability for uncertain tax positions will not significantly change within the next twelve months. If these uncertain tax positions are released, the impact on the Company’s tax provision would be a benefit of $24.9 million, including interest and penalties.

The Company files income tax returns in Ireland, in the United States for federal and various states, as well as in certain other jurisdictions. At December 31, 2017, all open tax years in U.S. federal and certain state jurisdictions date back to 2006 due to the taxing authorities’ ability to adjust operating loss carryforwards. In Ireland, the statute of limitations...
expires five years from the end of the tax year or four years from the time a tax return is filed, whichever is later. Therefore the earliest year open to examination is 2013 with the lapse of statute occurring in 2018. No changes in settled tax years have occurred to date. On December 29, 2017, the Company received a letter from the U.S. Internal Revenue Service for commencement of a federal income tax examination for the tax year ended December 31, 2015.

As of the filing of this Annual Report on Form 10-K, the Company does not currently anticipate material changes from the originally filed U.S. federal tax return for the 2015 year.

NOTE 23 – EMPLOYEE BENEFIT PLANS

The Company sponsors a defined contribution 401(k) retirement savings plan covering all of its U.S. employees, whereby an eligible employee may elect to contribute a portion of his or her salary on a pre-tax basis, subject to applicable federal limitations. The Company is not required to make any discretionary matching of employee contributions. The Company makes a matching contribution equal to 100% of each employee’s elective contribution to the plan of up to 3% of the employee’s eligible pay, and 50% for the next 2% of the employee’s eligible pay. The full amount of this employer contribution is immediately vested in the plan. For the years ended December 31, 2017, 2016 and 2015, the Company recorded defined contribution expense of $4.9 million, $2.7 million and $2.1 million, respectively.

The Company’s wholly owned Swiss subsidiary sponsors a defined benefit savings plan covering all of its employees in Switzerland. The Company’s wholly owned German subsidiary sponsors a defined contribution plans for its employees in Germany. For the years ended December 31, 2017, 2016 and 2015, the Company recognized immaterial expenses under these plans.

The Company’s wholly owned Irish subsidiary sponsors a defined contribution plan covering all of its employees in Ireland. For the years ended December 31, 2017, 2016 and 2015, the Company recognized expenses of $0.4 million, $0.4 million and $0.2 million, respectively, under this plan.

The Company has a non-qualified deferred compensation plan for executives, which was established in April 2015. The deferred compensation plan obligations are payable in cash upon retirement, termination of employment and/or certain other times in a lump-sum distribution or in installments, as elected by the participant in accordance with the plan. As of December 31, 2017 and 2016, the deferred compensation plan liabilities totaled $6.5 million and $3.1 million, respectively, and are included in “other long-term liabilities” in the consolidated balance sheet. The Company held funds of approximately $6.5 million and $3.1 million in an irrevocable grantor’s rabbi trust as of December 31, 2017 and 2016, respectively, related to this plan. Rabbi trust assets are classified as trading marketable securities and are included in “other current assets” in the consolidated balance sheets. Unrealized gains and losses on these marketable securities are included in “other income” in the consolidated statements of comprehensive (loss) income. For the years ended December 31, 2017, 2016 and 2015, the Company recognized expenses of $0.8 million, $0.6 million and $0.2 million, respectively, under this plan.
NOTE 24 – SELECTED QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The following table provides a summary of selected financial results of operations by quarter for the years ended December 31, 2017 and 2016 (in thousands, except per share data):

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First</td>
<td>Second</td>
<td>Third</td>
<td>Fourth</td>
</tr>
<tr>
<td>Net sales</td>
<td>$220,859</td>
<td>$289,507</td>
<td>$271,646</td>
<td>$274,219</td>
</tr>
<tr>
<td>Gross profit</td>
<td>81,743</td>
<td>159,357</td>
<td>146,129</td>
<td>122,727</td>
</tr>
<tr>
<td>Operating loss</td>
<td>(105,383)</td>
<td>(185,667)</td>
<td>(25,751)</td>
<td>(75,568)</td>
</tr>
<tr>
<td>Net loss</td>
<td>(90,570)</td>
<td>(209,536)</td>
<td>(63,971)</td>
<td>(46,449)</td>
</tr>
<tr>
<td>Net loss per ordinary share - basic</td>
<td>$ (0.56)</td>
<td>$ (1.29)</td>
<td>$ (0.39)</td>
<td>$ (0.28)</td>
</tr>
<tr>
<td>Net loss per ordinary share - diluted</td>
<td>(0.56)</td>
<td>(1.29)</td>
<td>(0.39)</td>
<td>(0.28)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First</td>
<td>Second</td>
<td>Third</td>
<td>Fourth</td>
</tr>
<tr>
<td>Net sales</td>
<td>$204,690</td>
<td>$257,378</td>
<td>$208,702</td>
<td>$310,350</td>
</tr>
<tr>
<td>Gross profit</td>
<td>127,457</td>
<td>176,252</td>
<td>123,541</td>
<td>160,598</td>
</tr>
<tr>
<td>Operating (loss) income</td>
<td>(27,204)</td>
<td>31,467</td>
<td>(21,322)</td>
<td>(130,108)</td>
</tr>
<tr>
<td>Net (loss) income</td>
<td>(45,406)</td>
<td>14,984</td>
<td>(5,870)</td>
<td>(130,542)</td>
</tr>
<tr>
<td>Net (loss) income per ordinary share - basic</td>
<td>$ (0.28)</td>
<td>$ 0.09</td>
<td>$ (0.04)</td>
<td>$ (0.81)</td>
</tr>
<tr>
<td>Net (loss) income per ordinary share - diluted</td>
<td>(0.28)</td>
<td>0.09</td>
<td>(0.04)</td>
<td>(0.81)</td>
</tr>
</tbody>
</table>
## SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

For Each of the Three Fiscal Years Ended December 31, 2017, 2016 and 2015:

<table>
<thead>
<tr>
<th>Valuation and Qualifying Accounts (in thousands)</th>
<th>Balance at beginning of period</th>
<th>Acquisitions/(Divestitures)</th>
<th>Additions charged to costs and expenses</th>
<th>Deductions from reserves</th>
<th>Balance at end of period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year ended December 31, 2017:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowance for discounts and returns</td>
<td>21,916</td>
<td>-</td>
<td>125,851</td>
<td>(100,671)</td>
<td>47,096</td>
</tr>
<tr>
<td>Year ended December 31, 2016:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowance for discounts and returns</td>
<td>14,964</td>
<td>1,234</td>
<td>81,089</td>
<td>(75,371)</td>
<td>21,916</td>
</tr>
<tr>
<td>Year ended December 31, 2015:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowance for discounts and returns</td>
<td>4,483</td>
<td>236</td>
<td>55,702</td>
<td>(45,457)</td>
<td>14,964</td>
</tr>
</tbody>
</table>

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

HORIZON PHARMA PLC

Dated: February 28, 2018

By: /s/ TIMOTHY P. WALBERT
    Timothy P. Walbert
    President, Chief Executive Officer and Chairman of the Board

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy P. Walbert and Paul W. Hoelscher, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>TITLE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ TIMOTHY P. WALBERT</td>
<td>President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Timothy P. Walbert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ PAUL W. HOELSCHER</td>
<td>Executive Vice President and Chief Financial Officer (Principal Financial Officer)</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Paul W. Hoelscher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ MILES W. MCHUGH</td>
<td>Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Miles W. McHugh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ MICHAEL GREY</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Michael Grey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ LIAM DANIEL</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Liam Daniel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ JEFF HIMAWAN</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Jeff Himawan, Ph.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ RONALD PAULI</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Ronald Pauli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ GINO SANTINI</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Gino Santini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ JAMES SHANNON</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>James Shannon M.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ H. THOMAS WATKINS</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>H. Thomas Watkins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ PASCALE WITZ</td>
<td>Director</td>
<td>February 28, 2018</td>
</tr>
<tr>
<td>Pascale Witz</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. **GENERAL.**

(a) **Relationship to Prior Plans.** This Plan is intended as the successor to the Horizon Pharma, Inc. 2011 Equity Incentive Plan (the “2011 Plan”) with respect to grants to Employees. From and after 12:01 a.m. on the Effective Date, all outstanding stock awards granted under the 2011 Plan and the Horizon Pharma, Inc. 2005 Stock Plan (the “2005 Plan”) and, together with the 2011 Plan, the “Prior Plans”) shall remain subject to the terms of the 2011 Plan or the 2005 Plan, as applicable; provided, however, any Ordinary Shares subject to outstanding stock awards granted under the Prior Plans that expire, terminate or are forfeited for any reason prior to exercise or settlement, and any Ordinary Shares that are repurchased or redeemed because of the failure to meet a contingency or condition required to vest such Ordinary Shares (the “Returning Shares”) shall immediately be added to the Share Reserve (as described below) as and when such Ordinary Shares become Returning Shares and shall become available for issuance pursuant to Awards granted hereunder. All Awards granted on or after the Effective Date of this Plan shall be subject to the terms of this Plan.

(b) **Eligible Award Recipients.** The persons eligible to receive Awards are Employees. The persons eligible to receive Inducement Awards are Employees who meet the criteria set forth in Section 3(f).

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

(d) **Purpose.** The Company, by means of the Plan, seeks to secure and retain the services of the group of persons eligible to receive Awards as set forth in Section 1(b), to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and to provide a means by which such eligible recipients may be given an opportunity to benefit from increases in value of the Ordinary Shares through the granting of Awards.
2. **ADMINISTRATION.**

(a) **Administration by Board.** The Board shall administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in Section 2(c). Notwithstanding anything to the contrary set forth herein, only an Inducement Committee has the power to grant Inducement Awards.

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

(i) To determine from time to time (A) which of the persons eligible under the Plan shall be granted Awards; (B) when and how each Award shall be granted; (C) what type or combination of types of Award shall be granted; (D) the provisions of each Award granted (which need not be identical), including the time or times when a person shall be permitted to receive cash or Ordinary Shares pursuant to a Stock Award; (E) the number of Ordinary Shares with respect to which a Stock Award shall be granted to each such person; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Stock Award Agreement or in the written terms of a Performance Cash Award, in a manner and to the extent it shall 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 the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Award stating the time at which it may first be exercised or the time during which it will vest.

(v) To suspend or terminate the Plan at any time. Suspension or termination of the Plan shall not impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant.

(vi) To amend the Plan in any respect the Board deems necessary or advisable. However, except as provided in Section 9(a) relating to Capitalization Adjustments, to the extent required by applicable law or listing requirements, shareholder approval shall be required for any amendment of the Plan that either (A) materially increases the number of Ordinary Shares available for issuance under the Plan, (B) materially expands the class of individuals eligible to receive Awards under the Plan, (C) materially increases the benefits accruing to Participants under the Plan or materially reduces the price at which Ordinary Shares may be issued or purchased under the Plan, (D) materially extends the term of the Plan, or (E) expands the types of Awards available for issuance under the Plan. Except as provided above, rights under any Award granted before amendment of the Plan shall not be impaired by any amendment of the Plan unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.
(vii) To submit any amendment to the Plan for shareholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of (A) Section 162(m) of the Code regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to Covered Employees, (B) Section 422 of the Code regarding incentive stock options or (C) Rule 16b-3.

(viii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; provided however, that except with respect to amendments that disqualify or impair the status of an Incentive Stock Option, a Participant’s rights under any Award shall 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, 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 if necessary to maintain the qualified status of the Award as an Incentive Stock Option or to bring the Award into compliance with Section 409A of the Code.

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

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees who are foreign nationals or employed outside the United States.

c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee shall 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 shall thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. 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.
Section 162(m) and Rule 16b-3 Compliance. The Committee may consist solely of two or more Outside Directors, in accordance with Section 162(m) of the Code, or solely of two or more Non-Employee Directors, in accordance with Rule 16b-3.

Inducement Awards. Notwithstanding any other provision of the Plan to the contrary, all Inducement Awards must be granted by an Inducement Committee.

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

Cancellation and Re-Grant of Stock Awards. Neither the Board nor any Committee shall have the authority to: (i) reduce the exercise price of any outstanding Options or Stock Appreciation Rights under the Plan, or (ii) cancel any outstanding Options or Stock Appreciation Rights that have an exercise price or strike price greater than the current Fair Market Value of the Ordinary Shares in exchange for cash or other Stock Awards under the Plan, unless the stockholders of the Company have approved such an action within twelve (12) months prior to such an event, provided that the exercise price of any such outstanding Options or Stock Appreciation Rights under the Plan may not be reduced below the nominal value of an Ordinary Share.

3. Shares Subject to the Plan.

(a) Share Reserve.

Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate number of Ordinary Shares of the Company that may be issued pursuant to Stock Awards after the Effective Date shall not exceed 44,052,130 shares, which is the sum of (i) 22,052,130 Ordinary Shares, which is the total reserve that was approved as of the Effective Date in connection with the adoption of the Plan, including, but not limited to, the shares remaining available for issuance under the Prior Plans and the Returning Shares, (ii) 14,000,000 additional Ordinary Shares approved by the Company’s shareholders at the 2015 annual general meeting, and (iii) 6,000,000 new Ordinary Shares approved by the Company’s shareholders at the 2016 annual general meeting (the total of (i), (ii) and (iii), the “Share Reserve”) and (iv) 2,000,000 Ordinary Shares that may be issued pursuant to Inducement Awards granted under Section 3(f) of the Plan. For clarity, the limitation in this Section 3(a)(i) is a limitation on the number of Ordinary Shares that may be issued pursuant to the Plan. Accordingly, this Section 3(a)(i) does not limit the granting of Stock Awards except as provided in Section 7(a). Shares may be issued in connection with a merger or acquisition as permitted by, as applicable, NASDAQ Marketplace Rule 4350(j)(1)(A)(iii), NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable stock exchange rules, and such issuance shall not reduce the number of Ordinary Shares available for issuance under the Plan. Furthermore, if a Stock Award or any portion thereof (i) expires or otherwise terminates without all of the Ordinary Shares covered by such Stock Award having been issued or (ii) is settled in cash (i.e., the Participant receives cash rather than Ordinary Shares), such expiration, termination or settlement shall not reduce (or otherwise offset) the number of Ordinary Shares that may be available for issuance under the Plan.
Subject to subsection 3(b) and except with respect to Inducement Awards, the number of Ordinary Shares available for issuance under the Plan shall be reduced by: (i) one (1) Ordinary Share for each Ordinary Share issued pursuant to (A) an Option granted under Section 5, or (B) a Stock Appreciation Right granted under Section 5 with respect to which the strike price is at least one hundred percent (100%) of the Fair Market Value of the underlying Ordinary Shares on the date of grant; and (ii) 1.29 Ordinary Shares for each Ordinary Share issued pursuant to a Restricted Stock Award, Restricted Stock Unit Award, Performance Stock Award, Other Stock Award or any other stock award granted under the Plan that is not described in subsection (i) above.

(b) Reversion of Shares to the Share Reserve.

(i) Shares Available For Subsequent Issuance. If any Stock Award is forfeited back to the Company or Ordinary Shares are redeemed or repurchased by the Company or any Affiliate (in accordance with applicable Irish law) because of the failure to meet a contingency or condition required to vest such Ordinary Shares, then the Ordinary Shares that are forfeited, redeemed or repurchased shall revert to and again become available for issuance under the Plan. Notwithstanding the provisions of this Section 3(b)(i), to the extent (i) there is issued an Ordinary Share pursuant to a Stock Award under the Plan (other than an Option or Stock Appreciation Right), and (ii) there are any Returning Shares granted under the Prior Plans pursuant to an award other than an Option or Stock Appreciation Right, and such Ordinary Share becomes available for issuance under the Plan pursuant to Section 1(a), Section 3(a)(i) or this Section 3(b)(i), then the number of Ordinary Shares available for issuance under the Plan shall increase by 1.29 shares for each such Ordinary Share. Notwithstanding the foregoing, any Inducement Shares that become available for issuance under the Plan pursuant to this subsection 3(b)(i) will only become available for issuance pursuant to Inducement Awards.

(ii) Shares Not Available For Subsequent Issuance. If any Ordinary Shares subject to a Stock Award are not delivered to a Participant because the Stock Award is exercised through a reduction of Ordinary Shares subject to the Stock Award (i.e., “net exercised”), the number of Ordinary Shares that are not delivered to the Participant shall not remain available for issuance under the Plan. Also, any Ordinary Shares withheld by the Company pursuant to Section 8(g) or withheld or tendered as consideration for the exercise of an Option or purchase of any other Stock Award shall not again become available for issuance under the Plan.

(c) Incentive Stock Option Limit. Notwithstanding anything to the contrary in this Section 3 and, subject to the provisions of Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of Ordinary Shares that may be issued pursuant to the exercise of Incentive Stock Options shall be the number of shares subject to the Plan’s Share Reserve.

(d) Section 162(m) Limitation on Annual Grants. Subject to the provisions of Section 9(a) relating to Capitalization Adjustments and except with respect to Inducement Awards, at such time as the Company may be subject to the applicable provisions of Section 162(m) of the Code, a maximum of three million (3,000,000) Ordinary Shares subject to Options, Stock Appreciation Rights and Other Stock Awards whose value is determined by reference to an increase over an exercise or strike price of at least one hundred percent (100%) of the Fair Market Value on the date any such Stock Award is granted may be granted to any...
Participant during any calendar year. Notwithstanding the foregoing, if any additional Options, Stock Appreciation Rights or Other Stock Awards whose value is determined by reference to an increase over an exercise or strike price of at least one hundred percent (100%) of the Fair Market Value on the date the Stock Awards are granted to any Participant during any calendar year, compensation attributable to the exercise of such additional Stock Awards shall not satisfy the requirements to be considered “qualified performance-based compensation” under Section 162(m) of the Code unless such additional Stock Award is approved by the Company’s shareholders.

(e) Source of Shares. The Ordinary Shares issuable under the Plan shall be authorized but unissued or reacquired Ordinary Shares, including Ordinary Shares redeemed or repurchased by the Company or any Affiliate on the open market or otherwise, in accordance with applicable Irish Law.

(f) Inducement Shares. This subsection 3(f) will apply with respect to the 2,000,000 Ordinary Shares reserved under this Plan by action of the Board (or a committee thereof) to be used exclusively for the grant of Inducement Awards in compliance with NASDAQ Listing Rule 5635(c)(4) (the “Inducement Shares”). Notwithstanding anything to the contrary in this Plan, an Inducement Award may be granted only to an Employee who has not previously been an Employee or a non-Employee Director of the Company or an Affiliate, or following a bona fide period of non-employment, as an inducement material to the individual’s entering into employment with the Company within the meaning of Rule 5635(c)(4) of the NASDAQ Listing Rules.

4. ELIGIBILITY.

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

(b) Ten Percent Shareholders. A Ten Percent Shareholder shall not be granted an Incentive Stock Option unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value on the date of grant and the Option is not exercisable after the expiration of five (5) years from the date of grant.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. All Options shall be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a
separate certificate or certificates shall be issued for Ordinary Shares purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, then the Option shall be a Nonstatutory Stock Option. The provisions of separate Options or SARs need not be identical; provided, however, that each Option Agreement or Stock Appreciation Right Agreement shall conform to (through incorporation of provisions hereof by reference in the applicable Award Agreement or otherwise) the substance of each of the following provisions:

(a) **Term.** Subject to the provisions of Section 4(b) regarding Ten Percent Shareholders, no Option or SAR shall be exercisable after the expiration of ten (10) years from the date of its grant or such shorter period specified in the Award Agreement.

(b) **Exercise Price.** Subject to the provisions of Section 4(b) regarding Ten Percent Shareholders, the exercise price (or strike price) of each Option or SAR shall be not less than one hundred percent (100%) of the Fair Market Value of the Ordinary Shares subject to the Option or SAR on the date the Option or SAR is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise price (or strike price) lower than one hundred percent (100%) of the Fair Market Value of the Ordinary Shares subject to the Option or SAR if such Option or SAR 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 Sections 409A and, if applicable, 424(a) of the Code, provided that in all cases the exercise price is not less than the nominal value of an Ordinary Share. Each SAR will be denominated in Ordinary Shares equivalents.

(c) **Purchase Price for Options.** The purchase price of Ordinary Shares acquired pursuant to the exercise of an Option shall 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; provided, however, that where Ordinary Shares are issued pursuant to the exercise of an Option, the nominal value of each newly issued Ordinary Share is fully paid up. The Board shall have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize 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 Ordinary Shares 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) if the option is a Nonstatutory Stock Option, by a “net exercise” arrangement pursuant to which the Company will reduce the number of Ordinary Shares issuable upon exercise by the largest whole number of Ordinary Shares with a Fair Market Value that does not exceed the aggregate exercise price; provided, however, that:
the Company shall 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 Ordinary Shares to be issued;

irrespective of whether a “net exercise” arrangement is used, the nominal value of each newly issued Ordinary Shares will be fully paid up in cash; and

Ordinary Shares will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) Ordinary Shares issuable upon exercise are reduced to pay the exercise price pursuant to the “net exercise,” (B) Ordinary Shares are delivered to the Participant as a result of such exercise, and (C) Ordinary Shares are withheld to satisfy tax withholding obligations;

(d) Exercise and Payment of a SAR. To exercise any outstanding Stock Appreciation Right, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Agreement evidencing such Stock Appreciation Right. The appreciation distribution payable on the exercise of a Stock Appreciation Right will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the Stock Appreciation Right) of a number of Ordinary Shares equal to the number of Ordinary Shares equivalents in which the Participant is vested under such Stock Appreciation Right, and with respect to which the Participant is exercising the Stock Appreciation Right on such date, over (B) the strike price that will be determined by the Board at the time of grant of the Stock Appreciation Right. The appreciation distribution in respect to a Stock Appreciation Right may be paid in Ordinary Shares, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Stock Appreciation Right Agreement evidencing such Stock Appreciation Right, provided, however, that where Ordinary Shares are issued pursuant to a Stock Appreciation Right, the nominal value of each newly issued Ordinary Share is fully paid up.

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

(i) Restrictions on Transfer. An Option or SAR shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Participant only by the Participant; provided, however, that the Board may, in its sole discretion, permit transfer of the Option or SAR in a manner that is not prohibited by applicable tax and securities laws upon the Participant’s request. Except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration.
(ii) Domestic Relations Orders. Notwithstanding the foregoing, an Option or SAR may be transferred pursuant to a domestic relations order; provided, however, that if an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Notwithstanding the foregoing, the Participant may, by delivering written notice to the Company, in a form provided by or otherwise satisfactory to the Company and any broker designated by the Company to effect Option exercises, designate a third party who, in the event of the death of the Participant, shall thereafter be entitled to exercise the Option or SAR and receive the Ordinary Shares or other consideration resulting from such exercise. In the absence of such a designation, the executor or administrator of the Participant’s estate shall be entitled to exercise the Option or SAR and receive the Ordinary Shares or other consideration resulting from such exercise.

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

(g) Termination of Continuous Service. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company or any Affiliate, if a Participant’s Continuous Service terminates (other than for Cause or upon the Participant’s death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) but only within such 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 Award Agreement), or (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the time specified herein or in the Award Agreement (as applicable), the Option or SAR shall terminate.

(h) Extension of Termination Date. If the exercise of an Option or SAR following the termination of the Participant’s Continuous Service (other than for Cause or upon the Participant’s death or Disability) would be prohibited at any time solely because the issuance of Ordinary Shares would violate the registration requirements under the Securities Act, then the Option or SAR shall terminate on the earlier of (i) the expiration of a total period of three (3) months (that need not be consecutive) after the termination of the Participant’s Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement. In addition, unless otherwise provided in a Participant’s Award Agreement, if the immediate sale of any Ordinary Shares received upon exercise of an Option or SAR following the termination of the Participant’s Continuous Service (other than for Cause) would violate the Company’s insider trading policy, then the Option or SAR shall
terminate on the earlier of (i) the expiration of a period equal to the applicable post-termination exercise period after the termination of the Participant’s Continuous Service during which the sale of the Ordinary Shares received upon exercise of the Option or SAR would not be in violation of the Company’s insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement.

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

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

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

(l) **Non-Exempt Employees.** No Option or SAR, whether or not vested, granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, shall be first exercisable for any Ordinary Shares until at least six months following the date of grant of the Option or SAR. Notwithstanding the foregoing, consistent with the provisions of the Worker Economic Opportunity Act, (i) in the event of the Participant’s death or Disability, (ii) upon a Corporate Transaction in which such Option or SAR is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant’s
6. **Provisions of Stock Awards other than Options and SARs.**

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

(i) **Consideration.** A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company, (B) services to the Company or an Affiliate or (C) any other form of legal consideration (including future services) that may be acceptable to the Board, in its sole discretion, and permissible under applicable law, provided however, that where Ordinary Shares are issued pursuant to a Restricted Stock Award the nominal value of each newly issued Ordinary Share is fully paid up.

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

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

(iv) **Transferability.** Rights to acquire Ordinary Shares under the Restricted Stock Award Agreement shall be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board shall determine in its sole discretion, so long as Ordinary Shares awarded under the Restricted Stock Award Agreement remain subject to the terms of the Restricted Stock Award Agreement.

(v) **Dividends.** A Restricted Stock Award Agreement may provide that any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the Ordinary Shares subject to the Restricted Stock Award to which they relate.
(b) Restricted Stock Unit Awards. Each Restricted Stock Unit Award Agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical; provided, however, that each Restricted Stock Unit Award Agreement shall 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 Ordinary Shares subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Ordinary Shares 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, provided, however, that where Ordinary Shares are issued pursuant to a Restricted Stock Unit Award, the nominal value of each newly issued Ordinary Share is fully paid up.

(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 Ordinary Shares, 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 Ordinary Shares (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 Ordinary Shares 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 Ordinary Shares covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any additional Ordinary Shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant’s Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant’s termination of Continuous Service.
(c) Performance Awards.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award that may vest or may be exercised contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Stock Award may, but need not, require the completion of a specified period of Continuous Service. The length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained shall be conclusively determined by the Committee, in its sole discretion. Except with respect to Inducement Awards, the maximum number of shares covered by an Award that may be granted to any Participant in a calendar year attributable to Stock Awards described in this Section 6(c)(i) (whether the grant, vesting or exercise is contingent upon the attainment during a Performance Period of the Performance Goals) shall not exceed three million (3,000,000) Ordinary Shares. The Board may provide for or, subject to such terms and conditions as the Board may specify, may permit a Participant to elect for, the payment of any Performance Stock Award to be deferred to a specified date or event. In addition, to the extent permitted by applicable law and the applicable Award Agreement, the Board may determine that cash may be used in payment of Performance Stock Awards.

(ii) Performance Cash Awards. A Performance Cash Award is a cash award that may be paid contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Cash Award may also require the completion of a specified period of Continuous Service. At the time of grant of a Performance Cash Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained shall be conclusively determined by the Committee, in its sole discretion. In any calendar year, the Committee may not grant a Performance Cash Award that has a maximum value that may be paid to any Participant in excess of three million dollars ($3,000,000). The Board may provide for or, subject to such terms and conditions as the Board may specify, may permit a Participant to elect for, the payment of any Performance Cash Award to be deferred to a specified date or event. The Committee may specify the form of payment of Performance Cash Awards, which may be cash or other property, or may provide for a Participant to have the option for his or her Performance Cash Award, or such portion thereof as the Board may specify, to be paid in whole or in part in cash or other property.

(iii) Board Discretion. The Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for a Performance Period.

(iv) Section 162(m) Compliance. Unless otherwise permitted in compliance with the requirements of Section 162(m) of the Code with respect to an Award intended to qualify as “performance-based compensation” thereunder, the Committee shall establish the Performance Goals applicable to, and the formula for calculating the amount payable under, the Award no later than the earlier of (a) the date ninety (90) days after the commencement of the applicable Performance Period, or (b) the date on which twenty-five percent (25%) of the Performance Period has elapsed, and in either event at a time when the achievement of the applicable Performance Goals remains substantially uncertain. Prior to the payment of any
compensation under an Award intended to qualify as “performance-based compensation” under Section 162(m) of the Code, the Committee shall certify the extent to which any Performance Goals and any other material terms under such Award have been satisfied (other than in cases where such relate solely to the increase in the value of the Ordinary Shares). Notwithstanding satisfaction or completion of any Performance Goals, to the extent specified at the time of grant of an Award to “covered employees” within the meaning of Section 162(m) of the Code, the number of Ordinary Shares, Options, cash or other benefits granted, issued, retainable and/or vested under an Award on account of satisfaction of such Performance Goals may be reduced by the Committee on the basis of such further considerations as the Committee, in its sole discretion, shall determine.

(d) Other Stock Awards. Other forms of Stock Awards valued in whole or in part by reference to, or otherwise based on, Ordinary Shares, including the appreciation in value thereof (e.g., options or share rights with an exercise price or strike price less than 100% of the Fair Market Value of the Ordinary Shares at the time of grant) may be granted either alone or in addition to Stock Awards provided for under Section 5 and the preceding provisions of this Section 6. Subject to the provisions of the Plan, the Board shall have sole and complete authority to determine the persons to whom and the time or times at which such Other Stock Awards will be granted, the number of Ordinary Shares (or the cash equivalent thereof) to be granted pursuant to such Other Stock Awards and all other terms and conditions of such Other Stock Awards; provided, however, that where Ordinary Shares are issued pursuant to any Other Stock Award, the nominal value of each newly issued Ordinary Share is fully paid up.

7. COVENANTS OF THE COMPANY.

(a) Availability of Shares. During the terms of the Stock Awards, the Company shall keep available at all times the authorized but unissued Ordinary Shares reasonably required to satisfy such Stock Awards.

(b) Securities Law Compliance. The Company shall seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Stock Awards and to issue and sell Ordinary Shares upon exercise of the Stock Awards; provided, however, that this undertaking shall not require the Company to register under the Securities Act the Plan, any Stock Award or any Ordinary Shares issued or issuable pursuant to any such Stock Award. If, after reasonable efforts, 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 Ordinary Shares under the Plan, the Company shall be relieved from any liability for failure to issue and sell Ordinary Shares upon exercise of such Stock Awards unless and until such authority is obtained. A Participant shall not be eligible for the grant of a Stock Award or the subsequent issuance of Ordinary Shares pursuant to the Stock 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 and its Affiliates shall have no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company and its Affiliates shall have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of a Stock Award or a possible period in which the Stock Award may not be exercised. The Company and its Affiliates have no duty or obligation to minimize the tax consequences of a Stock Award to the holder of such Stock Award.
8. MISCELLANEOUS.

(a) **Use of Proceeds from Sales of Ordinary Shares.** Proceeds from the sale of Ordinary Shares pursuant to Stock Awards shall constitute general funds of the Company.

(b) **Corporate Action Constituting Grant of Stock Awards.** Corporate action constituting a grant by the Company of a Stock Award to any Participant shall 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 Stock Award is communicated to, or actually received or accepted by, the Participant.

(c) **Shareholder Rights.** No Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any Ordinary Shares subject to such Stock Award unless and until (i) such Participant has satisfied all requirements for exercise of the Stock Award pursuant to its terms, if applicable, and (ii) the issuance of the Ordinary Shares subject to such Stock Award has been entered into the books and records of the Company.

(d) **No Employment or Other Service Rights.** Nothing in the Plan, any Stock Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto shall confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Stock Award was granted or shall affect the right of the Company or an Affiliate to terminate the employment of an Employee with or without notice and with or without cause.

(e) **Incentive Stock Option $100,000 Limitation.** To the extent that the aggregate Fair Market Value (determined at the time of grant) of Ordinary Shares with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds one hundred thousand dollars ($100,000), the Options or portions thereof that exceed such limit (according to the order in which they were granted) shall be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(f) **Investment Assurances.** The Company may require a Participant, as a condition of exercising or acquiring Ordinary Shares under any Stock 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 he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Stock Award; and (ii) to give written assurances satisfactory to the Company stating that the Participant is acquiring Ordinary Shares subject to the Stock Award for the Participant’s own account and not with any present intention of selling or otherwise distributing the Ordinary Shares. The foregoing requirements, and any assurances given pursuant to such requirements, shall be inoperative if (A) the issuance of the shares upon the exercise or acquisition of Ordinary Shares under the Stock 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 share 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 Ordinary Shares.

(g) **Withholding Obligations.** Unless prohibited by the terms of a Stock Award Agreement, the Company or any Affiliate may, in its sole discretion, satisfy any federal, state, local or foreign tax withholding obligation, or levies or social security deduction 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 Ordinary Shares from the Ordinary Shares issued or otherwise issuable to the Participant in connection with the Award; provided, however, that no Ordinary Shares are withheld with a value exceeding the minimum amount of tax, levies and social security contribution required to be withheld by law or the practice of any revenue authority (or such lesser amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; or (v) by such other method as may be set forth in the Award Agreement.

(h) **Electronic Delivery.** Any reference herein to a “written” agreement or document shall include any agreement or document delivered electronically or posted on the Company’s (or Affiliate’s, if applicable) intranet (or other shared electronic medium controlled by the Company or any Affiliate 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 Ordinary Shares 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 or an Affiliate. 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.** 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 shall 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 shall 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 Ordinary Shares 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 shall 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) **Personal Data.** It shall be a term and condition of every Award that a Participant agrees and consents to:

(i) the collection, use and processing of his Personal Data by the Company or any Subsidiary and the transfer of his Personal Data to any third party administrator of the Plan and any broker through whom Shares are to be sold on behalf of a Participant;

(ii) the Company, its Subsidiaries or any third party administrator of the Plan, transferring the Participant’s Personal Data amongst themselves for the purposes of implementing, administering and managing the Plan and the issue of Awards and the acquisition of Ordinary Shares pursuant to Awards;

(iii) the use of Personal Data by any such person for any such purposes; and

(iv) the transfer to and retention of Personal Data by third parties (including any situated outside the European Economic Area) for or in connection with such purposes.

9. **ADJUSTMENTS UPON CHANGES IN ORDINARY SHARES; OTHER CORPORATE EVENTS.**

(a) **Capitalization Adjustments.** In the event of a Capitalization Adjustment, the Board shall appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a)(i) and 3(f), (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(a)(ii), (iii) the class(es) and maximum number of securities that may be awarded to any person pursuant to Sections 3(d) and 6(c)(i), and (iv) the class(es) and number of securities and price per Ordinary Share subject to outstanding Stock Awards. The Board shall make such adjustments, and its determination shall be final, binding and conclusive.

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

(c) **Corporate Transaction.** The following provisions shall apply to Stock Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing
Stock Awards May Be Assumed. In the event of a Corporate Transaction, any surviving corporation or acquiring corporation (or the surviving or acquiring corporation’s parent company) may assume or continue any or all Stock Awards outstanding under the Plan or may substitute similar stock awards for Stock Awards outstanding under the Plan (including but not limited to, awards to acquire the same consideration paid to the shareholders of the Company pursuant to the Corporate Transaction), and any reacquisition or repurchase rights held by the Company in respect of Ordinary Shares issued pursuant to Stock Awards may be assigned by the Company to the successor of the Company (or the successor’s parent company, if any) in connection with such Corporate Transaction. A surviving corporation or acquiring corporation (or its parent) may choose to assume or continue only a portion of a Stock Award or substitute a similar stock award for only a portion of a Stock Award, or may choose to assume or continue the Stock Awards held by some, but not all Participants. The terms of any assumption, continuation or substitution shall be set by the Board.

Stock Awards Held by Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Stock Awards or substitute similar stock awards for such outstanding Stock Awards, then with respect to Stock Awards that have not been assumed, continued or substituted and that are held by Participants whose Continuous Service has not terminated prior to the effective time of the Corporate Transaction (referred to as the “Current Participants”), the vesting of such Stock Awards (and, with respect to Options and Stock Appreciation Rights, the time when such Stock Awards may be exercised) shall be accelerated in full to a date prior to the effective time of such Corporate Transaction (contingent upon the effectiveness of the Corporate Transaction) as the Board shall determine (or, if the Board shall not determine such a date, to the date that is five (5) days prior to the effective time of the Corporate Transaction), and such Stock Awards shall terminate if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Stock Awards shall lapse (contingent upon the effectiveness of the Corporate Transaction).

Stock Awards Held by Persons other than Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Stock Awards or substitute similar stock awards for such outstanding Stock Awards, then with respect to Stock Awards that have not been assumed, continued or substituted and that are held by persons other than Current Participants, such Stock Awards shall terminate if not exercised (if applicable) prior to the effective time of the Corporate Transaction; provided, however, that any reacquisition or repurchase rights held by the Company with respect to such Stock Awards shall not terminate and may continue to be exercised notwithstanding the Corporate Transaction.

Payment for Stock Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event a Stock Award will terminate if not exercised prior to the effective time of a Corporate Transaction, the Board may provide, in its sole discretion, that the holder of such
Stock Award may not exercise such Stock Award but will receive a payment, in such form as may be determined by the Board, equal in value, at the effective
time, to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Stock Award (including, at the
discretion of the Board, any unvested portion of such Stock Award), over (B) any exercise price payable by such holder in connection with such exercise.

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

10. TERMINATION OR SUSPENSION OF THE PLAN.

(a) Plan Term. The Board may suspend or terminate the Plan at any time. Unless terminated sooner by the Board, the Plan shall automatically
terminate on the day before the tenth (10th) anniversary of the earlier of (i) the date the Plan is adopted by the Board, or (ii) the date the Plan is approved by
the shareholders of the Company. 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 shall not impair rights and obligations under any Award granted while the Plan
is in effect except with the written consent of the affected Participant.

11. EFFECTIVE DATE OF PLAN.

The Plan shall become effective on the Effective Date.

12. CHOICE OF LAW.

The laws of the State of California shall 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 shall apply to the capitalized terms indicated below:

(a) “2011 Plan Available Reserve” means the number of shares of common available for issuance pursuant to the grant of future awards under the
2011 Plan determined as of immediately prior to the Effective Date.

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

(c) “Award” means a Stock Award or a Performance Cash Award.
(d) “Award Agreement” means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award.

(e) “Board” means the Board of Directors of the Company.

(f) “Capitalization Adjustment” means any change that is made in, or other events that occur with respect to, the Ordinary Shares subject to the Plan or subject to any Stock Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, share dividend, dividend in property other than cash, large nonrecurring cash dividend, share 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 No. 123 (revised). Notwithstanding the foregoing, the conversion of any convertible securities of the Company shall not be treated as a Capitalization Adjustment.

(g) “Cause” shall have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term shall mean, with respect to a Participant, the occurrence of any of the following events that has a material negative impact on the business or reputation of the Company: (i) such Participant’s repeated failure to perform one or more essential duties and responsibilities to the Company; (ii) such Participant’s failure to follow the lawful directives of manager(s); (iii) such Participant’s material violation of any Company policy; (iv) such Participant’s commission of any act of fraud, embezzlement, dishonesty or any other willful misconduct or gross misconduct; (v) such Participant’s unauthorized use or disclosure of any proprietary information, confidential information or trade secrets of the Company or any other party to whom he or she owes an obligation of nondisclosure as a result of his or her relationship with the Company; or (vi) such Participant’s willful breach of any of obligations under any written agreement or covenant with the Company or violation of any statutory duty owed to the Company. The determination that a termination of the Participant’s Continuous Service is either for Cause or without Cause shall be made by the Company (or an Affiliate, if applicable), in its sole discretion. Any determination by the Company (or an Affiliate, if applicable) that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant shall have no effect upon any determination of the rights or obligations of the Company or Affiliate or such Participant for any other purpose.

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

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 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 shall 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 or any Affiliate 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 or any Affiliate, 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 shall 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 shareholders 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 shareholders 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 shareholders 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 shall, for purposes of this Plan, be considered as a member of the Incumbent Board.

For the avoidance of doubt, any one or more of the above events may be effected pursuant to (i) a compromise or arrangement sanctioned by the Irish courts under section 201 of the Companies Act 1963 (as may be amended, updated or replaced from time to time) (the “1963 Act”) or (ii) a scheme, contract or offer which has become binding on all shareholders pursuant to Section 204 of the 1963 Act, or (iii) a bid pursuant to Regulation 23 or 24 of the European Communities (Takeover Bids (Directive 2004/25/EC)) Regulations 2006.
Notwithstanding the foregoing or any other provision of this Plan, (A) the term Change in Control shall 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 shall 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 shall apply.

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

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

(k) "Company" means Horizon Pharma Public Limited Company, a company incorporated under the laws of Ireland.

(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 Non-employee Director, or payment of a fee for such service, shall not cause a Non-employee 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.

(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, shall not terminate a Participant’s Continuous Service; provided, however, 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 shall be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. To the extent permitted by law, the Board or the chief executive officer of the Company (or an Affiliate, if applicable), in that party’s sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer of the Company (or an Affiliate, if applicable), 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 shall be treated as Continuous Service for purposes of vesting in a Stock Award only to such extent as may be provided in the Company’s (or an Affiliate’s, if applicable) 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 Ordinary Shares 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) “Covered Employee” shall have the meaning provided in Section 162(m)(3) of the Code.

(p) “Director” means a member of the Board.

(q) “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 which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months, as provided in Sections 22(e)(3) and 409A(a)(2)(c)(i) of the Code, and shall be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(r) “Effective Date” means the effective date of this Plan, which is immediately prior to the effective time of the merger between Horizon Pharma, Inc. and Horizon Pharma Public Limited Company pursuant to the Transaction Agreement and Plan of Merger dated March 18, 2014, provided that this Plan is approved by the stockholders of Horizon Pharma, Inc. prior to such merger and such merger is consummated.

(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, shall 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.


(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”
shall not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the shareholders of the Company in substantially the same proportions as their Ownership of Ordinary Shares 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 Ordinary Shares determined as follows:

(i) If the Ordinary Shares is listed on any established stock exchange or traded on the NASDAQ Global Market or the NASDAQ Global Select Market, the Fair Market Value of a share of Ordinary Shares, unless otherwise determined by the Board, shall be the closing sales price for such Ordinary Shares as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Ordinary Shares) on the day 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 Ordinary Shares on the day of determination, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.

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

(x) “Horizon” means Horizon Pharma, Inc., a Delaware corporation.

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

(z) “Inducement Award” means a Stock Award granted pursuant to Section 3(f) of the Plan.

(aa) “Inducement Committee” means a Committee consisting of the majority of the Company’s independent directors or the Company’s independent compensation committee, in either case in accordance with NASDAQ Listing Rule 5635(c)(4).

(bb) “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.

(cc) “Nonstatutory Stock Option” means any option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(dd) “Officer” means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(ee) “Option” means an Incentive Stock Option or a Nonstatutory Stock Option to purchase Ordinary Shares granted pursuant to the Plan.

(ff) “Option Agreement” means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an Option grant. Each Option Agreement shall be subject to the terms and conditions of the Plan.

(gg) “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.

(hh) “Ordinary Shares” or “Shares” means the ordinary shares in the capital of the Company with a nominal value of US$0.0001 per share.

(ii) “Other Stock Award” means an award based in whole or in part by reference to the Ordinary Shares which is granted pursuant to the terms and conditions of Section 6(d).

(jj) “Other Stock Award Agreement” means a written agreement between the Company and a holder of an Other Stock Award evidencing the terms and conditions of an Other Stock Award grant. Each Other Stock Award Agreement shall be subject to the terms and conditions of the Plan.

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

(ll) “Own,” “Owned,” “Owner,” “Ownership” A person or Entity shall 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.

(mm) “Participant” means a person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.
Performance Cash Award” means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

“Performance Criteria” means the one or more criteria that the Board shall select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that shall be used to establish such Performance Goals may be based on any one of, or combination of, the following as determined by the Board: (i) earnings (including earnings per share and net earnings); (ii) earnings before interest, taxes and depreciation; (iii) earnings before interest, taxes, depreciation and amortization; (iv) total shareholder return; (v) return on equity or average shareholder’s equity; (vi) return on assets, investment, or capital employed; (vii) share price; (viii) margin (including gross margin); (ix) income (before or after taxes); (x) operating income; (xi) operating income after taxes; (xii) pre-tax profit; (xiii) operating cash flow; (xiv) sales or revenue targets; (xv) increases in revenue or product revenue; (xvi) expenses and cost reduction goals; (xvii) improvement in or attainment of working capital levels; (xviii) economic value added (or an equivalent metric); (xix) market share; (xx) cash flow; (xxi) cash flow per share; (xxii) share price performance; (xxiii) debt reduction; (xxiv) implementation or completion of projects or processes; (xxv) customer satisfaction; (xxvi) shareholders’ equity; (xxvii) capital expenditures; (xxviii) debt levels; (xxix) operating profit or net operating profit; (xxx) workforce diversity; (xxxi) growth of net income or operating income; (xxi) billings; and (xxxii) to the extent that an Award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by the Board.

“Performance Goals” means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board shall appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated Performance Goals; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; and (5) to exclude the effects of any items that are ‘unusual’ in nature or that occur ‘infrequently’ as determined under generally accepted accounting principles.

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

“Performance Stock Award” means a Stock Award granted under the terms and conditions of Section 6(c)(i).
“Personal Data” has the same meaning as defined in the Data Protection Acts 1988 and 2003.

“Plan” means this Horizon Pharma Public Limited Company 2014 Equity Incentive Plan.

“Restricted Stock Award” means an award of Ordinary Shares which is granted pursuant to the terms and conditions of Section 6(a).

“Restricted Stock Award” means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Agreement shall be subject to the terms and conditions of the Plan.

“Restricted Stock Unit Award” means a right to receive Ordinary Shares which is granted pursuant to the terms and conditions of Section 6(b).

“Restricted Stock Unit Award” 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 shall be subject to the terms and conditions of the Plan.

“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.

“Securities Act” means the Securities Act of 1933, as amended.

“Stock Appreciation Right” or “SAR” means a right to receive the appreciation on Ordinary Shares that is granted pursuant to the terms and conditions of Section 5.

“Stock Appreciation Right Agreement” means a written agreement between the Company and a holder of a Stock Appreciation Right evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Agreement shall be subject to the terms and conditions of the Plan.

“Stock Award” means any right to receive Ordinary Shares granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, a Performance Stock Award or any Other Stock Award.

“Stock Award Agreement” means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement shall be subject to the terms and conditions of the Plan.

“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 shall 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%).

(fif) “Ten Percent Shareholder” means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) shares possessing more than ten percent (10%) of the total combined voting power of all classes of shares of the Company or any Affiliate.
Pursuant to your Stock Option Grant Notice ("Grant Notice") and this Option Agreement (the "Agreement"), Horizon Pharma Public Limited Company (the "Company") has granted you an option under its 2014 Equity Incentive Plan (the "Plan") to purchase the number of the Company’s Ordinary Shares indicated in your Grant Notice at the exercise price indicated in your Grant Notice. Capitalized terms not explicitly defined in this Agreement but defined in the Plan shall have the same definitions as in the Plan.

The details of your option are as follows:

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

2. **Number of Shares and Exercise Price.** The number of Ordinary Shares subject to your option and your exercise price per share referenced in your Grant Notice may be adjusted from time to time for Capitalization Adjustments.

3. **Exercise Restriction for Non-Exempt Employees.** In the event that you are an Employee eligible for overtime compensation under the United States Fair Labor Standards Act of 1938, as amended (i.e., a “Non-Exempt Employee”), you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant specified in your Grant Notice, notwithstanding any other provision of your option.

4. **Method of Payment.** Payment of the applicable exercise price is due in full upon exercise of all or any part of your option. All amounts due are payable in United States dollars based, if applicable, upon the local currency to United States dollar exchange rate published in the West Coast edition of The Wall Street Journal on the date of exercise of your option (or, if the date of exercise is not a business day in the United States, the preceding business day in the United States). You may not exercise your option, and no obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares, unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that you have fully paid up in cash (or by check) the nominal value of each Ordinary Share subject to the exercised portion of the option. You may elect to make payment of the remaining portion of the option exercise price by remittance for the amount payable or in any other manner permitted by your Grant Notice, which may include one or more of the following:

   a. Provided that at the time of exercise the Ordinary Shares are publicly traded and quoted regularly in a source the Board deems reliable, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Ordinary Shares, 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.
b. If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a “net exercise” arrangement pursuant to which the Company will reduce the number of Ordinary Shares issuable upon exercise of your option by the largest whole number of Ordinary Shares with a Fair Market Value that does not exceed the aggregate exercise price; \textit{provided, however, that:}

1) the Company shall accept a cash or other payment from you to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole Ordinary Shares to be issued;

2) Ordinary Shares will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) Ordinary Shares issuable upon exercise are reduced to pay the exercise price pursuant to the “net exercise,” (B) Ordinary Shares are delivered to you as a result of such exercise, and (C) Ordinary Shares are withheld to satisfy tax withholding obligations.

5. \textbf{WHOLE SHARES.} You may exercise your option only for whole Ordinary Shares.

6. \textbf{SECURITIES LAW COMPLIANCE.} Notwithstanding anything to the contrary contained herein, you may not exercise your option unless the Ordinary Shares issuable upon such exercise are then registered under the Securities Act or, if such Ordinary Shares are not then so registered, the Company has determined that such exercise and issuance would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with other applicable laws and regulations governing your option, including, without limitation, the laws and regulations of the United States and your country of residence, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations.

7. \textbf{TERM.} You may not exercise your option before the commencement of its term or after its term expires. The term of your option commences on the Date of Grant and expires upon the earliest of the following:

\begin{itemize}
  \item \textbf{a.} immediately upon the termination of your Continuous Service for Cause;
  \item \textbf{b.} three (3) months after the termination of your Continuous Service for any reason other than Cause, Disability or death, provided that if during any part of such three (3)-month period you may not exercise your option solely because of the condition set forth in the preceding paragraph relating to “Securities Law Compliance,” your option shall not expire until the earlier of the Expiration Date or until it shall have been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service;
  \item \textbf{c.} twelve (12) months after the termination of your Continuous Service due to your Disability;
\end{itemize}
d. eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

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

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

If your option is an Incentive Stock Option, note that to obtain the US federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the date of grant of your option and ending on the day three (3) months before the date of your option’s exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or your permanent and total disability, as defined in Section 22(e) (3) of the Code. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

8. Exercise.

a. You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by following the option exercise instructions specified in your StockCross Financial Services brokerage account including adequate provision for payment of the option exercise price to the Company together with such additional documents as the Company may then require.

b. By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (1) the exercise of your option, (2) the lapse of any substantial risk of forfeiture to which the Ordinary Shares are subject at the time of exercise, or (3) the disposition of Ordinary Shares acquired upon such exercise.

c. By exercising your option you agree that, as a condition to any exercise of your option, if you do not pay the nominal value of the Ordinary Shares by cash or check, such nominal value will be automatically deducted from salary or base wages due and payable to you.

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

9. Transferability. Your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you. Notwithstanding the foregoing, by delivering written notice to the Company, in a form satisfactory to the Company,
you may designate a third party who, in the event of your death, shall thereafter be entitled to exercise your option. In addition, if permitted by the Company you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust, provided that you and the trustee enter into a transfer and other agreements required by the Company.

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

11. WITHHOLDING OBLIGATIONS.

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

   b. Upon your request and subject to approval by the Company, in its sole discretion, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested Ordinary Shares otherwise issuable to you upon the exercise of your option a number of whole Ordinary Shares having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax and social security contribution required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

   c. You may not exercise your option and no obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that either (i) you have made payment, or have made arrangements satisfactory to the Company and/or any Affiliate for the payment to it of such sum as is sufficient to meet any withholding liability to Taxation (defined below) in any jurisdiction which is or would be recoverable from you following exercise of your option and/or the issue of Ordinary Shares by the Company arising from such exercise, and in respect of which the Company and/or any Affiliate is liable to account in any jurisdiction; or (ii) you have entered into an agreement with the Company and/or an Affiliate (in a form satisfactory to the Company or such Affiliate) to ensure that such a payment is made by you including, without limitation, amounts in respect of any employers’ social security (or the local law equivalent thereof) or other forms of Taxation. Accordingly, you may not be able to exercise
your option when desired even though your option is vested, and the Company shall have no obligation to issue a certificate for such Ordinary Shares or release such Ordinary Shares from any escrow provided for herein unless such obligations are satisfied. “Taxation” shall include all forms of taxation including employees’ and employers’ social security, income tax and any other taxes of whatever nature in any jurisdiction together with any amount payable by an Affiliate in respect of which the Affiliate has a duty to account as a result of any laws of any jurisdiction relating to taxation.

12. PERSONAL DATA. You understand that your employer, if applicable, the Company, and/or its Affiliates hold certain personal information about you. This information include your name, home address, telephone number, date of birth, social security or equivalent tax identification number, salary, nationality, job title, and details of your option grant and all Ordinary Shares subject to such grant that have been granted, cancelled, vested, unvested, or are outstanding (the “Personal Data”).

You hereby declare your express consent to allowing your employer to transfer your Personal Data (name, home address, telephone number, date of birth, salary, nationality, job title, and details of the option grant and all Ordinary Shares subject to such grant) outside the country in which you are employed or retained to its Affiliates, Horizon Pharma, Inc. and Horizon Pharma USA, Inc. which are located in the United States and their parent entity, Horizon Pharma Public Limited Company (together such entities are the “Company Group”). The legal persons for whom such Personal Data are intended are: Horizon Pharma Public Limited Company, Horizon Pharma, Inc., Horizon Pharma USA, Inc., StockCross Financial Services and any other third party entity providing option and/or Plan administration services to the Company and for the sole purpose of facilitating the transactions contemplated by this Stock Agreement. You have the right to access and correct your Personal Data by applying to the Company representative identified on the Grant Notice (the “Representative”). You have the right to revoke this consent at any time with future effect towards the Company Group by providing written notice to the Representative of such revocation (the “Revocation Notice”). You may also elect to exercise your option, to the extent such option is vested, by following the option exercise instructions specified in your StockCross Financial Services brokerage account and making provision for payment of the applicable option exercise price to the Company concurrently with your Revocation Notice, in which case your consent revocation will become effective as soon as administratively practicable following the execution of your option exercise election and the issuance of the Ordinary Shares subject to the option to you. If you do not follow the option exercise instructions specified in your StockCross Financial Services brokerage account or provide for payment of the option exercise price along with your Revocation Notice, or to the extent your option is unvested at the time you elect to provide a Revocation Notice, then as soon as administratively practicable following the Representative’s receipt of the Revocation Notice your consent revocation will become effective and your option shall automatically immediately terminate and be forfeited, and you will not receive any Ordinary Shares or any other consideration in respect of such forfeited option.

13. ADDITIONAL ACKNOWLEDGEMENTS. You hereby consent and acknowledge that:
a. Participation in the Plan is voluntary and therefore you must accept the terms and conditions of the Plan and this option as a condition to participating in the Plan and receipt of this option.

b. The Plan is discretionary in nature and the Company can amend, cancel, or terminate it at any time.

c. This option and any other options under the Plan are voluntary and occasional and do not create any contractual or other right to receive future options or other benefits in lieu of future options, even if similar options have been granted repeatedly in the past.

d. All determinations with respect to any such future options, including, but not limited to, the time or times when such options are made, the number of Ordinary Shares, and performance and other conditions applied to the options, will be at the sole discretion of the Company.

e. The value of the Ordinary Shares and this option is an extraordinary item of compensation, which is outside the scope of your employment, service contract or consulting agreement, if any. This option shall not form part of any past, current or future entitlement to remuneration or benefits which you may have under any contract of employment with the Company nor form any part of any such contract of employment between you and the Company.

f. The Ordinary Shares, this option, or any income derived therefrom are a potential bonus payment not paid in lieu of any cash salary compensation and not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any termination, severance, resignation, redundancy, end of service payments, bonuses, long-service awards, life or accident insurance benefits, pension or retirement benefits or similar payments.

g. In the event of the involuntary termination of your Continuous Service, your eligibility to receive Ordinary Shares or payments under the option or the Plan, if any, will terminate effective as of the date that you are no longer actively employed or retained regardless of any reasonable notice period mandated under local law, except as expressly provided in the option.

h. The future value of the Ordinary Shares is unknown and cannot be predicted with certainty. You do not have, and will not assert, any claim or entitlement to compensation, indemnity or damages arising from the termination of this option or diminution in value of the Ordinary Shares and you irrevocably release the Company, its Affiliates and, if applicable, your employer, if different from the Company, from any such claim that may arise.

i. The Plan and this option set forth the entire understanding between you, the Company and any Affiliate regarding the acquisition of the Ordinary Shares and supersedes all prior oral and written agreements pertaining to this option.

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

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

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

17. MISCELLANEOUS.

a. The rights and obligations of the Company under your option shall be transferable to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by the Company’s successors and assigns. Your rights and obligations under your option may only be assigned with the prior written consent of the Company.

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

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

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

e. All obligations of the Company under the Plan and this Agreement shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.
18. Governing Plan Document. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the provisions of your option and those of the Plan, the provisions of the Plan shall control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

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

20. Effect on Other Employee Benefit Plans. The value of the option subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating the Employee’s benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company’s or any Affiliate’s employee benefit plans.

21. Amendment. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that no such amendment adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the grant as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the option which is then subject to restrictions as provided herein.
Horizon Pharma Public Limited Company (the “Company”), pursuant to its 2014 Equity Incentive Plan (the “Plan”), hereby grants to you an option (the “Option”) to purchase the Company’s Ordinary Shares. The following specific terms of the Option can be obtained by logging on to your StockCross brokerage account: [Optionholder, Date of Grant, Vesting Commencement Date, Number of Ordinary Shares Subject to Option, Exercise Price (Per Share), Total Exercise Price, Expiration Date, Type of Grant (Incentive Stock Option or Nonstatutory Stock Option), Exercise Schedule, Vesting Schedule and Payment]. These specific terms are incorporated by reference into this Grant Notice. This Option is subject to all of the terms and conditions as set forth herein and in the Option Agreement and the Plan, all of which are available on the StockCross website.

Additional Terms/Acknowledgements: You must electronically accept the Option by logging into your StockCross account. If you have not set-up your StockCross brokerage account, the following information provided below will assist you in this process. Failure to do so may result in forfeiture of the Option. By electronically accepting the Option, you acknowledge receipt of, and understand and agree to, this Stock Option Grant Notice, the Option Agreement and the Plan. You further acknowledge that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between you and the Company regarding the acquisition of shares in the Company and supersede all prior oral and written agreements on that subject with the exception of awards previously granted and delivered to you under the Plan.

STOCKCROSS FINANCIAL SERVICES BROKERAGE ACCOUNT

Horizon currently utilizes StockCross Financial Services as our online broker. StockCross Financial Services offers an internet website for viewing option data and for buying or selling your stock options.

To open your brokerage account (if you have not yet done so)

• Go to the StockCross website at www.stockcross.com
• Select the Green “Open an Account” menu item.
• Under the New Account Application screen, select “Employee Stock Plan Account” button to proceed with the brokerage application.
• If any additional documentation is needed, StockCross will contact you directly.
• Once the account is fully processed, you will receive a welcome email from StockCross, containing your account number and other useful information. This is generally within 72 hours.

If you have any questions or comments completing the brokerage application, please contact StockCross Corporate Services at 800-338-3965.

Viewing your Award

• Login to www.trading.stockcross.com using you StockCross account number and password established during registration
• Once logged into your StockCross account, select the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. **Please note that to view this information, you will need to disable popup blockers.**
• Select “Portfolio.” This will show you all equity grants that you have been granted.

Accepting your Award

• Login to www.trading.stockcross.com using you StockCross user name and password established during registration
Once logged into your StockCross account, select the link to Employee Stock Plans under the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. **Please note that to view this information, you will need to disable popup blockers.**

- Select “My Portfolio.” This will show you all equity grants that you have been granted.
- For your new equity grant, in the first column, click on the Orange “Accept Grant” Action Button.
- This will take you to an electronic acceptance window. For your reference, the Equity Agreement applicable to the Award is provided. If you agree with the terms and conditions of your equity grant, Place your name in the signature box, type your name below, and check the agreement box. Click “Accept Grant to complete the acceptance.

**IMPORTANT REMINDER:** In order to avoid forfeiture of your Award, **you must electronically accept your Award 30 days prior to your first vesting date.**

Contact Horizon Pharma plc’s Global Equity Plan Administrator Garry Devine at 224-383-3037 or email gdevine@horizonpharma.com with any further questions regarding your awards.
Pursuant to the Restricted Stock Unit Grant Notice (the "Grant Notice") and this Restricted Stock Unit Agreement (the "Agreement") and in consideration of your services, Horizon Pharma Public Limited Company (the "Company") has granted you a Restricted Stock Unit Award (the "Award") under its 2014 Equity Incentive Plan (the "Plan") for the number of restricted stock units referenced in the Grant Notice. Capitalized terms not explicitly defined in this Agreement shall have the same meanings given to them in the Plan or the Grant Notice, as applicable. Except as otherwise explicitly provided herein, in the event of any conflict between the terms in this Agreement and the Plan, the terms of the Plan shall control.

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

1. GRANT OF THE AWARD. This Award represents your right to be issued on a future date the number of Ordinary Shares that is equal to the number of restricted stock units indicated in the Grant Notice (the "Stock Units") at the Purchase Price per Ordinary Share specified in your Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "Account") the number of Stock Units subject to the Award.

2. VESTING. Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice, provided that vesting will cease upon the termination of your Continuous Service. Upon such termination of your Continuous Service, the Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in such Stock Units or the Ordinary Shares to be issued in respect of such portion of the Award.

3. METHOD OF PAYMENT. On or before the time you receive a distribution of the Ordinary Shares in settlement of your Stock Units, you hereby authorize the Company or any Affiliate to satisfy the payment of the Purchase Price per Ordinary Share with respect to such Ordinary Shares by withholding such payment from payroll and any other cash amounts otherwise payable to you. If no cash amounts are otherwise payable to you by the Company and available for such deduction, you must provide timely payment of the applicable Purchase Price to the Company via cash or check and no obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that you have satisfied such payment requirement. All amounts due are payable in United States dollars based, if applicable, upon the local currency to United States dollar exchange rate published in the West Coast edition of The Wall Street Journal on the applicable payment date (or, if such date is not a business day in the United States, the preceding business day in the United States).
4. NUMBER OF STOCK UNITS, ORDINARY SHARES AND PURCHASE PRICE.

a. The number of Stock Units subject to your Award and the Purchase Price per Ordinary Share may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Furthermore, the Purchase Price per Ordinary Share will be automatically adjusted from time to time, as applicable, such that it shall at all times be equal to the nominal value per Ordinary Share as then in effect. In no event will the Purchase Price per Ordinary Share be less than the nominal value per Ordinary Share.

b. Any additional Stock Units that become subject to the Award pursuant to this Section 4, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Stock Units covered by your Award.

c. Notwithstanding the provisions of this Section 4, no fractional shares or rights for fractional Ordinary Shares shall be created pursuant to this Section 4. The Board shall, in its discretion, determine an equivalent benefit for any fractional shares or fractional shares that might be created by the adjustments referred to in this Section 4.

5. SECURITIES LAW COMPLIANCE. You may not be issued any shares in respect of your Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award also must comply with other applicable laws and regulations governing the Award, including, without limitation, the laws and regulations of the United States and your country of residence, and you will not receive such shares if the Company determines that such receipt would not be in material compliance with such laws and regulations.

6. TRANSFER RESTRICTIONS. Your Award is not transferable, except by will or by the laws of descent and distribution. In addition to any other limitation on transfer created by applicable securities laws, you agree not to assign, hypothecate, donate, encumber or otherwise dispose of any interest in any of the Ordinary Shares subject to the Award until the shares are issued to you in accordance with Section 7 of this Agreement. After the shares have been issued to you, you are free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, any applicable Company policies (including, but not limited to, insider trading and window period policies) and applicable securities laws. Notwithstanding the foregoing, by delivering written notice to the Company, in a form satisfactory to the Company, you may designate a third party who, in the event of your death, shall thereafter be entitled to receive any distribution of Ordinary Shares to which you were entitled at the time of your death pursuant to this Agreement.

7. DATE OF ISSUANCE.

a. To the extent the Award is exempt from application of Section 409A of the Code and any state law of similar effect (collectively “Section 409A”), the Company will deliver to you a number of Ordinary Shares equal to the number of vested Stock Units subject to your Award, including any additional Stock Units received pursuant to Section 4 above that relate to those vested Stock Units, on the applicable vesting date(s). However, if a scheduled
delivery date falls on a date that is not a business day, such delivery date shall instead fall on the next following business day. Notwithstanding the foregoing, in the event that (i) any shares covered by your Award are scheduled to be delivered on a day (the “Original Distribution Date”) that does not occur: (A) during an open “window period” applicable to you under the Company’s policy permitting officers, directors and other designated individuals to sell shares only during certain “window” periods, in effect from time to time (the “Policy”), (B) on a day on which you are permitted to sell Ordinary Shares pursuant to a written plan that meets the requirements of Rule 10b5-1 under the Exchange Act, as determined by the Company in accordance with the Policy, or (C) on a date when you are otherwise permitted to sell Ordinary Shares on the open market, and (ii) the Company elects not to satisfy its tax withholding obligations by withholding shares from your distribution or withholding from other compensation otherwise payable to you by the Company, then such shares shall not be delivered on such Original Distribution Date and shall instead be delivered on the first business day of the next occurring open “window period” applicable to you pursuant to such Policy (regardless of whether you are still providing continuous services at such time) or the next business day when you are not prohibited from selling Ordinary Shares in the open market, but in no event later than the fifteenth (15th) day of the third calendar month of the calendar year following the calendar year in which the shares covered by the Award vest. Delivery of the shares pursuant to the provisions of this Section 7(a) is intended to comply with the requirements for the short-term deferral exemption available under Treasury Regulations Section 1.409A-1(b)(4) and shall be construed and administered in such manner. The form of such delivery of the shares (e.g., a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

b. The provisions of Appendix A to this Agreement will apply to the extent the Award is subject to, and not exempt from, application of Section 409A (a “Non-Exempt Award”).

8. DIVIDENDS. You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment as provided in the Plan; provided, however, that this sentence shall not apply with respect to any Ordinary Shares that are delivered to you in connection with your Award after such shares have been delivered to you.

9. RESTRICTIVE LEGENDS. The shares issued in respect of your Award shall be endorsed with appropriate legends determined by the Company.

10. AWARD NOT A SERVICE CONTRACT.

a. Your Continuous Service with the Company or an Affiliate is not for any specified term and may be terminated by you or by the Company or an Affiliate at any time, for any reason, with or without cause and with or without notice. Nothing in this Agreement (including, but not limited to, the vesting of your Award pursuant to the schedule set forth in the Grant Notice or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other
term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

b. By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice is earned only by continuing as an employee, director or consultant at the will of the Company (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a “reorganization”). You further acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with your right or the Company’s right to terminate your Continuous Service at any time, with or without cause and with or without notice.

11. WITHHOLDING OBLIGATIONS.

a. On or before the time you receive a distribution of the shares subject to your Award, or at any time thereafter as requested by the Company, you hereby authorize any required withholding from the Ordinary Shares issuable to you and/or otherwise agree to make adequate provision in cash for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate which arise in connection with your Award (the “Withholding Taxes”). Additionally, the Company may, in its sole discretion, satisfy all or any portion of the Withholding Taxes obligation relating to your Award by any of the following means or by a combination of such means: (i) withholding from any compensation otherwise payable to you by the Company; (ii) causing you to tender a cash payment, (iii) permitting or requiring you to enter into a “same day sale” commitment with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a “FINRA Dealer”) whereby you irrevocably elect to sell a portion of the shares to be delivered in connection with yourRestricted Stock Units to satisfy the Withholding Taxes and whereby the FINRA Dealer irrevocably commits to forward the proceeds necessary to satisfy the Withholding Taxes directly to the Company and/or its Affiliates; or (iv) withholding Ordinary Shares from the Ordinary Shares issued or otherwise issuable to you in connection with the Award with a Fair Market Value (measured as of the date Ordinary Shares are issued pursuant to Section 7) equal to the amount of such Withholding Taxes; provided, however, that the number of such Ordinary Shares so withheld shall not exceed the amount necessary to satisfy the Company’s required tax withholding obligations using the minimum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income; and provided further, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, such share withholding procedure shall be subject to the express prior approval of the Company’s Compensation Committee.

4.
b. Unless the tax withholding obligations of the Company and/or any Affiliate are satisfied, the Company shall have no obligation to deliver to you any Ordinary Shares pursuant to this Award.

c. No obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that either (i) you have made payment, or have made arrangements satisfactory to the Company and/or any Affiliate for the payment to it of such sum as is sufficient to meet any withholding liability to Taxation (defined below) in any jurisdiction which is or would be recoverable from you in connection with the vesting of the Award or the issuance of Ordinary Shares by the Company in settlement of the Award, and in respect of which the Company and/or any Affiliate is liable to account in any jurisdiction; or (ii) you have entered into an agreement with the Company and/or an Affiliate (in a form satisfactory to the Company or such Affiliate) to ensure that such a payment is made by you including, without limitation, amounts in respect of any employers’ social security (or the local law equivalent thereof) or other forms of Taxation. Accordingly, the Company shall have no obligation to issue a certificate for such Ordinary Shares or release such Ordinary Shares from any escrow provided for herein unless such obligations are satisfied. “Taxation” shall include all forms of taxation including employees’ and employers’ social security, income tax and any other taxes of whatever nature in any jurisdiction together with any amount payable by an Affiliate in respect of which the Affiliate has a duty to account as a result of any laws of any jurisdiction relating to taxation.

12. PERSONAL DATA. You understand that your employer, if applicable, the Company, and/or its Affiliates hold certain personal information about you. This information include your name, home address, telephone number, date of birth, social security or equivalent tax identification number, salary, nationality, job title, and details of your Award and all Ordinary Shares subject to your Award that have been granted, cancelled, vested, unvested, or are outstanding (the “Personal Data”).

You hereby declare your express consent to allowing your employer to transfer your Personal Data (name, home address, telephone number, date of birth, salary, nationality, job title, and details of the Award and all Ordinary Shares subject to such grant) outside the country in which you are employed or retained to its Affiliates, Horizon Pharma, Inc. and Horizon Pharma USA, Inc. which are located in the United States and their parent entity, Horizon Pharma Public Limited Company (together such entities are the “Company Group”). The legal persons for whom such Personal Data are intended are: Horizon Pharma Public Limited Company, Horizon Pharma, Inc., Horizon Pharma USA, Inc., StockCross Financial Services and any other third party entity providing equity award and/or Plan administration services to the Company and for the sole purpose of facilitating the transactions contemplated by this Agreement. You have the right to access and correct your Personal Data by applying to the Company representative identified on the Grant Notice (the “Representative”). You have the right to revoke this consent at any time with future effect towards the Company Group by providing written notice to the Representative of such revocation (the “Revocation Notice”) and as soon as administratively practicable following the Representative’s receipt of the Revocation Notice your consent revocation will become effective and your Award shall automatically immediately terminate and be forfeited, and you will not receive any Ordinary Shares or any other consideration in respect of such forfeited Award.

5.
13. ADDITIONAL ACKNOWLEDGEMENTS. You hereby consent and acknowledge that:

a. Participation in the Plan is voluntary and therefore you must accept the terms and conditions of the Plan and this Award as a condition to participating in the Plan and receipt of the Award.

b. The Plan is discretionary in nature and the Company can amend, cancel, or terminate it at any time.

c. This Award and any other equity awards granted under the Plan are voluntary and occasional and do not create any contractual or other right to receive future awards or other benefits in lieu of future awards, even if similar awards have been granted repeatedly in the past.

d. All determinations with respect to any such future awards, including, but not limited to, the time or times when such awards are granted, the number of Ordinary Shares, and performance and other conditions applied to the awards, will be at the sole discretion of the Company.

e. The value of the Ordinary Shares and this Award is an extraordinary item of compensation, which is outside the scope of your employment, service contract or consulting agreement, if any. This Award shall not form part of any past, current or future entitlement to remuneration or benefits which you may have under any contract of employment with the Company nor form any part of any such contract of employment between you and the Company.

f. The Ordinary Shares, this Award, or any income derived therefrom are a potential bonus payment not paid in lieu of any cash salary compensation and not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any termination, severance, resignation, redundancy, end of service payments, bonuses, long-service awards, life or accident insurance benefits, pension or retirement benefits or similar payments.

g. In the event of the involuntary termination of your Continuous Service, your eligibility to receive Ordinary Shares or payments under the Award or the Plan, if any, will terminate effective as of the date that you are no longer actively employed or retained regardless of any reasonable notice period mandated under local law, except as expressly provided in the Agreement.

h. The future value of the Ordinary Shares is unknown and cannot be predicted with certainty. You do not have, and will not assert, any claim or entitlement to compensation, indemnity or damages arising from the termination of this award or diminution in value of the Ordinary Shares and you irrevocably release the Company, its Affiliates and, if applicable, your employer, if different from the Company, from any such claim that may arise.
The Plan and this Agreement set forth the entire understanding between you, the Company and any Affiliate regarding the acquisition of the Ordinary Shares and supersedes all prior oral and written agreements pertaining to this Award.

14. UNSECURED OBLIGATION. Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company’s obligation, if any, to issue shares pursuant to this Agreement. You shall not have voting or any other rights as a shareholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 7 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a shareholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

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

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

17. MISCELLANEOUS.

a. The rights and obligations of the Company under your Award shall be transferable to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by the Company’s successors and assigns. Your rights and obligations under your Award may only be assigned with the prior written consent of the Company.

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

c. You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award, and fully understand all provisions of your Award.
d. This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

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

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

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

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

21. AMENDMENT. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that no such amendment adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the grant as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.
22. **NO OBLIGATION TO MINIMIZE TAXES.** The Company has no duty or obligation to minimize the tax consequences to you of this Award and will not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so.
Appendix A

The provisions set forth on this Appendix A shall apply to the extent the Award is a Non-Exempt Award and shall supersede any provisions to the contrary set forth in the Plan or in any other section of the Agreement to which this Appendix A is attached.

1. The provisions of this Section 1 are intended to apply to the extent your Award is a Non-Exempt Award because of the terms of a severance arrangement or other agreement between you and the Company, if any, that provide for acceleration of vesting of your Award and issuance of the shares in respect of the Award upon your termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("Separation from Service") and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4) or 1.409A-1(b)(9) ("Non-Exempt Severance Arrangement"). To the extent your Award is a Non-Exempt Award due to application of a Non-Exempt Severance Arrangement, the following provisions in this Section 1 of Appendix A shall supersede anything to the contrary in Section 6(a) of the Award Agreement.

a. If your Award vests in the ordinary course during your Continuous Service in accordance with the vesting schedule set forth in the Grant Notice, without accelerating vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of your Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date and (ii) the 60th day that follows the applicable vesting date.

b. If vesting of your Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with your Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of your Award and, therefore, are part of the terms of your Award as of the date of grant, then the shares will be earlier issued in respect of your Award upon your Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of your Separation from Service. However, if at the time the shares would otherwise be issued you are subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six (6) months following the date of your Separation from Service, or, if earlier, the date of your death that occurs within such six month period.

c. If vesting of your Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with your Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Award and, therefore, are not a part of the terms of your Award on the date of grant, then such acceleration of vesting of your Award shall not accelerate the issuance date of the shares, but the shares shall instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during your Continuous Service, notwithstanding the vesting acceleration of the Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).
2. Permitted Treatment of Non-Exempt Awards Upon a Corporate Transaction for Employees and Consultants

The provisions in this Section 2 shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of your Non-Exempt Award in connection with a Corporate Transaction if you were either an Employee or Consultant upon the applicable date of grant of your Non-Exempt Award.

a. Vested Non-Exempt Awards: To the extent your Non-Exempt Award has vested in accordance with its terms upon or prior to the date of a Corporate Transaction (such portion of your Non-Exempt Award is a "Vested Non-Exempt Award"), then the following provisions shall apply.

1) If the Corporate Transaction is also a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company’s assets, as described in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (a "409A Change of Control"), then the surviving or acquiring corporation (or its parent company) (the “Acquiring Entity”) may not assume, continue or substitute your Vested Non-Exempt Award. Upon the 409A Change of Control the settlement of your Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of your Vested Non-Exempt Award. Alternatively, the Company may instead provide that you will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to you upon the 409A Change of Control.

2) If the Corporate Transaction is not also a 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute your Vested Non-Exempt Award. The shares to be issued in respect of your Vested Non-Exempt Award shall be issued to you by the Acquiring Entity on the same schedule that the shares would have been issued to you if the Corporate Transaction had not occurred. In the Acquiring Entity’s discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to you on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Corporate Transaction.

b. Unvested Non-Exempt Awards. To the extent your Non-Exempt Award has not vested in accordance with its terms upon or prior to the date of any Corporate Transaction, (such portion of your Non-Exempt Award is an “Unvested Non-Exempt Award”), then the following provisions shall apply.

1) If the Acquiring Entity will not assume, substitute or continue your Unvested Non-Exempt Award, then such Award shall automatically terminate and be forfeited upon the Corporate Transaction with no consideration payable to you in respect of your forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Company may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Corporate Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to you, as further provided in Section 4(b) below. In the absence of such discretionary election by the Company, your Unvested Non-Exempt Award shall be forfeited without payment of any consideration to you if the Acquiring Entity will not assume, substitute or continue your Unvested Non-Exempt Award in connection with the Corporate Transaction.
2) The foregoing treatment shall apply with respect to all Unvested Non-Exempt Awards upon any Corporate Transaction, and regardless of whether or not such Corporate Transaction is also a 409A Change of Control.

3. Permitted Treatment of Non-Exempt Awards Upon a Corporate Transaction for Non-Employee Directors. If you were a Director but not an Employee on the applicable grant date of your Non-Exempt Award and ("Non-Exempt Director Award"), the following provisions shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of your Non-Exempt Director Award in connection with a Corporate Transaction.

   a. If the Corporate Transaction is also a 409A Change of Control then the Acquiring Entity may not assume, continue or substitute your Non-Exempt Director Award. Upon the 409A Change of Control the vesting and settlement of your Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to you in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that you will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to you upon the 409A Change of Control pursuant to the preceding provision.

   b. If the Corporate Transaction is not also a 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute your Non-Exempt Director Award. Unless otherwise determined by the Board, your Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of your Non-Exempt Director Award shall be issued to you by the Acquiring Entity on the same schedule that the shares would have been issued to you if the Corporate Transaction had not occurred. In the Acquiring Entity’s discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to you on such issuance dates, with the determination of Fair Market Value made on the date of the Corporate Transaction.

4. General Superseding Provisions. The provisions in this Section 4 shall apply and supersede anything to the contrary that may be set forth in the Plan, the Grant Notice or in any other section of the Agreement with respect to the permitted treatment of your Non-Exempt Award:

   a. Any exercise by the Board of discretion to accelerate the vesting of your Non-Exempt Award shall not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

   b. The Company explicitly reserves the right to earlier settle your Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).
c. To the extent the terms of your Non-Exempt Award provide that it will be settled upon a Change in Control or Corporate Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Change in Control or Corporate Transaction event triggering settlement must also constitute a 409A Change of Control. To the extent the terms of your Non-Exempt Award provides that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation From Service. However, if at the time the shares would otherwise be issued to you in connection with your “separation from service” you are subject to the distribution limitations contained in Section 409A applicable to “specified employees,” as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six (6) months following the date of your Separation From Service, or, if earlier, the date of your death that occurs within such six month period.

5. **Section 409A Compliance.** The provisions in this Agreement for delivery of the shares in respect of the Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to you in respect of your Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.
Pursuant to the Restricted Stock Unit Grant Notice (the "Grant Notice") and this Restricted Stock Unit Agreement (the "Agreement") and in consideration of your services, Horizon Pharma Public Limited Company (the "Company") has granted you a Restricted Stock Unit Award (the "Award") under its 2014 Equity Incentive Plan (the "Plan") for the number of restricted stock units referenced in the Grant Notice. Capitalized terms not explicitly defined in this Agreement shall have the same meanings given to them in the Plan or the Grant Notice, as applicable. Except as otherwise explicitly provided herein, in the event of any conflict between the terms in this Agreement and the Plan, the terms of the Plan shall control.

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

1. **GRANT OF THE AWARD.** This Award represents your right to be issued on a future date the number of Ordinary Shares that is equal to the number of restricted stock units indicated in the Grant Notice (the "Stock Units") at the Purchase Price per Ordinary Share specified in your Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "Account") the number of Stock Units subject to the Award.

2. **VESTING.** Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice, provided that vesting will cease upon the termination of your Continuous Service. Upon such termination of your Continuous Service, the Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in such Stock Units or the Ordinary Shares to be issued in respect of such portion of the Award.

3. **METHOD OF PAYMENT.** On or before the time you receive a distribution of the Ordinary Shares in settlement of your Stock Units, you hereby authorize the Company or any Affiliate to satisfy the payment of the Purchase Price per Ordinary Share with respect to such Ordinary Shares by withholding such payment from payroll and any other cash amounts otherwise payable to you. If no cash amounts are otherwise payable to you by the Company and available for such deduction, you must provide timely payment of the applicable Purchase Price to the Company via cash or check and no obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that you have satisfied such payment requirement. All amounts due are payable in United States dollars based, if applicable, upon the local currency to United States dollar exchange rate published in the West Coast edition of The Wall Street Journal on the applicable payment date (or, if such date is not a business day in the United States, the preceding business day in the United States).
4. **NUMBER OF STOCK UNITS, ORDINARY SHARES AND PURCHASE PRICE.**

   (a) The number of Stock Units subject to your Award and the Purchase Price per Ordinary Share may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Furthermore, the Purchase Price per Ordinary Share will be automatically adjusted from time to time, as applicable, such that it shall at all times be equal to the nominal value per Ordinary Share as then in effect. In no event will the Purchase Price per Ordinary Share be less than the nominal value per Ordinary Share.

   (b) Any additional Stock Units that become subject to the Award pursuant to this Section 4, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Stock Units covered by your Award.

   (c) Notwithstanding the provisions of this Section 4, no fractional shares or rights for fractional Ordinary Shares shall be created pursuant to this Section 4. The Board shall, in its discretion, determine an equivalent benefit for any fractional shares or fractional shares that might be created by the adjustments referred to in this Section 4.

5. **SECURITIES LAW COMPLIANCE.** You may not be issued any shares in respect of your Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award also must comply with other applicable laws and regulations governing the Award, including, without limitation, the laws and regulations of the United States and your country of residence, and you will not receive such shares if the Company determines that such receipt would not be in material compliance with such laws and regulations.

6. **TRANSFER RESTRICTIONS.**

   (a) Your Award is not transferable, except by will or by the laws of descent and distribution. In addition to any other limitation on transfer created by applicable securities laws, you agree not to assign, hypothecate, donate, encumber or otherwise dispose of any interest in any of the Ordinary Shares subject to the Award until the shares are issued to you in accordance with Section 7 of this Agreement, subject to the additional restrictions set forth in Section 6(b) below. Notwithstanding the foregoing, by delivering written notice to the Company, in a form satisfactory to the Company, you may designate a third party who, in the event of your death, shall thereafter be entitled to receive any distribution of Ordinary Shares to which you were entitled at the time of your death pursuant to this Agreement.

   (b) Any Ordinary Shares issued to you in settlement of the Award may not be transferred, sold or otherwise disposed of by you within the one (1) year period that commences on the date the shares are issued to you (the “Holding Period”); provided that nothing in this Section 6(b) shall prohibit the disposition of Ordinary Shares in connection with a Change in Control or the withholding of shares that would otherwise be issued pursuant to the Award in satisfaction of applicable withholding taxes. After the Holding Period has expired, you are free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such issued Ordinary Shares provided that any such actions are in compliance with the provisions herein, any applicable Company policies (including, but not limited to, insider trading and window period policies) and applicable securities laws.
7. **DATE OF ISSUANCE.**

   (a) To the extent the Award is exempt from application of Section 409A of the Code and any state law of similar effect (collectively "Section 409A"), the Company will deliver to you a number of Ordinary Shares equal to the number of vested Stock Units subject to your Award, including any additional Stock Units received pursuant to Section 4 above that relate to those vested Stock Units, on the applicable vesting date(s). However, if a scheduled delivery date falls on a date that is not a business day, such delivery date shall instead fall on the next following business day. Delivery of the shares pursuant to the provisions of this Section 7(a) is intended to comply with the requirements for the short-term deferral exemption available under Treasury Regulations Section 1.409A-1(b)(4) and shall be construed and administered in such manner. The form of such delivery of the shares (e.g., a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

   (b) The provisions of Appendix A to this Agreement will apply to the extent the Award is subject to, and not exempt from, application of Section 409A (a “Non-Exempt Award”).

8. **DIVIDENDS.** You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment as provided in the Plan; provided, however, that this sentence shall not apply with respect to any Ordinary Shares that are delivered to you in connection with your Award after such shares have been delivered to you.

9. **RESTRICTIVE LEGENDS.** The shares issued in respect of your Award shall be endorsed with appropriate legends determined by the Company.

10. **AWARD NOT A SERVICE CONTRACT.**

   (a) Your Continuous Service with the Company or an Affiliate is not for any specified term and may be terminated by you or by the Company or an Affiliate at any time, for any reason, with or without cause and with or without notice. Nothing in this Agreement (including, but not limited to, the vesting of your Award pursuant to the schedule set forth in the Grant Notice or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.
(b) By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice is earned only by continuing as an employee, director or consultant at the will of the Company (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "reorganization"). You further acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with your right or the Company’s right to terminate your Continuous Service at any time, with or without cause and with or without notice.

11. WITHHOLDING OBLIGATIONS.

(a) On or before the time you receive a distribution of the shares subject to your Award, or at any time thereafter as requested by the Company, you hereby authorize any required withholding from the Ordinary Shares issuable to you and/or otherwise agree to make adequate provision in cash for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate which arise in connection with your Award, as calculated based upon the maximum permitted withholding rate (the "Withholding Taxes"). Additionally, unless you satisfy the requirements set forth in Section 11(b) the Company will satisfy the Withholding Taxes obligation relating to your Award by withholding Ordinary Shares from the Ordinary Shares issued or otherwise issuable to you in connection with the Award with a Fair Market Value (measured as of the date Ordinary Shares are issued to pursuant to Section 7) equal to the amount of such Withholding Taxes; provided, however, that the number of such Ordinary Shares so withheld shall not exceed the amount necessary to satisfy the Company’s tax withholding obligations as calculated using the maximum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes (the “Share Withholding Procedure”). Any adverse consequences to you arising in connection with such Share Withholding Procedure shall be your sole responsibility.

(b) Unless you timely provide Horizon with each of the following, a Share Withholding Procedure will be automatically applied to your Award:

   (i) Written notice at least 10 days prior to the vesting date that you intend to pay the Withholding Taxes via a cash or check payment, and

   (ii) Cash or check payment of the total amount of the Withholding Taxes by the vesting date.

If the Share Withholding Procedure is applied to your Award then on the Vesting Date Horizon will automatically reduce the number of shares issuable pursuant to your Award by the maximum number of whole Horizon shares with a fair market value that at such time does not exceed the Withholding Taxes, and you will be issued only the net remaining number of Horizon
shares. Any remaining portion of the Withholding Taxes that is less than the fair market value of one Horizon share will be withheld from other payroll compensation otherwise payable to you. In determining the fair market value of Horizon’s shares for such purposes, the closing price of Horizon’s shares on the Vesting Date will apply.

(c) Unless the tax withholding obligations of the Company and/or any Affiliate are satisfied, the Company shall have no obligation to deliver to you any Ordinary Shares pursuant to this Award.

(d) No obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that either (i) you have made payment, or have made arrangements satisfactory to the Company and/or any Affiliate for the payment to it of such sum as is sufficient to meet any withholding liability to Taxation (defined below) in any jurisdiction which is or would be recoverable from you in connection with the vesting or the Award or the issuance of Ordinary Shares by the Company in settlement of the Award, and in respect of which the Company and/or any Affiliate is liable to account in any jurisdiction; or (ii) you have entered into an agreement with the Company and/or an Affiliate (in a form satisfactory to the Company or such Affiliate) to ensure that such a payment is made by you including, without limitation, amounts in respect of any employers’ social security (or the local law equivalent thereof) or other forms of Taxation. Accordingly, the Company shall have no obligation to issue a certificate for such Ordinary Shares or release such Ordinary Shares from any escrow provided for herein unless such obligations are satisfied. “Taxation” shall include all forms of taxation including employees’ and employers’ social security, income tax and any other taxes of whatever nature in any jurisdiction together with any amount payable by an Affiliate in respect of which the Affiliate has a duty to account as a result of any laws of any jurisdiction relating to taxation.

12. PERSONAL DATA. You understand that your employer, if applicable, the Company, and/or its Affiliates hold certain personal information about you. This information include your name, home address, telephone number, date of birth, social security or equivalent tax identification number, salary, nationality, job title, and details of your Award and all Ordinary Shares subject to your Award that have been granted, cancelled, vested, unvested, or are outstanding (the “Personal Data”).

You hereby declare your express consent to allowing your employer to transfer your Personal Data (name, home address, telephone number, date of birth, salary, nationality, job title, and details of the Award and all Ordinary Shares subject to such grant) outside the country in which you are employed or retained to its Affiliates, Horizon Pharma, Inc. and Horizon Pharma USA, Inc. which are located in the United States and their parent entity, Horizon Pharma Public Limited Company (together such entities are the “Company Group”). The legal persons for whom such Personal Data are intended are: Horizon Pharma Public Limited Company, Horizon Pharma, Inc., Horizon Pharma USA, Inc., StockCross Financial Services and any other third party entity providing equity award and/or Plan administration services to the Company and for the sole purpose of facilitating the transactions contemplated by this Agreement. You have the right to access and correct your Personal Data by applying to the Company representative identified on the Grant Notice (the “Representative”). You have the right to revoke this consent at any time with future effect towards the Company Group by providing written notice to the
Representative of such revocation (the "Revocation Notice") and as soon as administratively practicable following the Representative's receipt of the Revocation Notice your consent revocation will become effective and your Award shall automatically immediately terminate and be forfeited, and you will not receive any Ordinary Shares or any other consideration in respect of such forfeited Award.

13. ADDITIONAL ACKNOWLEDGEMENTS. You hereby consent and acknowledge that:

(a) Participation in the Plan is voluntary and therefore you must accept the terms and conditions of the Plan and this Award as a condition to participating in the Plan and receipt of the Award.

(b) The Plan is discretionary in nature and the Company can amend, cancel, or terminate it at any time.

(c) This Award and any other equity awards granted under the Plan are voluntary and occasional and do not create any contractual or other right to receive future awards or other benefits in lieu of future awards, even if similar awards have been granted repeatedly in the past.

(d) All determinations with respect to any such future awards, including, but not limited to, the time or times when such awards are granted, the number of Ordinary Shares, and performance and other conditions applied to the awards, will be at the sole discretion of the Company.

(e) The value of the Ordinary Shares and this Award is an extraordinary item of compensation, which is outside the scope of your employment, service contract or consulting agreement, if any. This Award shall not form part of any past, current or future entitlement to remuneration or benefits which you may have under any contract of employment with the Company nor form any part of any such contract of employment between you and the Company.

(f) The Ordinary Shares, this Award, or any income derived therefrom are a potential bonus payment not paid in lieu of any cash salary compensation and not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any termination, severance, resignation, redundancy, end of service payments, bonuses, long-service awards, life or accident insurance benefits, pension or retirement benefits or similar payments.

(g) In the event of the involuntary termination of your Continuous Service, your eligibility to receive Ordinary Shares or payments under the Award or the Plan, if any, will terminate effective as of the date that you are no longer actively employed or retained regardless of any reasonable notice period mandated under local law, except as expressly provided in the Agreement.

(h) The future value of the Ordinary Shares is unknown and cannot be predicted with certainty. You do not have, and will not assert, any claim or entitlement to compensation, indemnity or damages arising from the termination of this award or diminution in value of the Ordinary Shares and you irrevocably release the Company, its Affiliates and, if applicable, your employer, if different from the Company, from any such claim that may arise.

6.
(i) The Plan and this Agreement set forth the entire understanding between you, the Company and any Affiliate regarding the acquisition of the Ordinary Shares and supersedes all prior oral and written agreements pertaining to this Award.

14. **Unsecured Obligation.** Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company’s obligation, if any, to issue shares pursuant to this Agreement. You shall not have voting or any other rights as a shareholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 7 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a shareholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

15. **Other Documents.** You hereby acknowledge receipt or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company’s policy permitting officers, directors and other specified individuals to sell shares only during certain “window” periods and the Company’s insider trading policy, in effect from time to time.

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

17. **Miscellaneous.**

   (a) The rights and obligations of the Company under your Award shall be transferable to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by the Company’s successors and assigns. Your rights and obligations under your Award may only be assigned with the prior written consent of the Company.

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

7.
(c) You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award, and fully understand all provisions of your Award.

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

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

18. GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Except as expressly provided in this Agreement, in the event of any conflict between the provisions of your Award and those of the Plan, the provisions of the Plan shall control.

19. CLAWBACK/RECOUPMENT. Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment or recovery by the Company in accordance with the terms of: (i) the Company’s Incentive Compensation Recoupment Policy, (ii) The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, and (iii) any compensation recovery policy otherwise required by applicable law or listing requirements, in each case to the extent applicable.

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

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

22. AMENDMENT. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that no such amendment adversely affecting your rights hereunder may be made without your written consent. Without limiting the
foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the grant as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

23. **NO OBLIGATION TO MINIMIZE TAXES.** The Company has no duty or obligation to minimize the tax consequences to you of this Award and will not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by accepting this Award, you have agreed that you have done so or knowingly and voluntarily declined to do so.
Appendix A

The provisions set forth on this Appendix A shall apply to the extent the Award is a Non-Exempt Award and shall supersede any provisions to the contrary set forth in the Plan or in any other section of the Agreement to which this Appendix A is attached.

1. The provisions of this Section 1 are intended to apply to the extent your Award is a Non-Exempt Award because of the terms of a severance arrangement or other agreement between you and the Company, if any, that provide for acceleration of vesting of your Award and issuance of the shares in respect of the Award upon your termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("Separation from Service") and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4) or 1.409A-1(b)(9) ("Non-Exempt Severance Arrangement"). To the extent your Award is a Non-Exempt Award due to application of a Non-Exempt Severance Arrangement, the following provisions in this Section 1 of Appendix A shall supersede anything to the contrary in Section 6(a) of the Award Agreement.

(a) If your Award vests in the ordinary course during your Continuous Service in accordance with the vesting schedule set forth in the Grant Notice, without accelerating vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of your Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date and (ii) the 60th day that follows the applicable vesting date.

(b) If vesting of your Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with your Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of your Award and, therefore, are part of the terms of your Award as of the date of grant, then the shares will be earlier issued in respect of your Award upon your Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of your Separation from Service. However, if at the time the shares would otherwise be issued you are subject to the distribution limitations contained in Section 409A applicable to “specified employees,” as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six (6) months following the date of your Separation from Service, or, if earlier, the date of your death that occurs within such six month period.

(c) If vesting of your Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with your Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Award and, therefore, are not a part of the terms of your Award on the date of grant, then such acceleration of vesting of your Award shall not accelerate the issuance date of the shares, but the shares shall instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during your Continuous Service, notwithstanding the vesting acceleration of the Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).

10.
2. **Permitted Treatment of Non-Exempt Awards Upon a Corporate Transaction for Employees and Consultants.** The provisions in this Section 2 shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of your Non-Exempt Award in connection with a Corporate Transaction if you were either an Employee or Consultant upon the applicable date of grant of your Non-Exempt Award.

(a) **Vested Non-Exempt Awards:** To the extent your Non-Exempt Award has vested in accordance with its terms upon or prior to the date of a Corporate Transaction (such portion of your Non-Exempt Award is a "Vested Non-Exempt Award"), then the following provisions shall apply.

(i) If the Corporate Transaction is also a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company’s assets, as described in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (a "409A Change of Control"), then the surviving or acquiring corporation (or its parent company) (the "Acquiring Entity") may not assume, continue or substitute your Vested Non-Exempt Award. Upon the 409A Change of Control the settlement of your Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of your Vested Non-Exempt Award. Alternatively, the Company may instead provide that you will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to you upon the 409A Change of Control.

(ii) If the Corporate Transaction is not also a 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute your Vested Non-Exempt Award. The shares to be issued in respect of your Vested Non-Exempt Award shall be issued to you by the Acquiring Entity on the same schedule that the shares would have been issued to you if the Corporate Transaction had not occurred. In the Acquiring Entity’s discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to you on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Corporate Transaction.

(b) **Unvested Non-Exempt Awards.** To the extent your Non-Exempt Award has not vested in accordance with its terms upon or prior to the date of any Corporate Transaction, (such portion of your Non-Exempt Award is an “Unvested Non-Exempt Award”), then the following provisions shall apply.

(i) If the Acquiring Entity will not assume, substitute or continue your Unvested Non-Exempt Award, then such Award shall automatically terminate and be forfeited upon the Corporate Transaction with no consideration payable to you in respect of your forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Company may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Corporate Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to you, as further provided in Section 4(b) below. In the absence of such discretionary election by the Company, your Unvested Non-Exempt Award shall be forfeited without payment of any consideration to you if the Acquiring Entity will not assume, substitute or continue your Unvested Non-Exempt Award in connection with the Corporate Transaction.
(ii) The foregoing treatment shall apply with respect to all Unvested Non-Exempt Awards upon any Corporate Transaction, and regardless of whether or not such Corporate Transaction is also a 409A Change of Control.

3. Permitted Treatment of Non-Exempt Awards Upon a Corporate Transaction for Non-Employee Directors. If you were a Director but not an Employee on the applicable grant date of your Non-Exempt Award and ("Non-Exempt Director Award"), the following provisions shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of your Non-Exempt Director Award in connection with a Corporate Transaction.

(a) If the Corporate Transaction is also a 409A Change of Control then the Acquiring Entity may not assume, continue or substitute your Non-Exempt Director Award. Upon the 409A Change of Control the vesting and settlement of your Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to you in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that you will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to you upon the 409A Change of Control pursuant to the preceding provision.

(b) If the Corporate Transaction is not also a 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute your Non-Exempt Director Award. Unless otherwise determined by the Board, your Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of your Non-Exempt Director Award shall be issued to your by the Acquiring Entity on the same schedule that the shares would have been issued to you if the Corporate Transaction had not occurred. In the Acquiring Entity’s discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to you on such issuance dates, with the determination of Fair Market Value made on the date of the Corporate Transaction.

4. General Superseding Provisions. The provisions in this Section 4 shall apply and supersede anything to the contrary that may be set forth in the Plan, the Grant Notice or in any other section of the Agreement with respect to the permitted treatment of your Non-Exempt Award:

(a) Any exercise by the Board of discretion to accelerate the vesting of your Non-Exempt Award shall not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

(b) The Company explicitly reserves the right to earlier settle your Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).
(c) To the extent the terms of your Non-Exempt Award provide that it will be settled upon a Change in Control or Corporate Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Change in Control or Corporate Transaction event triggering settlement must also constitute a 409A Change of Control. To the extent the terms of your Non-Exempt Award provides that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation From Service. However, if at the time the shares would otherwise be issued to you in connection with your “separation from service” you are subject to the distribution limitations contained in Section 409A applicable to “specified employees,” as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six (6) months following the date of your Separation From Service, or, if earlier, the date of your death that occurs within such six month period.

5. **Section 409A Compliance.** The provisions in this Agreement for delivery of the shares in respect of the Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to you in respect of your Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.

13.
Horizon Pharma Public Limited Company (the “Company”), pursuant to its 2014 Equity Incentive Plan (the “Plan”), hereby grants to you a restricted stock unit award (the “Award”) to purchase the Company’s Ordinary Shares. The following specific terms of the Award can be obtained by logging on to your StockCross brokerage account: [Participant, Date of Grant, Vesting Commencement Date, Number of Restricted Stock Units, Purchase Price per Ordinary Share, Vesting Schedule and Issuance Schedule]. These specific terms are incorporated by reference into this Grant Notice. This Award is subject to all of the terms and conditions as set forth herein and in the Restricted Stock Unit Agreement (the “Award Agreement”) and the Plan, all of which are available on the StockCross website. Capitalized terms are defined in the Plan or the Award Agreement shall have the meanings set forth in the Plan or the Award Agreement. The Purchase Price per Ordinary Share that may be issued in settlement of your Award is equal to the nominal value per Ordinary Share as of the Date of Grant and is subject to adjustment as provided in Section 4 of the Award Agreement.

Additional Terms/Acknowledgements: You must electronically accept the Award by logging into your StockCross account. If you have not set-up your StockCross brokerage account, the following information provided below will assist you in this process. Failure to do so may result in forfeiture of the Award. By electronically accepting the Award, you acknowledge receipt of, and understand and agree to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. You further acknowledge that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement, and the Plan set forth the entire understanding between you and the Company regarding the acquisition of shares in the Company and supersede all prior oral and written agreements on that subject with the exception of: (i) any written employment or severance arrangement that would provide for vesting acceleration of the Award upon the terms and conditions set forth therein, or (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law. By accepting this Award, the Participant consents to receive Plan documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

STOCKCROSS FINANCIAL SERVICES BROKERAGE ACCOUNT

Horizon currently utilizes StockCross Financial Services as our online broker. StockCross Financial Services offers an internet website for viewing option data and for buying or selling your stock options.

To open your brokerage account (if you have not yet done so)

- Go to the StockCross website at www.stockcross.com
- Select the Green “Open an Account” menu item.
- Under the New Account Application screen, select “Employee Stock Plan Account” button to proceed with the brokerage application.
- If any additional documentation is needed, StockCross will contact you directly.
- Once the account is fully processed, you will receive a welcome email from StockCross, containing your account number and other useful information. This is generally within 72 hours.

If you have any questions or comments completing the brokerage application, please contact StockCross Corporate Services at 800-338-3965.

Viewing your Award

- Login to www.trading.stockcross.com using you StockCross account number and password established during registration
- Once logged into your StockCross account, select the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. Please note that to view this information, you will need to disable popup blockers.
- Select “Portfolio.” This will show you all equity grants that you have been granted.
Accepting your Award

- Login to www.trading.stockcross.com using your StockCross user name and password established during registration.

- Once logged into your StockCross account, select the link to Employee Stock Plans under the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. **Please note that to view this information, you will need to disable popup blockers.**

- Select “My Portfolio.” This will show you all equity grants that you have been granted.

- For your new equity grant, in the first column, click on the Orange “Accept Grant” Action Button.

- This will take you to an electronic acceptance window. For your reference, the Equity Agreement applicable to the Award is provided. If you agree with the terms and conditions of your equity grant, place your name in the signature box, type your name below, and check the agreement box. Click “Accept Grant” to complete the acceptance.

**IMPORTANT REMINDER:** In order to avoid forfeiture of your Award, **you must electronically accept your Award 30 days prior to your first vesting date.**

Contact Horizon Pharma plc’s Global Equity Plan Administrator Garry Devine at 224-383-3037 or email gdevine@horizonpharma.com with any further questions regarding your awards.
Pursuant to the Restricted Stock Unit Grant Notice (the “Grant Notice”) and this Restricted Stock Unit Agreement (the “Agreement”) and in consideration of your services, Horizon Pharma Public Limited Company (the “Company”) has granted you a Restricted Stock Unit Award (the “Award”) under its 2014 Equity Incentive Plan (the “Plan”) and its Equity Long Term Incentive Program (“Program”) for the number of restricted stock units referenced in the Grant Notice. Capitalized terms not explicitly defined in this Agreement shall have the same meanings given to them in the Plan, Program or the Grant Notice, as applicable. Except as otherwise explicitly provided herein, in the event of any conflict between the terms in this Agreement and the Plan or Program, the terms of the Plan or Program shall control.

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

1. **GRANT OF THE AWARD.** This Award represents your right to be issued on a future date the number of Ordinary Shares that is equal to the number of restricted stock units indicated in the Grant Notice (the “Stock Units”) which vest at the Purchase Price per Ordinary Share specified in your Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the “Account”) the number of Stock Units subject to the Award. As provided in the Program, the Award may be settled via a Substitute Cash Payment in lieu of an issuance of Ordinary Shares.

2. **VESTING.** Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the Vesting Criteria. Except as otherwise specified in the Program or the Vesting Criteria, upon termination of your Continuous Service, the Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in such Stock Units or the Ordinary Shares to be issued in respect of such portion of the Award.

3. **METHOD OF PAYMENT.** On or before the time you receive a distribution of the Ordinary Shares in settlement of your Stock Units, you hereby authorize the Company or any Affiliate to satisfy the payment of the Purchase Price per Ordinary Share with respect to such Ordinary Shares by withholding such payment from payroll and any other cash amounts otherwise payable to you. If no cash amounts are otherwise payable to you by the Company and available for such deduction, you must provide timely payment of the applicable Purchase Price to the Company via cash or check and no obligation shall arise upon the Company to procure the issue or transfer of the Ordinary Shares unless and until the Company and/or any Affiliate are satisfied in their absolute discretion that you have satisfied such payment requirement. All amounts due are payable in United States dollars based, if applicable, upon the local currency to United States dollar exchange rate published in the West Coast edition of The Wall Street Journal on the applicable payment date (or, if such date is not a business day in the United States, the preceding business day in the United States).

1.
4. **NUMBER OF STOCK UNITS, ORDINARY SHARES AND PURCHASE PRICE.**

(a) The number of Stock Units subject to your Award and the Purchase Price per Ordinary Share may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Furthermore, the Purchase Price per Ordinary Share will be automatically adjusted from time to time, as applicable, such that it shall at all times be equal to the nominal value per Ordinary Share as then in effect. In no event will the Purchase Price per Ordinary Share be less than the nominal value per Ordinary Share.

(b) Any additional Stock Units that become subject to the Award pursuant to this Section 4, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Stock Units covered by your Award.

(c) Notwithstanding the provisions of this Section 4, no fractional shares or rights for fractional Ordinary Shares shall be created pursuant to this Section 4. The Board shall, in its discretion, determine an equivalent benefit for any fractional shares or fractional shares that might be created by the adjustments referred to in this Section 4.

5. **SECURITIES LAW COMPLIANCE.** You may not be issued any shares in respect of your Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award also must comply with other applicable laws and regulations governing the Award, including, without limitation, the laws and regulations of the United States and your country of residence, and you will not receive such shares if the Company determines that such receipt would not be in material compliance with such laws and regulations.

6. **TRANSFER RESTRICTIONS.** Your Award is not transferable, except by will or by the laws of descent and distribution. In addition to any other limitation on transfer created by applicable securities laws, you agree not to assign, hypothecate, donate, encumber or otherwise dispose of any interest in any of the Ordinary Shares subject to the Award until the shares are issued to you in accordance with Section 7 of this Agreement. After the shares have been issued to you, you are free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, any applicable Company policies (including, but not limited to, insider trading and window period policies) and applicable securities laws. Notwithstanding the foregoing, by delivering written notice to the Company, in a form satisfactory to the Company, you may designate a third party who, in the event of your death, shall thereafter be entitled to receive any distribution of Ordinary Shares to which you were entitled at the time of your death pursuant to this Agreement.

7. **DATE OF ISSUANCE.** The Company will deliver to you a number of Ordinary Shares equal to the number of vested Stock Units subject to your Award, including any additional Stock Units received pursuant to Section 4 above that relate to those vested Stock Units, as soon as administratively practicable following the date of the Committee’s
determination of the number of Stock Units that will vest, but in no event later than 30 days following the date of such determination. Delivery of the shares pursuant to the provisions of this Section 7(a) is intended to comply with the requirements for the short-term deferral exemption available under Treasury Regulations Section 1.409A-1(b)(4) and shall be construed and administered in such manner. The form of such delivery of the shares (e.g., a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

8. **DIVIDENDS.** You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment as provided in the Plan; provided, however, that this sentence shall not apply with respect to any Ordinary Shares that are delivered to you in connection with your Award after such shares have been delivered to you.

9. **RESTRICTIVE LEGENDS.** The shares issued in respect of your Award shall be endorsed with appropriate legends determined by the Company.

10. **AWARD NOT A SERVICE CONTRACT.**

   (a) Your Continuous Service with the Company or an Affiliate is not for any specified term and may be terminated by you or by the Company or an Affiliate at any time, for any reason, with or without cause and with or without notice. Nothing in this Agreement (including, but not limited to, the vesting of your Award pursuant to the schedule set forth in the Grant Notice or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

   (b) By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice is earned only by continuing as an employee, director or consultant at the will of the Company (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "reorganization"). You further acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with your right or the Company’s right to terminate your Continuous Service at any time, with or without cause and with or without notice.
11. WITHHOLDING OBLIGATIONS.

(a) On or before the time you receive a distribution of the shares subject to your Award, or at any time thereafter as requested by the Company, you hereby authorize any required withholding from the Ordinary Shares issuable to you and/or otherwise agree to make adequate provision in cash for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate which arise in connection with your Award, as calculated based upon the maximum permitted withholding rate (the “Withholding Taxes”). The Company will satisfy the Withholding Taxes obligation relating to your Award by withholding Ordinary Shares from the Ordinary Shares issued or otherwise issuable to you in connection with the Award with a Fair Market Value (measured as of the date Ordinary Shares are issued to pursuant to Section 7) equal to the amount of such Withholding Taxes; provided, however, that the number of such Ordinary Shares so withheld shall not exceed the amount necessary to satisfy the Company’s tax withholding obligations as calculated using the maximum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes. Accordingly, on the applicable vesting date(s) Horizon will automatically reduce the number of shares issuable pursuant to your Award by the maximum number of whole Horizon shares with a fair market value that at such time does not exceed the Withholding Taxes, and you will be issued only the net remaining number of Horizon shares (the “Share Withholding Procedure”). Any remaining portion of the Withholding Taxes that is less than the fair market value of one Horizon share will be withheld from other payroll compensation otherwise payable to you. In determining the fair market value of Horizon’s shares for such purposes, the closing price of Horizon’s shares on the applicable vesting date will apply. Any adverse consequences to you arising in connection with such Share Withholding Procedure shall be your sole responsibility.

(b) Unless the tax withholding obligations of the Company and/or any Affiliate are satisfied, the Company shall have no obligation to deliver to you any Ordinary Shares pursuant to this Award.

12. PERSONAL DATA. You understand that your employer, if applicable, the Company, and/or its Affiliates hold certain personal information about you. This information include your name, home address, telephone number, date of birth, social security or equivalent tax identification number, salary, nationality, job title, and details of your Award and all Ordinary Shares subject to your Award that have been granted, cancelled, vested, unvested, or are outstanding (the “Personal Data”).

You hereby declare your express consent to allowing your employer to transfer your Personal Data (name, home address, telephone number, date of birth, salary, nationality, job title, and details of the Award and all Ordinary Shares subject to such grant) outside the country in which you are employed or retained to its Affiliates, Horizon Pharma, Inc. and Horizon Pharma USA, Inc. which are located in the United States and their parent entity, Horizon Pharma Public Limited Company (together such entities are the “Company Group”). The legal persons for whom such Personal Data are intended are: Horizon Pharma Public Limited Company, Horizon
13. ADDITIONAL ACKNOWLEDGEMENTS. You hereby consent and acknowledge that:

(a) Participation in the Plan is voluntary and therefore you must accept the terms and conditions of the Plan and this Award as a condition to participating in the Plan and receipt of the Award.

(b) The Plan is discretionary in nature and the Company can amend, cancel, or terminate it at any time.

(c) This Award and any other equity awards granted under the Plan are voluntary and occasional and do not create any contractual or other right to receive future awards or other benefits in lieu of future awards, even if similar awards have been granted repeatedly in the past.

(d) All determinations with respect to any such future awards, including, but not limited to, the time or times when such awards are granted, the number of Ordinary Shares, and performance and other conditions applied to the awards, will be at the sole discretion of the Company.

(e) The value of the Ordinary Shares and this Award is an extraordinary item of compensation, which is outside the scope of your employment, service contract or consulting agreement, if any. This Award shall not form part of any past, current or future entitlement to remuneration or benefits which you may have under any contract of employment with the Company nor form any part of any such contract of employment between you and the Company.

(f) The Ordinary Shares, this Award, or any income derived therefrom are a potential bonus payment not paid in lieu of any cash salary compensation and not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any termination, severance, resignation, redundancy, end of service payments, bonuses, long-service awards, life or accident insurance benefits, pension or retirement benefits or similar payments.

(g) In the event of the involuntary termination of your Continuous Service, your eligibility to receive Ordinary Shares or payments under the Award or the Plan, if any, will terminate effective as of the date that you are no longer actively employed or retained regardless of any reasonable notice period mandated under local law, except as expressly provided in the Agreement.
The future value of the Ordinary Shares is unknown and cannot be predicted with certainty. You do not have, and will not assert, any claim or entitlement to compensation, indemnity or damages arising from the termination of this award or diminution in value of the Ordinary Shares and you irrevocably release the Company, its Affiliates and, if applicable, your employer, if different from the Company, from any such claim that may arise.

The Plan, the Program the Vesting Criteria and this Agreement set forth the entire understanding between you, the Company and any Affiliate regarding the acquisition of the Ordinary Shares and supersedes all prior oral and written agreements pertaining to this Award.

14. UNSECURED OBLIGATION. Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company’s obligation, if any, to issue shares pursuant to this Agreement. You shall not have voting or any other rights as a shareholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 7 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a shareholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

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

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

17. MISCELLANEOUS.

(a) The rights and obligations of the Company under your Award shall be transferable to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by the Company’s successors and assigns. Your rights and obligations under your Award may only be assigned with the prior written consent of the Company.
You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

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

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

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

18. **GOVERNING PLAN DOCUMENT.** Your Award is subject to all the provisions of the Plan and the Program, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan and the Program. Except as expressly provided in this Agreement, in the event of any conflict between the provisions of your Award and those of the Plan or the Program, the provisions of the Plan or Program shall control.

19. **Clawback/Recoupment.** Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment or recovery by the Company in accordance with the terms of: (i) the Company’s Incentive Compensation Recoupment Policy, (ii) The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, and (iii) any compensation recovery policy otherwise required by applicable law or listing requirements, in each case to the extent applicable.

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

21. **Effect on Other Employee Benefit Plans.** The value of the Award subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company’s or any Affiliate’s employee benefit plans.
22. **AMENDMENT.** This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that no such amendment adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the grant as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

23. **NO OBLIGATION TO MINIMIZE TAXES.** The Company has no duty or obligation to minimize the tax consequences to you of this Award and will not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by accepting the Award, you have agreed that you have done so or knowingly and voluntarily declined to do so.
Horizon Pharma Public Limited Company (the “Company”), pursuant to its 2014 Equity Incentive Plan (the “Plan”) and its Equity Long Term Incentive Program that became effective on January 5, 2018 (the “Program”), granted to you a restricted stock unit award (the “Award”) to purchase the Company’s Ordinary Shares. The following specific terms of the Award can be obtained by logging on to your StockCross brokerage account: Participant, Date of Grant, Number of Restricted Stock Units, Purchase Price per Ordinary Share, and Vesting Criteria.

These specific terms are incorporated by reference into this Grant Notice. This Award is subject to all of the terms and conditions as set forth herein and in the Restricted Stock Unit Agreement (the “Award Agreement”), the Plan, the Program, and the Vesting Criteria, all of which are available on the StockCross website. Capitalized terms are defined in the Plan or the Award Agreement shall have the meanings set forth in the Plan, the Program or the Award Agreement. The Purchase Price per Ordinary Share that may be issued in settlement of your Award is equal to the nominal value per Ordinary Share as of the Date of Grant and is subject to adjustment as provided in Section 4 of the Award Agreement. The Award is subject to all the terms and conditions of the Program and the Vesting Criteria, and in the event of any conflict between the terms of the Program or the Vesting Criteria and the terms set forth in this Restricted Stock Unit Grant Notice or the Award Agreement, the terms of the Program or Vesting Criteria shall control.

Additional Terms/Acknowledgements: You must electronically accept the Award by logging into your StockCross account. If you have not set-up your StockCross brokerage account, the following information provided below will assist you in this process. Failure to do so may result in forfeiture of the Award. By electronically accepting the Award, you acknowledge receipt of, and understand and agree to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. You further acknowledge that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement, the Program and the Plan set forth the entire understanding between you and the Company regarding the acquisition of shares in the Company and supersede all prior oral and written agreements on that subject with the exception of: (i) any written employment or severance arrangement that would provide for vesting acceleration of the Award upon the terms and conditions set forth therein, or (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law. By accepting this Award, the Participant consents to receive Plan documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

STOCKCROSS FINANCIAL SERVICES BROKERAGE ACCOUNT
Horizon currently utilizes StockCross Financial Services as our online broker. StockCross Financial Services offers an internet website for viewing Award data and for buying or selling shares that may be issued in settlement of your Award.

To open your brokerage account

- Go to the StockCross website at www.stockcross.com.
- Select the red “Employee Stock Plans” menu item.
- Under the “Get Started” window, select the blue menu button “Open an Account.”
- Under the New Account Application screen, select “Employee Stock Option Plan ESOP” button to proceed with the brokerage application.
- You will receive a welcome email from StockCross within 72 hours, containing your account number and other useful information

If you have any questions or comments completing the brokerage application, please contact the StockCross New Accounts team at 800-225-6196 ext. 2442.
Viewing your Award

- Login to www.stockcross.com using your StockCross account number and password established during registration.
- Once logged into your StockCross account, select the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. **Please note that to view this information, you will need to disable popup blockers.**
- Select “My Portfolio.” This will show you all equity grants that you have been granted.

Accepting your Award

- Login to www.stockcross.com using your StockCross account number and password established during registration.
- Once logged into your StockCross account, select the menu item “Employee Stock Plan.” This will bring you into another window screen which provides a summary of your equity grants. **Please note that to view this information, you will need to disable popup blockers.**
- Select “My Portfolio.” This will show you all equity grants that you have been granted.
- For your new equity grant in the last column, click on the “View” hyperlink.
- Selecting “View” will take you to an electronic acceptance window. For your reference, the Equity Plan Agreement applicable to the Award is provided. If you agree with the terms and conditions of your equity grant, select the green “Accept” button.

**IMPORTANT REMINDER:** In order to avoid forfeiture of your Award, you must electronically accept your Award 30 days prior to your first vesting date.

Contact Horizon Pharma plc’s Senior Manager, Accounting and Global Equity Plan Administrator Garry Devine at 224-383-3037 or email gdevine@horizonpharma.com with any further questions regarding your awards.
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HORIZON PHARMA, INC.
DEFERRED COMPENSATION PLAN

ARTICLE 1
ESTABLISHMENT AND PURPOSE

Horizon Pharma, Inc. (the “Company”) originally established the Horizon Pharma, Inc. Deferred Compensation Plan (the “Plan”), effective April 1, 2015. The Plan is hereby amended and restated effective January 1, 2018 (the “Restatement Effective Date”). The purpose of the Plan is to attract and retain key employees by providing Participants with an opportunity to defer receipt of a portion of their salary, bonus, and other specified compensation. The Plan is not intended to meet the qualification requirements of Code Section 401(a), but is intended to meet the requirements of Code Section 409A, and shall be operated and interpreted consistent with that intent.

The Plan constitutes an unsecured promise by a Participating Employer to pay benefits in the future. Participants in the Plan shall have the status of general unsecured creditors of the Company or the Adopting Employer, as applicable. Each Participating Employer shall be solely responsible for payment of the benefits of its employees and their beneficiaries. The Plan is unfunded for Federal tax purposes and is intended to be an unfunded arrangement for eligible employees who are part of a select group of management or highly compensated employees of the Employer within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA. Any amounts set aside to defray the liabilities assumed by the Company or an Adopting Employer will remain the general assets of the Company or the Adopting Employer and shall remain subject to the claims of the Company’s or the Adopting Employer’s creditors until such amounts are distributed to the Participants.

ARTICLE 2
DEFINITIONS

2.1 Account. Account means a bookkeeping account maintained by the Committee to record the payment obligation of a Participating Employer to a Participant as determined under the terms of the Plan. The Committee may maintain an Account to record the total obligation to a Participant and component Accounts to reflect amounts payable at different times and in different forms. Reference to an Account means any such Account established by the Committee, as the context requires. Accounts are intended to constitute unfunded obligations within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA.

2.2 Account Balance. Account Balance means, with respect to any Account, the total payment obligation owed to a Participant from such Account as of the most recent Valuation Date.

2.3 Adopting Employer. Adopting Employer means an Affiliate who, with the consent of the Company, has adopted the Plan for the benefit of its eligible employees.

2.4 Affiliate. Affiliate means a corporation, trade or business that, together with the Company, is treated as a single employer under Code Section 414(b) or (c).
2.5 **Beneficiary**. Beneficiary means a natural person, estate, or trust designated by a Participant in accordance with Section 6.5 of the Plan to receive payments to which a Beneficiary is entitled in accordance with provisions of the Plan.

2.6 **Business Day**. Business Day means each day on which the New York Stock Exchange is open for business.

2.7 **Change in Control**. Change in Control means, with respect to a Participating Employer any of the following events: (i) a change in the ownership of the Participating Employer, (ii) a change in the effective control of the Participating Employer, or (iii) a change in the ownership of a substantial portion of the assets of the Participating Employer.

For purposes of this Section, a change in the ownership of the Participating Employer occurs on the date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer that, together with stock held by such person or group constitutes more than 50% of the total fair market value or total voting power of the stock of the Participating Employer. A change in the effective control of the Participating Employer occurs on the date on which either: (i) a person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer possessing 50% or more of the total voting power of the stock of the Participating Employer, taking into account all such stock acquired during the 12-month period ending on the date of the most recent acquisition, or (ii) a majority of the members of the Participating Employer’s Board of Directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of such Board of Directors prior to the date of the appointment or election, but only if no other corporation is a majority shareholder of the Participating Employer. A change in the ownership of a substantial portion of assets occurs on the date on which any one person, or more than one person acting as a group, other than a person or group of persons that is related to the Participating Employer, acquires assets from the Participating Employer that have a total gross fair market value equal to or more than 75% of the total gross fair market value of all of the assets of the Participating Employer immediately prior to such acquisition or acquisitions, taking into account all such assets acquired during the 12-month period ending on the date of the most recent acquisition.

An event constitutes a Change in Control with respect to a Participant only if the Participant performs services for the Participating Employer that has experienced the Change in Control, or the Participant’s relationship to the affected Participating Employer otherwise satisfies the requirements of Treasury Regulation Section 1.409A-3(i)(5)(ii).

The determination as to the occurrence of a Change in Control shall be based on objective facts and in accordance with the requirements of Code Section 409A.

2.8 **Claimant**. Claimant means a Participant or Beneficiary filing a claim under Article XII of this Plan.

2.9 **Code**. Code means the Internal Revenue Code of 1986, as amended from time to time.
2.10 **Code Section 409A.** Code Section 409A means section 409A of the Code, and regulations and other guidance issued by the Treasury Department and Internal Revenue Service thereunder.

2.11 **Committee.** Committee means the committee appointed by the Board of Directors of the Company Parent (or the appropriate committee of such board) to administer the Plan. If no designation is made, the Compensation Committee of the Board of Directors of the Company Parent shall have and exercise the powers of the Committee.

2.12 **Company.** Company means Horizon Pharma, Inc.

2.13 **Company Parent.** Company Parent means Horizon Pharma Public Limited Company.

2.14 **Company Contribution.** Company Contribution means a credit by a Participating Employer to a Participant’s Account(s) in accordance with the provisions of Article V of the Plan. Company Contributions are credited at the sole discretion of the Participating Employer and the fact that a Company Contribution is credited in one year shall not obligate the Participating Employer to continue to make such Company Contribution in subsequent years.

2.15 **Company Stock.** Company Stock means phantom ordinary shares issued by the Company Parent.

2.16 **Compensation.** Compensation means a Participant’s base salary, bonus, commission, and such other cash or equity-based compensation (if any) approved by the Committee as Compensation that may be deferred under this Plan. Compensation shall not include any compensation that has been previously deferred under this Plan or any other arrangement subject to Code Section 409A.

2.17 **Compensation Deferral Agreement.** Compensation Deferral Agreement means an agreement between a Participant and a Participating Employer that specifies: (i) the amount of each component of Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV, and (ii) the Payment Schedule applicable to one or more Accounts. The Committee may permit different deferral amounts for each component of Compensation and may establish a minimum or maximum deferral amount for each such component. Unless otherwise specified by the Committee in the Compensation Deferral Agreement, Participants may defer up to 50% of their base salary and up to 100% of other types of Compensation for a Plan Year. A Compensation Deferral Agreement may also specify the investment allocation described in Section 8.4.

2.18 **Death Benefit.** Death Benefit means the benefit payable under the Plan to a Participant’s Beneficiary(ies) upon the Participant’s death as provided in Section 6.1 of the Plan.

2.19 **Deferral.** Deferral means a credit to a Participant’s Account(s) that records that portion of the Participant’s Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV. Unless the context of the Plan clearly indicates otherwise, a reference to Deferrals includes Earnings attributable to such Deferrals.
Deferrals shall be calculated with respect to the gross cash Compensation payable to the Participant prior to any deductions or withholdings, but shall be reduced by the Committee as necessary so that it does not exceed 100% of the cash Compensation of the Participant remaining after deduction of all required income and employment taxes, 401(k) and other employee benefit deductions, and other deductions required by law. Changes to payroll withholdings that affect the amount of Compensation being deferred to the Plan shall be allowed only to the extent permissible under Code Section 409A.

2.20 **Director.** Director means a member of the Board of Directors of the Company, the Board of Directors of the Company Parent or the Board of Directors of any other Affiliate.

2.21 **Earnings.** Earnings means an adjustment to the value of an Account in accordance with Article VIII.

2.22 **Eligible Employee.** Eligible Employee means a member of a “select group of management or highly compensated employees” of a Participating Employer within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA, as determined by the Committee from time to time in its sole discretion.

2.23 **Employee.** Employee means a common-law employee of an Employer.

2.24 **Employer.** Employer means, with respect to Employees it employs, the Company and each Affiliate.

2.25 **ERISA.** ERISA means the Employee Retirement Income Security Act of 1974, as amended from time to time.

2.26 **Fiscal Year Compensation.** Fiscal Year Compensation means Compensation earned during one or more consecutive fiscal years of a Participating Employer, all of which is paid after the last day of such fiscal year or years.

2.27 **Participant.** Participant means an Eligible Employee who has received notification of his or her eligibility to defer Compensation under the Plan under Section 3.1 and any other person with an Account Balance greater than zero, regardless of whether such individual continues to be an Eligible Employee. A Participant’s continued participation in the Plan shall be governed by Section 3.2 of the Plan.

2.28 **Participating Employer.** Participating Employer means the Company and each Adopting Employer.

2.29 **Payment Schedule.** Payment Schedule means the date as of which payment of an Account under the Plan will commence and the form in which payment of such Account will be made.
2.30 **Performance-Based Compensation.** Performance-Based Compensation means Compensation where the amount of, or entitlement to, the Compensation is contingent on the satisfaction of pre-established organizational or individual performance criteria relating to a performance period of at least 12 consecutive months. Organizational or individual performance criteria are considered pre-established if established in writing by not later than 90 days after the commencement of the period of service to which the criteria relate, provided that the outcome is substantially uncertain at the time the criteria are established. The determination of whether Compensation qualifies as “**Performance-Based Compensation**” will be made in accordance with Treas. Reg. Section 1.409A-1(e) and subsequent guidance.

2.31 **Plan.** Generally, the term Plan means the “**Horizon Pharma, Inc. Deferred Compensation Plan**” as documented herein and as may be amended from time to time hereafter. However, to the extent permitted or required under Code Section 409A, the term Plan may in the appropriate context also mean a portion of the Plan that is treated as a single plan under Treas. Reg. Section 1.409A-1(c), or the Plan or portion of the Plan and any other nonqualified deferred compensation plan or portion thereof that is treated as a single plan under such section.

2.32 **Plan Year.** Plan Year means January 1 through December 31; provided, however, the initial Plan Year shall be the period commencing on April 1, 2015 and ending on December 31, 2015.

2.33 **Pre-2018 Deferrals.** Pre-2018 Deferrals means all Deferrals and Company Contributions contributed to the Participant’s Account that are contributions for Plan Years commencing prior to January 1, 2018 and any related earnings.

2.34 **Post-2017 Deferrals.** Post-2017 Deferrals means all Deferrals and Company Contributions contributed to the Participant’s Account that are contributions for Plan Years commencing on or after January 1, 2018 and any related earnings.

2.35 **Retirement/Termination Account.** Retirement/Termination Account means an Account established by the Committee to record the amounts payable to a Participant upon Separation from Service. Unless the Participant has established a Specified Date Account, all Deferrals and Company Contributions shall be allocated to a Retirement/Termination Account on behalf of the Participant.

2.36 **Separation from Service.** With respect to an Employee a “**Separation from Service**” means an Employee’s termination of service with the Employer. In all cases, whether a Separation from Service has occurred shall be determined by the Committee in accordance with Code Section 409A.

Except in the case of an Employee on a bona fide leave of absence as provided below, an Employee is deemed to have incurred a Separation from Service if the Employer and the Employee reasonably anticipated that the level of services to be performed by the Employee after a date certain, whether as an Employee or in a consulting capacity, would be reduced to 20% or less of the average services rendered by the Employee during the immediately preceding 36-month period (or the total period of employment, if less than 36 months), disregarding periods during which the Employee was on a bona fide leave of absence.

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An Employee who is absent from work due to military leave, sick leave, or other bona fide leave of absence shall incur a Separation from Service on the first date immediately following the later of: (i) the six month anniversary of the commencement of the leave, or (ii) the expiration of the Employee’s right, if any, to reemployment under statute or contract.

If a Participant is both a Director and an Employee, the services provided as a Director shall be disregarded in determining whether there has been a Separation from Service as an Employee, provided that the Plan is not required to be aggregated with any plans in which the Participant participates as a Director in accordance with the rules of Treasury Regulation Section 1.409A-1(c)(2)(ii).

For purposes of determining whether a Separation from Service has occurred, the Employer means the Employer as defined in Section 2.24 of the Plan, except that in applying Code sections 1563(a)(1), (2) and (3) for purposes of determining whether another organization is an Affiliate of the Company under Code Section 414(b), and in applying Treasury Regulation Section 1.414(c)-2 for purposes of determining whether another organization is an Affiliate of the Company under Code Section 414(c), “at least 50 percent” shall be used instead of “at least 80 percent” each place it appears in those sections.

The Committee specifically reserves the right to determine whether a sale or other disposition of substantial assets to an unrelated party constitutes a Separation from Service with respect to a Participant providing services to the seller immediately prior to the transaction and providing services to the buyer after the transaction. Such determination shall be made in accordance with the requirements of Code Section 409A.

2.37 Specified Date Account. Specified Date Account means an Account established by the Committee to record the amounts payable at a future date as specified in the Participant’s Compensation Deferral Agreement. Unless otherwise determined by the Committee, a Participant may maintain no more than five Specified Date Accounts. A Specified Date Account may be identified in enrollment materials as an “In-Service Account” or such other name as established by the Committee without affecting the meaning thereof.

2.38 Specified Date Benefit. Specified Date Benefit means the benefit payable to a Participant under the Plan in accordance with Section 6.1(b).

2.39 Specified Employee. Specified Employee means an Employee who, as of the date of his or her Separation from Service, is a “key employee” of the Company or any Affiliate, any stock of which is actively traded on an established securities market or otherwise.

An Employee is a key employee if he or she meets the requirements of Code Section 416(i)(1)(A)(i), (ii), or (iii) (applied in accordance with applicable regulations thereunder and without regard to Code Section 416(i)(5)) at any time during the 12-month period ending on the Specified Employee Identification Date. Such Employee shall be treated as a key employee for the entire 12-month period beginning on the Specified Employee Effective Date.

For purposes of determining whether an Employee is a Specified Employee, the compensation of the Employee shall be determined in accordance with the definition of compensation provided under Treas. Reg. Section 1.415(c)-2(d)(2) (wages, salaries, fees for
professional services, and other amounts received for personal services actually rendered in the course of employment with the employer maintaining the plan, to the extent such amounts are includible in gross income or would be includible but for an election under section 125(a), 132(f)(4), 402(e)(3), 402(h)(1)(B), 402(k) or 457(b), including the earned income of a self-employed individual; provided, however, that, with respect to a nonresident alien who is not a Participant in the Plan, compensation shall not include compensation that is not includible in the gross income of the Employee under Code Sections 872, 893, 894, 911, 931 and 933, provided such compensation is not effectively connected with the conduct of a trade or business within the United States.

In the event of corporate transactions described in Treas. Reg. Section 1.409A-1(i)(6), the identification of Specified Employees shall be determined in accordance with the default rules described therein, unless the Employer elects to utilize the available alternative methodology through designations made within the timeframes specified therein.

2.40 Specified Employee Identification Date. Specified Employee Identification Date means December 31st.

2.41 Specified Employee Effective Date. Specified Employee Effective Date means the first day of the fourth month following the Specified Employee Identification Date.


2.43 Termination Benefit. Termination Benefit means the benefit payable to a Participant under the Plan following the Participant’s Separation from Service.

2.44 Unforeseeable Emergency. Unforeseeable Emergency means a severe financial hardship to the Participant resulting from an illness or accident of the Participant, the Participant’s spouse, the Participant’s dependent (as defined in Code section 152, without regard to section 152(b)(1), (b)(2), and (d)(1)(B)), or a Beneficiary; loss of the Participant’s property due to casualty (including the need to rebuild a home following damage to a home not otherwise covered by insurance, for example, as a result of a natural disaster); or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The types of events which may qualify as an Unforeseeable Emergency may be limited by the Committee.

2.45 Valuation Date. Valuation Date means each Business Day.

2.46 Year of Service. Year of Service means each 12-month period of continuous service with the Employer.

ARTICLE 3
ELIGIBILITY AND PARTICIPATION

3.1 Eligibility and Participation. An Eligible Employee becomes a Participant upon the earlier to occur of: (i) a credit of Company Contributions under Article V, or (ii) receipt of notification of eligibility to participate.
3.2 **Duration.** A Participant shall be eligible to defer Compensation and receive allocations of Company Contributions, subject to the terms of the Plan, for as long as such Participant remains an Eligible Employee. A Participant who is no longer an Eligible Employee but has not Separated from Service may not defer Compensation under the Plan beyond the Plan Year in which he or she became ineligible but may otherwise exercise all of the rights of a Participant under the Plan with respect to his or her Account(s). On and after a Separation from Service, a Participant shall remain a Participant as long as his or her Account Balance is greater than zero (0), and during such time may continue to make allocation elections as provided in Section 8.4. An individual shall cease being a Participant in the Plan when all benefits under the Plan to which he or she is entitled have been paid.

ARTICLE 4
DEFERRALS

4.1 **Deferral Elections, Generally.**

(a) A Participant may elect to defer Compensation by submitting a Compensation Deferral Agreement during the enrollment periods established by the Committee and in the manner specified by the Committee, but in any event, in accordance with Section 4.2. A Compensation Deferral Agreement that is not timely filed with respect to a service period or component of Compensation shall be considered void and shall have no effect with respect to such service period or Compensation. The Committee may modify any Compensation Deferral Agreement prior to the date the election becomes irrevocable under the rules of Section 4.2.

(b) The Participant shall specify on his or her Compensation Deferral Agreement the amount of Deferrals and whether to allocate Deferrals to a Retirement/Termination Account or to a Specified Date Account. If no designation is made, Deferrals shall be allocated to the Retirement/Termination Account. A Participant may also specify in his or her Compensation Deferral Agreement the Payment Schedule applicable to his or her Plan Accounts. If the Payment Schedule is not specified in a Compensation Deferral Agreement, the Payment Schedule shall be the Payment Schedule specified in Section 6.2.

(c) For Pre-2018 Deferrals, Participants were permitted to contribute their aggregate Deferrals for all Plan Years to a single Retirement/Termination Account and up to a maximum of five (5) Specified Date Accounts. For Post-2017 Deferrals, with respect to each Plan year Participants may make different distribution elections in their Compensation Deferral Agreement for Deferrals elected to be contributed to their Retirement/Termination Account and/or Specified Date Account, such that each Plan Year may have a separate Retirement/Termination Account and/or Specified Date Account.

4.2 **Timing Requirements for Compensation Deferral Agreements.**

(a) First Year of Eligibility. In the case of the first year in which an Eligible Employee becomes eligible to participate in the Plan, he or she has up to 30 days following his or her initial eligibility to submit a Compensation Deferral Agreement with respect to Compensation to be earned during such year. The Compensation Deferral Agreement described in this paragraph becomes irrevocable upon the end of such 30-day period. The determination of
whether an Eligible Employee may file a Compensation Deferral Agreement under this paragraph shall be determined in accordance with the rules of Code Section 409A, including the provisions of Treas. Reg. Section 1.409A-2(a)(7).

A Compensation Deferral Agreement filed under this paragraph applies only to Compensation earned on and after the date the Compensation Deferral Agreement becomes irrevocable.

(b) Prior Year Election. Except as otherwise provided in this Section 4.2, Participants may defer Compensation by filing a Compensation Deferral Agreement no later than December 31 of the year prior to the year in which the Compensation to be deferred is earned. A Compensation Deferral Agreement described in this paragraph shall become irrevocable with respect to such Compensation as of December 31 of the year prior to the year in which the Compensation to be deferred is earned.

(c) Performance-Based Compensation. Participants may file a Compensation Deferral Agreement with respect to Performance-Based Compensation no later than the date that is six months before the end of the performance period, provided that:

(i) the Participant performs services continuously from the later of the beginning of the performance period or the date the criteria are established through the date the Compensation Deferral Agreement is submitted and becomes irrevocable; and

(ii) the Compensation is not readily ascertainable as of the date the Compensation Deferral Agreement is filed.

A Compensation Deferral Agreement becomes irrevocable with respect to Performance-Based Compensation as of the latest date for filing such election. Any election to defer Performance-Based Compensation that is made in accordance with this paragraph and that becomes payable as a result of the Participant’s death or disability (as defined in Treas. Reg. Section 1.409A-1(e)) or upon a Change in Control (as defined in Treas. Reg. Section 1.409A-3(i)(5)) prior to the satisfaction of the performance criteria, will be void.

(d) Fiscal Year Compensation. A Participant may defer Fiscal Year Compensation by filing a Compensation Deferral Agreement prior to the first day of the fiscal year or years in which such Fiscal Year Compensation is earned. The Compensation Deferral Agreement described in this paragraph becomes irrevocable on the date immediately preceding the first day of the fiscal year or years to which it applies.

(e) Short-Term Deferrals. Compensation that meets the definition of a “short-term deferral” described in Treas. Reg. Section 1.409A-1(b)(4) may be deferred in accordance with the rules of Article VII, applied as if the date the Substantial Risk of Forfeiture lapses is the date payments were originally scheduled to commence, provided, however, that the provisions of Section 7.3 shall not apply to payments attributable to a Change in Control (as defined in Treas. Reg. Section 1.409A-3(i)(5)).

(f) Certain Forfeitable Rights. With respect to a legally binding right to a payment in a subsequent year that is subject to a forfeiture condition requiring the Participant’s
continued services for a period of at least 12 months from the date the Participant obtains the legally binding right, an election to defer such Compensation may be made on or before the 30th day after the Participant obtains the legally binding right to the Compensation, provided that the election is made at least 12 months in advance of the earliest date at which the forfeiture condition could lapse. The Compensation Deferral Agreement described in this paragraph becomes irrevocable upon such 30th day. If the forfeiture condition applicable to the payment lapses before the end of the required service period as a result of the Participant’s death or disability (as defined in Treas. Reg. Section 1.409A-3(i)(4)) or upon a Change in Control (as defined in Treas. Reg. Section 1.409A-3(i)(5)), the Compensation Deferral Agreement will be void unless it would be considered timely under another rule described in this Section.

(g) **Company Awards.** Participating Employers may unilaterally provide for deferrals of Company awards prior to the date of such awards. Deferrals of Company awards (such as sign-on, retention, or severance pay) may be negotiated with a Participant prior to the date the Participant has a legally binding right to such Compensation.

(h) **“Evergreen” Deferral Elections.**

(i) The Committee, in its discretion, may provide in the Compensation Deferral Agreement that such Compensation Deferral Agreement will continue in effect for each subsequent year or performance period. Such “evergreen” Compensation Deferral Agreements will become effective with respect to an item of Compensation on the date such election becomes irrevocable under this Section 4.2. An evergreen Compensation Deferral Agreement may be terminated or modified prospectively with respect to Compensation for which such election remains revocable under this Section 4.2. A Participant whose Compensation Deferral Agreement is cancelled in accordance with Section 4.6 will be required to file a new Compensation Deferral Agreement under this Article IV in order to recommence Deferrals under the Plan.

(ii) With respect to Pre-2018 Deferrals, “evergreen” Compensation Deferral Agreements were in effect. Commencing with Post-2017 Deferrals, “evergreen” elections do not apply, unless otherwise set forth in the Compensation Deferral Agreement.

4.3 **Allocation of Deferrals.** A Compensation Deferral Agreement may allocate Deferrals to one or more Specified Date Accounts and/or to the Retirement/Termination Account. The Committee may, in its discretion, establish a minimum deferral period for the establishment of a Specified Date Account (for example, the third Plan Year following the year Compensation is allocated to such accounts.).

4.4 **Deductions from Pay.** The Committee has the authority to determine the payroll practices under which any component of Compensation subject to a Compensation Deferral Agreement will be deducted from a Participant’s Compensation.

4.5 **Vesting.** Participant Deferrals shall be 100% vested at all times.

4.6 **Cancellation of Deferrals.** The Committee may cancel a Participant’s Deferrals: (i) for the balance of the Plan Year in which an Unforeseeable Emergency occurs, (ii) if the Participant receives a hardship distribution under the Employer’s qualified 401(k) plan, through
the end of the Plan Year in which the six month anniversary of the hardship distribution falls, and (iii) during periods in which the Participant is unable to perform the duties of his or her position or any substantially similar position due to a mental or physical impairment that can be expected to result in death or last for a continuous period of at least six months, provided cancellation occurs by the later of the end of the taxable year of the Participant or the 15th day of the third month following the date the Participant incurs the disability (as defined in this paragraph (iii)).

ARTICLE 5
COMPANY CONTRIBUTIONS

5.1 Discretionary Company Contributions. The Participating Employer may, from time to time in its sole and absolute discretion, credit discretionary Company Contributions to any Participant in any amount determined by the Participating Employer. Such contributions will be credited to a Participant’s Retirement/Termination Account.

5.2 Matching Company Contributions. The Participating Employer may, from time to time in its sole and absolute discretion, credit matching Company Contributions to the Accounts of Participants in any amount determined by the Participating Employer. Such contributions will be credited to a Participant’s Retirement/Termination Account.

5.3 Vesting. Discretionary Company Contributions described in Section 5.1, above, and the Earnings thereon, shall vest in accordance with the vesting schedule(s) established by the Committee at the time that the Company Contribution is made. Unless otherwise determined by the Company at the time such Matching Company Contributions are approved, any Matching Company Contributions described in Section 5.2 above, and the Earnings thereon, shall vest in accordance with the vesting schedule applicable to matching contributions under the Participating Employer’s qualified 401(k) plan. All Company Contributions shall become 100% vested upon the occurrence of the earliest of: (i) the death of the Participant while actively employed, (ii) the Participant’s disability as determined under a disability plan of the Participating Employer, or applying the disability definition under such plan if the Participant is not covered by such plan, or (iii) a Change in Control. The Participating Employer may, at any time, in its sole discretion, increase a Participant’s vested interest in a Company Contribution. The portion of a Participant’s Accounts that remains unvested upon his or her Separation from Service after the application of the terms of this Section 5.3 shall be immediately forfeited.

5.4 Safe Harbor Matching Contributions. Commencing January 1, 2017 the Participating Employer shall credit matching Company Contributions to Participant Accounts as provided in this Section 5.4 (the “Safe Harbor Matching Contributions”). With respect to each Participant, the Safe Harbor Matching Contributions will be equal to 100% of the Participant’s Deferrals up to the first 3% of such Participant’s Compensation plus 50% of the Participant’s Deferrals between 3% and 5% of the Participant’s Compensation. Any Safe Harbor Matching contributions will be credited to the Participant’s Retirement/Termination Account no later than ninety (90) days following the end of the Plan Year for which the Participant Deferrals were made. Safe Harbor Matching Contributions will vest 20% on each anniversary of the Participant’s date of hire so that the Participant is 100% vested in all Safe Harbor Matching Contributions on the fifth anniversary of the Participant’s date of hire with the Participating
Employer, subject to the Participant’s continued employment with the Participating Employer through the applicable vesting dates. All Safe Harbor Matching Contributions shall become 100% vested upon the occurrence of the earliest of: (i) the death of the Participant while actively employed, (ii) the Participant’s disability as determined under a disability plan of the Participating Employer, or applying the disability definition under such plan if the Participant is not covered by such plan, a (iii) Change in Control, or (iv) the Participant attaining age 65. The Participating Employer may, at any time, in its sole discretion, increase a Participant’s vested interest in a Safe Harbor Matching Contribution. The portion of a Participant’s Accounts that remains unvested upon his or herSeparation from Service after the application of the terms of this Section 5.4 shall be forfeited.

ARTICLE 6
BENEFITS

6.1 Benefits, Generally. A Participant shall be entitled to the following benefits under the Plan:

(a) Termination Benefit. Upon the Participant’s Separation from Service for reasons other than death, he or she shall be entitled to a Termination Benefit. The Termination Benefit shall be equal to the vested portion of the Retirement/Termination Account and, if the Participant Separates from Service prior to the year payments from a Specified Date Account are scheduled to commence, the vested balances of any such Specified Date Accounts. Payment of the Termination Benefit will be made as follows:

(i) If the Participant Separates from Service on or before June 30th of a calendar year, payment of the Termination Benefit will begin on January 1st of the calendar year immediately following the calendar year in which Separation from Service occurs.

(ii) If the Participant Separates from Service on or after July 1st of a calendar year, payment of the Termination Benefit will begin on July 1st of the calendar year immediately following the calendar year in which Separation from Service occurs.

(iii) If any part of the Termination Benefit is to be paid in the form of installments, the timing of such payments shall be made as provided in Section 6.2(d).

(b) Specified Date Benefit. If the Participant has established one or more Specified Date Accounts, he or she shall be entitled to a Specified Date Benefit with respect to each such Specified Date Account. The Specified Date Benefit shall be equal to the vested portion of the Specified Date Account. Payment of the Specified Date Benefit will be made or begin in January of the year designated by the Participant; provided, however, that if a Participant Separates from Service prior to the year designated, payment will be instead made in accordance with the most recent Participant payment election applicable to the Retirement/Termination Account as provided further in Section 6.2(c).

(c) Death Benefit. In the event of the Participant’s death, his or her designated Beneficiary(ies) shall be entitled to a Death Benefit. The Death Benefit shall be equal
to the vested portion of the Retirement/Termination Account and the unpaid balances of any Specified Date Accounts, with such payment made as soon as practicable following the Participant’s death, but in no event later than December 31st of the calendar year following the calendar year that includes the Participant’s death.

(d) **Change in Control.** A Participant will receive his or her Account Balances in a single lump sum payment equal to the unpaid balance of all of his or her Accounts within ninety (90) days following a Change in Control; provided, however, that with respect to any Participant who is a Specified Employee and who had a Separation from Service prior to the date of the Change in Control, such payment shall not be made until after expiration of the six month period following the date he or she Separates from Service, if later, to the extent necessary to avoid adverse tax consequences to such Participant under Section 409A.

(e) **Unforeseeable Emergency Payments.** A Participant who experiences an Unforeseeable Emergency may submit a written request to the Committee to receive payment of all or any portion of his or her vested Accounts. Whether a Participant or Beneficiary is faced with an Unforeseeable Emergency permitting an emergency payment shall be determined by the Committee based on the relevant facts and circumstances of each case, but, in any case, a distribution on account of Unforeseeable Emergency may not be made to the extent that such emergency is or may be reimbursed through insurance or otherwise, by liquidation of the Participant’s assets, to the extent the liquidation of such assets would not cause severe financial hardship, or by cessation of Deferrals under this Plan. If an emergency payment is approved by the Committee, the amount of the payment shall not exceed the amount reasonably necessary to satisfy the need, taking into account the additional compensation that is available to the Participant as the result of cancellation of deferrals to the Plan, including amounts necessary to pay any taxes or penalties that the Participant reasonably anticipates will result from the payment. The amount of the emergency payment shall be subtracted first from the vested portion of the Participant’s Retirement/Termination Account until depleted and then from the vested Specified Date Accounts, beginning with the Specified Date Account with the latest payment commencement date. Emergency payments shall be paid in a single lump sum within the 90-day period following the date the payment is approved by the Committee.

6.2 **Form of Payment.**

(a) **Pre-2018 Deferrals Termination Benefit.** A Participant who is entitled to receive a Termination Benefit with respect to Pre-2018 Deferrals shall receive payment of such benefit in a single lump sum, unless the Participant elects on his or her initial Compensation Deferral Agreement to have such benefit paid in one of the following alternative forms of payment (i) substantially equal annual installments over a period of two to twenty years, as elected by the Participant, or (ii) a lump sum payment of a percentage of the balance in the Retirement/Termination Account, with the balance paid in substantially equal annual installments over a period of two to twenty years, as elected by the Participant. Such payments will be made at the time specified in Section 6.1(a).

(b) **Post-2017 Deferrals Termination Benefit.** A Participant who is entitled to receive a Termination Benefit with respect to Post-2017 Deferrals shall receive payment of such benefit in a single lump sum, unless the Participant elects to have such benefit paid in
substantially equal annual installments over a period of two to ten years, as elected by the Participant. A Participant may make different payment elections for Deferrals for separate Plan Years with respect to the Termination Benefit. Such payments will be made at the time specified in Section 6.1(a).

(c) **Specified Date Benefit.** The Specified Date Benefit shall be paid in a single lump sum, unless the Participant elects on the Compensation Deferral Agreement with which the account was established to have the Specified Date Account paid in substantially equal annual installments over a period of two to ten years, as elected by the Participant, and such payments will be made at the time specified in Section 6.1(b); provided, however, that if a Participant Separates from Service prior to the year designated for commencement of payment(s) from a Specified Date Account, such Account will be distributed in accordance with the election applicable to the most recently effective Participant form of distribution election made for the Retirement/Termination Account pursuant to Section 6.2(b) and will instead be paid at the time specified in Section 6.1(a).

(d) **Rules Applicable to Installment Payments.** If a Payment Schedule specifies installment payments (without any lump sum percentage), the first installment payment shall be made on the applicable payment commencement date and subsequent installment payments shall be made on each subsequent January until the number of installment payments specified in the Payment Schedule has been paid. If a lump sum equal to less than 100% of the Retirement/Termination Account is elected (with respect to Pre-2018 Deferrals), the lump sum amount will be paid on the payment commencement date and the payment date for the first installment form of payment will be January of the following calendar year, with any subsequent installment payments to continue on each subsequent January until the number of installment payments specified in the Payment Schedule has been paid. In cases, the amount of each installment payment shall be determined by dividing (a) by (b), where (a) equals the Account Balance at the time of payment and (b) equals the remaining number of installment payments. For purposes of Article VII, installment payments will be treated as a single form of payment.

(e) **Death Benefit.** A designated Beneficiary who is entitled to receive a Death Benefit shall receive payment of such benefit in a single lump sum at the time specified in Section 6.1(c).

(f) **Change in Control.** In the event of a Change in Control each Participant will receive the value of his or her entire Account Balances in a single lump sum payment. Such payment will be made at the time specified in Section 6.1(d).

(g) **Small Account Balances.** The Committee shall pay the value of the entire Participant’s Account Balance in a single lump sum if the Participant’s entire Account Balance, including any Specified Date Account balances, at Separation from Service is less than $50,000, which payment will be made at the time specified in Section 6.1(a), as applicable. Further, the Committee may direct that all of a Participant’s Account Balances will be distributed in a single lump sum if the Account Balances are not greater than the applicable dollar amount under Code Section 402(g)(1)(B), provided the payment represents the complete liquidation of the Participant’s interest in the Plan.
6.3 Administrative Discretion with Regard to Timing of Payments. Notwithstanding anything to the contrary in this Article VI, the Committee may make a payment at the time specified in the preceding paragraphs or at a later date that falls in the same calendar year as the specified time or, if later, by the 15th day of the third calendar month following the time specified, provided the Participant is not permitted, directly or indirectly, to designate the taxable year in which payment will be made. Further, except as necessary so that no Termination Benefit is payable within the six month period following any Separation From Service of a Specified Employee, the Committee may make a payment up to 30 days preceding the time specified in the preceding paragraphs, provided the Participant is not permitted, directly or indirectly, to designate the taxable year in which the payment will be made.

6.4 Acceleration of or Delay in Payments. The Committee, in its sole and absolute discretion, may elect to accelerate the time or form of payment of a benefit owed to the Participant hereunder, provided such acceleration is permitted under Treas. Reg. Section 1.409A-3(j)(4) and explicitly reserves the right to make such election. The Committee may also, in its sole and absolute discretion, delay the time for payment of a benefit owed to the Participant hereunder, to the extent permitted under Treas. Reg. Section 1.409A-2(b)(7). If the Plan receives a domestic relations order (within the meaning of Code Section 414(p)(1)(B)) directing that all or a portion of a Participant’s Accounts be paid to an “alternate payee,” any amounts to be paid to the alternate payee(s) shall be paid in a single lump sum.

6.5 Designation of Beneficiaries.

(a) In General. The Participant shall designate a Beneficiary on the forms provided by the Committee or on such terms and conditions as the Committee may prescribe. No such designation shall become effective unless filed with the Committee during the Participant’s lifetime. Any designation shall remain in effect until a new designation is filed with the Committee; provided, however, that in the event a Participant designates his or her spouse as a Beneficiary, such designation shall be automatically revoked upon the dissolution of the marriage unless, following such dissolution, the Participant submits a new designation naming the former spouse as a Beneficiary. A Participant may from time to time change his or her designated Beneficiary without the consent of a previously-designated Beneficiary by filing a new designation with the Committee.

(b) No Beneficiary. If a designated Beneficiary does not survive the Participant, or if there is no valid Beneficiary designation, amounts payable under the Plan upon the death of the Participant shall be paid to the Participant’s spouse, or if there is no surviving spouse, then to the duly appointed and currently acting personal representative of the Participant’s estate.

ARTICLE 7
MODIFICATIONS TO PAYMENT SCHEDULES

7.1 Participant’s Right to Modify. A Participant may modify the Payment Schedules applicable to a Specified Date Account, consistent with the permissible Payment Schedules available under the Plan, provided such modification complies with the requirements of this Article VII. No modifications may be made to Payment Schedules for a Participant’s Retirement/Termination Account.
7.2 **Time of Election.** The date on which a modification election is submitted to the Committee must be at least 12 months prior to the date on which payment is scheduled to commence under the Payment Schedule in effect prior to the modification.

7.3 **Date of Payment under Modified Payment Schedule.** The date payments are to commence under the modified Payment Schedule must be no earlier than five years after the date payment would have commenced under the original Payment Schedule. Under no circumstances may a modification election result in an acceleration of payments in violation of Code Section 409A.

7.4 **Effective Date.** A modification election submitted in accordance with this Article VII is irrevocable upon receipt by the Committee and becomes effective 12 months after such date.

7.5 **Effect on Accounts.** An election to modify a Payment Schedule is specific to the Account or payment event to which it applies, and shall not be construed to affect the Payment Schedules of any other Accounts.

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**ARTICLE 8**

**VALUATION OF ACCOUNT BALANCES; INVESTMENTS**

8.1 **Valuation.** Deferrals shall be credited to appropriate Accounts on the date such Compensation would have been paid to the Participant absent the Compensation Deferral Agreement. Company Contributions shall be credited to the Retirement/Termination Account at the times determined by the Committee. Valuation of Accounts shall be performed under procedures approved by the Committee.

8.2 **Earnings Credit.** Each Account will be credited with Earnings on each Business Day, based upon the Participant’s investment allocation among a menu of investment options selected in advance by the Committee, in accordance with the provisions of this Article VIII (“investment allocation”).

8.3 **Investment Options.** Investment options will be determined by the Committee. The Committee, in its sole discretion, shall be permitted to add or remove investment options from the Plan menu from time to time, provided that any such additions or removals of investment options shall not be effective with respect to any period prior to the effective date of such change.

8.4 **Investment Allocations.** A Participant’s investment allocation constitutes a deemed, not actual, investment among the investment options comprising the investment menu. At no time shall a Participant have any real or beneficial ownership in any investment option included in the investment menu, nor shall the Participating Employer or any trustee acting on its behalf have any obligation to purchase actual securities as a result of a Participant’s investment allocation. A Participant’s investment allocation shall be used solely for purposes of adjusting the value of a Participant’s Account Balances.
A Participant shall specify an investment allocation for each of his Accounts in accordance with procedures established by the Committee. Allocation among the investment options must be designated in increments of 1%. The Participant’s investment allocation will become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day.

A Participant may change an investment allocation on any Business Day, both with respect to future credits to the Plan and with respect to existing Account Balances, in accordance with procedures adopted by the Committee. Changes shall become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day, and shall be applied prospectively.

8.5 Unallocated Deferrals and Accounts. If the Participant fails to make an investment allocation with respect to an Account, such Account shall be invested in an investment option, the primary objective of which is the preservation of capital, as determined by the Committee.

8.6 Company Stock. The Committee may include Company Stock as one of the investment options described in Section 8.3. The Committee may, in its sole discretion, limit the investment allocation of Company Contributions to Company Stock. The Committee may also require Deferrals consisting of equity-based Compensation to be allocated to Company Stock.

8.7 Diversification. A Participant may not re-allocate an investment in Company Stock into another investment option. The portion of an Account that is invested in Company Stock will be paid under Article VI in the form of whole shares of Company Stock.

8.8 Effect on Installment Payments. If an Account is to be paid in installments, the Committee will determine the portion of each payment that will be paid in the form of Company Stock.

8.9 Dividend Equivalents. Dividend equivalents with respect to Company Stock will be credited to the applicable Accounts in the form of additional shares or units of Company Stock.

ARTICLE 9  
ADMINISTRATION

9.1 Plan Administration. This Plan shall be administered by the Committee which shall have discretionary authority to make, amend, interpret and enforce all appropriate rules and regulations for the administration of this Plan and to utilize its discretion to decide or resolve any and all questions, including but not limited to eligibility for benefits and interpretations of this Plan and its terms, as may arise in connection with the Plan. Claims for benefits shall be filed with the Committee and resolved in accordance with the claims procedures in Article XII.

9.2 Administration Upon Change in Control. Upon a Change in Control, the Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Committee. The individual who was the Chief Executive Officer of the Company Parent (or if such person is unable or unwilling to act, the next highest ranking officer) prior to the Change in Control shall have the authority (but shall not be obligated) to appoint an independent third party to act as the Committee.
Upon such Change in Control, the Company may not remove the Committee, unless 2/3rds of the members of the Board of Directors of the Company Parent and a majority of Participants and Beneficiaries with Account Balances consent to the removal and replacement of the Committee. Notwithstanding the foregoing, neither the Committee nor the officer described above shall have authority to direct investment of trust assets under any rabbi trust described in Section 11.2.

The Participating Employer shall, with respect to the Committee identified under this Section: (i) pay all reasonable expenses and fees of the Committee, (ii) indemnify the Committee (including individuals serving as Committee members) against any costs, expenses and liabilities including, without limitation, attorneys’ fees and expenses arising in connection with the performance of the Committee’s duties hereunder, except with respect to matters resulting from the Committee’s gross negligence or willful misconduct, and (iii) supply full and timely information to the Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Committee may reasonably require.

9.3 Withholding. The Participating Employer shall have the right to withhold from any payment due under the Plan (or with respect to any amounts credited to the Plan) any taxes required by law to be withheld in respect of such payment (or credit). Withholdings with respect to amounts credited to the Plan shall be deducted from Compensation that has not been deferred to the Plan.

9.4 Indemnification. The Participating Employers shall indemnify and hold harmless each employee, officer, director, agent or organization, to whom or to which are delegated duties, responsibilities, and authority under the Plan or otherwise with respect to administration of the Plan, including, without limitation, the Committee and its agents, against all claims, liabilities, fines and penalties, and all expenses reasonably incurred by or imposed upon him or it (including but not limited to reasonable attorney fees) which arise as a result of his or its actions or failure to act in connection with the operation and administration of the Plan to the extent lawfully allowable and to the extent that such claim, liability, fine, penalty, or expense is not paid for by liability insurance purchased or paid for by the Participating Employer. Notwithstanding the foregoing, the Participating Employer shall not indemnify any person or organization if his or its actions or failure to act are due to gross negligence or willful misconduct or for any such amount incurred through any settlement or compromise of any action unless the Participating Employer consents in writing to such settlement or compromise.

9.5 Delegation of Authority. In the administration of this Plan, the Committee may, from time to time, employ agents and delegate to them such administrative duties as it sees fit, and may from time to time consult with legal counsel who shall be legal counsel to the Company and/or the Company Parent.

9.6 Binding Decisions or Actions. The decision or action of the Committee in respect of any question arising out of or in connection with the administration, interpretation and application of the Plan and the rules and regulations thereunder shall be final and conclusive and binding upon all persons having any interest in the Plan.
ARTICLE 10
AMENDMENT AND TERMINATION

10.1 Amendment and Termination. The Company may at any time and from time to time amend the Plan or may terminate the Plan as provided in this Article X. Each Participating Employer may also terminate its participation in the Plan.

10.2 Amendments. The Company, by action taken by the Board of Directors of the Company Parent, may amend the Plan at any time and for any reason, provided that any such amendment shall not reduce the vested Account Balances of any Participant accrued as of the date of any such amendment or restatement (as if the Participant had incurred a voluntary Separation from Service on such date) or reduce any rights of a Participant under the Plan or other Plan features with respect to Deferrals made prior to the date of any such amendment or restatement without the consent of the Participant. The Compensation Committee of the Board of Directors of the Company Parent has the authority to amend the Plan without the consent of the Board of Directors of the Company Parent for the purpose of: (i) conforming the Plan to the requirements of law; (ii) facilitating the administration of the Plan; (iii) clarifying provisions based on the Committee’s interpretation of the document; and (iv) making such other amendments as the Board of Directors of the Company Parent may authorize.

10.3 Termination. The Company, by action taken by the Board of Directors of the Company Parent, may terminate the Plan and pay Participants and Beneficiaries their Account Balances in a single lump sum at any time, to the extent and in accordance with Treas. Reg. Section 1.409A-3(j)(4)(ix). If a Participating Employer terminates its participation in the Plan, the benefits of affected Employees shall be paid at the time provided in Article VI.

10.4 Accounts Taxable Under Code Section 409A. The Plan is intended to constitute a plan of deferred compensation that meets the requirements for deferral of income taxation under Code Section 409A. The Committee, pursuant to its authority to interpret the Plan, may sever from the Plan or any Compensation Deferral Agreement any provision or exercise of a right that otherwise would result in a violation of Code Section 409A.

ARTICLE 11
INFORMAL FUNDING

11.1 General Assets. Obligations established under the terms of the Plan may be satisfied from the general funds of the Participating Employers, or a trust described in this Article XI. No Participant, spouse or Beneficiary shall have any right, title or interest whatever in assets of the Participating Employers. Nothing contained in this Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind, or a fiduciary relationship, between the Participating Employers and any Employee, spouse, or Beneficiary. To the extent that any person acquires a right to receive payments hereunder, such rights are no greater than the right of an unsecured general creditor of the Participating Employer.
11.2 Rabbi Trust. A Participating Employer may, in its sole discretion, establish a grantor trust, commonly known as a rabbi trust, as a vehicle for accumulating assets to pay benefits under the Plan. Payments under the Plan may be paid from the general assets of the Participating Employer or from the assets of any such rabbi trust. Payment from any such source shall reduce the obligation owed to the Participant or Beneficiary under the Plan.

ARTICLE 12
CLAIMS

12.1 Filing a Claim. Any controversy or claim arising out of or relating to the Plan shall be filed in writing with the Committee which shall make all determinations concerning such claim. Any claim filed with the Committee and any decision by the Committee denying such claim shall be in writing and shall be delivered to the Participant or Beneficiary filing the claim (the "Claimant").

(a) In General. Notice of a denial of benefits (other than Disability benefits) will be provided within 90 days of the Committee’s receipt of the Claimant’s claim for benefits. If the Committee determines that it needs additional time to review the claim, the Committee will provide the Claimant with a notice of the extension before the end of the initial 90-day period. The extension will not be more than 90 days from the end of the initial 90-day period and the notice of extension will explain the special circumstances that require the extension and the date by which the Committee expects to make a decision.

(b) Disability Benefits. Notice of denial of Disability benefits will be provided within forty-five (45) days of the Committee’s receipt of the Claimant’s claim for Disability benefits. If the Committee determines that it needs additional time to review the Disability claim, the Committee will provide the Claimant with a notice of the extension before the end of the initial 45-day period. If the Committee determines that a decision cannot be made within the first extension period due to matters beyond the control of the Committee, the Committee will extend the time period for making a determination. The Committee shall notify the Claimant prior to the expiration of the initial 30-day extension. Any notice of extension shall indicate the circumstances necessitating the extension of time, the date by which the Committee expects to make a decision, the specific standards on which such entitlement to a benefit is based, the unresolved issues that prevent a decision on the claim and any additional information needed to resolve those issues. A Claimant will be provided a minimum of 45 days to submit any necessary additional information to the Committee. In the event that a 30-day extension is necessary due to a Claimant’s failure to submit information necessary to decide a claim, the period for furnishing a notice of decision shall be tolled from the date on which the notice of the extension is sent to the Claimant until the earlier of the date the Claimant responds to the request for additional information or the response deadline.

(c) Contents of Notice. If a claim for benefits is completely or partially denied, notice of such denial shall be in writing and shall set forth the reasons for denial in plain language. The notice shall: (i) cite the pertinent provisions of the Plan document, and (ii) explain, where appropriate, how the Claimant can perfect the claim, including a description of any additional material or information necessary to complete the claim and why such material or
12.2 Appeal of Denied Claims. A Claimant whose claim has been completely or partially denied shall be entitled to appeal the claim denial by filing a written appeal with a committee designated to hear such appeals (the “Appeals Committee”). In the absence of any such designation, the Appeals Committee shall be the Committee. A Claimant who timely requests a review of the denied claim (or his or her authorized representative) may review, upon request and free of charge, copies of all documents, records and other information relevant to the denial and may submit written comments, documents, records and other information relevant to the claim to the Appeals Committee. All written comments, documents, records, and other information shall be considered “relevant” if the information: (i) was relied upon in making a benefits determination, (ii) was submitted, considered or generated in the course of making a benefits decision regardless of whether it was relied upon to make the decision, or (iii) demonstrates compliance with administrative processes and safeguards established for making benefit decisions. The Appeals Committee may, in its sole discretion and if it deems appropriate or necessary, decide to hold a hearing with respect to the claim appeal.

(a) In General. Appeal of a denied benefits claim (other than a Disability benefits claim) must be filed in writing with the Appeals Committee no later than 60 days after receipt of the written notification of such claim denial. The Appeals Committee shall make its decision regarding the merits of the denied claim within 60 days following receipt of the appeal (or within 120 days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals Committee expects to render the determination on review. The review will take into account comments, documents, records and other information submitted by the Claimant relating to the claim without regard to whether such information was submitted or considered in the initial benefit determination.

(b) Disability Benefits. Appeal of a denied Disability benefits claim must be filed in writing with the Appeals Committee no later than 180 days after receipt of the written notification of such claim denial. The review shall be conducted by the Appeals Committee (exclusive of the person who made the initial adverse decision or such person’s subordinate). In reviewing the appeal, the Appeals Committee shall: (i) not afford deference to the initial denial of the claim, (ii) consult a medical professional who has appropriate training and experience in the field of medicine relating to the Claimant’s disability and who was neither consulted as part of the initial denial nor is the subordinate of such individual, and (iii) identify the medical or vocational experts whose advice was obtained with respect to the initial benefit denial, without regard to whether the advice was relied upon in making the decision. The Appeals Committee
shall make its decision regarding the merits of the denied claim within 45 days following receipt of the appeal (or within 90 days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals Committee expects to render the determination on review. Following its review of any additional information submitted by the Claimant, the Appeals Committee shall render a decision on its review of the denied claim.

(c) Contents of Notice. If a benefits claim is completely or partially denied on review, notice of such denial shall be in writing and shall set forth the reasons for denial in plain language.

The decision on review shall set forth: (i) the specific reason or reasons for the denial, (ii) specific references to the pertinent Plan provisions on which the denial is based, (iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to and copies of all documents, records, or other information relevant (as defined above) to the Claimant’s claim, and (iv) a statement describing any voluntary appeal procedures offered by the plan and a statement of the Claimant’s right to bring an action under Section 502(a) of ERISA.

(d) For the denial of a Disability benefit, the notice will also include a statement that the Appeals Committee will provide, upon request and free of charge: (i) any internal rule, guideline, protocol or other similar criterion relied upon in making the decision, (ii) any medical opinion relied upon to make the decision, and (iii) the required statement under Section 2560.503-1(j)(5)(iii) of the Department of Labor regulations.

12.3 Claims Appeals Upon Change in Control. Upon a Change in Control, the Appeals Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Appeals Committee. Upon such Change in Control, the Company may not remove any member of the Appeals Committee, but may replace resigning members if 2/3rds of the members of the Board of Directors of the Company Parent and a majority of Participants and Beneficiaries with Account Balances consent to the replacement.

The Appeals Committee shall have the exclusive authority at the appeals stage to interpret the terms of the Plan and resolve appeals under the Claims Procedure.

Each Participating Employer shall, with respect to the Committee identified under this Section: (i) pay its proportionate share of all reasonable expenses and fees of the Appeals Committee, (ii) indemnify the Appeals Committee (including individual committee members) against any costs, expenses and liabilities including, without limitation, attorneys’ fees and expenses arising in connection with the performance of the Appeals Committee hereunder, except with respect to matters resulting from the Appeals Committee’s gross negligence or willful misconduct, and (iii) supply full and timely information to the Appeals Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Appeals Committee may reasonably require.
12.4 Legal Action. A Claimant may not bring any legal action relating to a claim for benefits under the Plan unless and until the Claimant has followed the claims procedures under the Plan and exhausted his or her administrative remedies under such claims procedures.

If a Participant or Beneficiary prevails in a legal proceeding brought under the Plan to enforce the rights of such Participant or any other similarly situated Participant or Beneficiary, in whole or in part, the Participating Employer shall reimburse such Participant or Beneficiary for all legal costs, expenses, attorneys’ fees and such other liabilities incurred as a result of such proceedings. If the legal proceeding is brought in connection with a Change in Control, or a “change in control” as defined in a rabbi trust described in Section 11.2, the Participant or Beneficiary may file a claim directly with the trustee for reimbursement of such costs, expenses and fees. For purposes of the preceding sentence, the amount of the claim shall be treated as if it were an addition to the Participant’s or Beneficiary’s Account Balance.

12.5 Discretion of Appeals Committee. All interpretations, determinations and decisions of the Appeals Committee with respect to any claim shall be made in its sole discretion, and shall be final and conclusive.

ARTICLE 13
GENERAL PROVISIONS

13.1 Assignment. No interest of any Participant, spouse or Beneficiary under this Plan and no benefit payable hereunder shall be assigned as security for a loan, and any such purported assignment shall be null, void and of no effect, nor shall any such interest or any such benefit be subject in any manner, either voluntarily or involuntarily, to anticipation, sale, transfer, assignment or encumbrance by or through any Participant, spouse or Beneficiary. Notwithstanding anything to the contrary herein, however, the Committee has the discretion to make payments to an alternate payee in accordance with the terms of a domestic relations order (as defined in Code Section 414(p)(1)(B)).

The Company may assign any or all of its liabilities under this Plan in connection with any restructuring, recapitalization, sale of assets or other similar transactions affecting a Participating Employer without the consent of the Participant.

13.2 No Legal or Equitable Rights or Interest. No Participant or other person shall have any legal or equitable rights or interest in this Plan that are not expressly granted in this Plan. Participation in this Plan does not give any person any right to be retained in the service of the Participating Employer. The right and power of a Participating Employer to dismiss or discharge an Employee is expressly reserved. The Participating Employers make no representations or warranties as to the tax consequences to a Participant or a Participant’s beneficiaries resulting from a deferral of income pursuant to the Plan.

13.3 No Employment Contract. Nothing contained herein shall be construed to constitute a contract of employment between an Employee and a Participating Employer.

13.4 Notice. Any notice or filing required or permitted to be delivered to the Committee under this Plan shall be delivered in writing, in person, or through such electronic means as is established by the Committee. Notice shall be deemed given as of the date of delivery or, if delivery is made by mail, as of the date shown on the postmark on the receipt for registration or certification. Written transmission shall be sent by certified mail to:
Any notice or filing required or permitted to be given to a Participant under this Plan shall be sufficient if in writing or hand-delivered, or sent by mail to the last known address of the Participant.

13.5 **Headings.** The headings of Sections are included solely for convenience of reference, and if there is any conflict between such headings and the text of this Plan, the text shall control.

13.6 **Invalid or Unenforceable Provisions.** If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof and the Committee may elect in its sole discretion to construe such invalid or unenforceable provisions in a manner that conforms to applicable law or as if such provisions, to the extent invalid or unenforceable, had not been included.

13.7 **Lost Participants or Beneficiaries.** Any Participant or Beneficiary who is entitled to a benefit from the Plan has the duty to keep the Committee advised of his or her current mailing address. If benefit payments are returned to the Plan or are not presented for payment after a reasonable amount of time, the Committee shall presume that the payee is missing. The Committee, after making such efforts as in its discretion it deems reasonable and appropriate to locate the payee, shall stop payment on any uncashed checks and may discontinue making future payments until contact with the payee is restored.

13.8 **Facility of Payment to a Minor.** If a distribution is to be made to a minor, or to a person who is otherwise incompetent, then the Committee may, in its discretion, make such distribution: (i) to the legal guardian, or if none, to a parent of a minor payee with whom the payee maintains his or her residence, or (ii) to the conservator or committee or, if none, to the person having custody of an incompetent payee. Any such distribution shall fully discharge the Committee, the Company, and the Plan from further liability on account thereof.

13.9 **Governing Law.** To the extent not preempted by ERISA, the laws of the State of Illinois shall govern the construction and administration of the Plan.
This Executive Employment Agreement (hereinafter referred to as the “Agreement”), is entered into by and between Horizon Pharma, Inc., a Delaware corporation, and its wholly owned subsidiary, Horizon Pharma USA, Inc., a Delaware corporation, each having a principal place of business at 150 S. Saunders Rd, Lake Forest IL 60045, (hereinafter referred together as the “Company”) and Shao-Lee Lin (hereinafter referred as to the “Executive”). The terms of this Agreement shall be effective commencing January 4, 2018 (the “Effective Date”).

RECITALS

WHEREAS, the Company desires assurance of association and services of the Executive in order to retain the Executive’s experience, skills, abilities, background and knowledge, and is willing to engage the Executive’s services on the terms and conditions set forth in this Agreement; and

WHEREAS, Executive desires to be in the employ of the Company, and is willing to accept such employment on the terms and conditions set forth in this Agreement.

AGREEMENT

1. Employment.

1.1 Term. The Company hereby agrees to employ the Executive, and the Executive hereby accepts employment by the Company, upon the terms and conditions set forth in this Agreement. Executive’s employment shall be governed under the terms set forth in this Agreement beginning on the Effective Date and shall continue until it is terminated pursuant to Section 4 herein (hereinafter referred to as the “Term”).

1.2 Title. From and after the Effective Date the Executive will have the title of Executive Vice President, Head of Research and Development and Chief Scientific Officer (such position held by Executive during such period is hereinafter referred to as “EVP CSO”) and Executive shall serve in such other capacity or capacities commensurate with her position as EVP CSO as the President and CEO of the Company may from time to time prescribe.

1.3 Duties. The Executive shall do and perform all services, acts or things necessary or advisable to manage and conduct the business of the Company and shall have the authority and responsibilities which are generally associated with the position of EVP CSO. The Executive shall report to the President and CEO.

1.4 Policies and Practices. The employment relationship between the Parties shall be governed by this Agreement and the policies and practices established by the Company and the Board of Directors (hereinafter referred to as the “Board”). In the event that the terms of this Agreement differ from or are in conflict with the Company’s policies or practices or the Company’s Employee Handbook, this Agreement shall control.
1.5 **Location.** The Executive shall perform the services the Executive is required to perform pursuant to this Agreement in at the Company’s U.S. Headquarters in Lake Forest Illinois. The Company may from time to time require the Executive to travel temporarily to other locations outside of Lake Forest, Illinois area in connection with the Company’s business.

2. **Loyalty of Executive.**

2.1 **Loyalty.** During the Executive’s employment by the Company, the Executive shall devote the Executive’s business energies, interest, abilities and productive time to the proper and efficient performance of Executive’s duties under this Agreement. Subject to the prior written consent of the President and CEO, the Executive is permitted to serve on the board of directors of one other company, so long as the other company does not compete with the Company.

2.2 **Exclusive Employment.** Except with the prior written consent of the Chief Executive Officer, Executive shall not, during the term of this Agreement, undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor. Executive may engage in any civic and not-for-profit activities so long as such activities do not materially interfere with the performance of her duties hereunder or present a conflict of interest with the Company.

2.3 **Agreement not to Participate in Company’s Competitors.** During the Term of this Agreement, the Executive agrees not to acquire, assume or participate in, directly or indirectly, any position, investment or interest known by Executive to be adverse or antagonistic to the Company, its business or prospects, financial or otherwise or in any company, person or entity that is, directly or indirectly, in competition with the business of the Company or any of its affiliates. Notwithstanding the foregoing, Executive may invest and/or maintain investments in any public or private entity up to an amount of 2% of an entity’s fully diluted shares and on a passive basis.

3. **Compensation to Executive.**

3.1 **Base Salary.** The Company shall pay the Executive a base salary at the initial annualized rate of six hundred twenty five thousand dollars ($625,000.00) per year, subject to standard deductions and withholdings, or such higher rate as may be determined from time to time by the Board or the compensation committee thereof (hereinafter referred to as the “Base Salary”). Such Base Salary shall be paid in accordance with the Company’s standard payroll practice. Payments of salary installments shall be made no less frequently than once per month. Executive’s Base Salary will be reviewed annually each December and Executive shall be eligible to receive a salary increase (but not decrease) annually in an amount to be determined by the Board or the compensation committee thereof in its sole and exclusive discretion. Once increased, the new salary shall become the Base Salary for purposes of this Agreement and shall not be reduced without the Executive’s written consent. Any material reduction in the Base Salary of the Executive, without her written consent, may be deemed Good Reason as set forth in and subject to Section 4.5.2 of this Agreement.

2. **
3.2 **Sign-On Bonus.** Executive shall be entitled to a one time sign on bonus equal to seven hundred forty thousand dollars ($740,000) (hereinafter referred to as the “Sign On Bonus”), subject to standard deductions and withholdings. The Sign On Bonus shall be paid to Executive as follows: (1) six hundred thousand dollars ($600,000) paid on or before January 15, 2018; and (2) one hundred forty thousand dollars ($140,000) paid on or before January 15, 2019, provided that Executive is still an employee of Company on January 15, 2019. If Executive’s employment is terminated by Company for “Cause,” as defined in section 4.5.3 of this Agreement, or if Executive provides notice to Company of her intent to terminate this Agreement Without Good Reason, as described in section 4.2.2 of this Agreement (each hereafter referred to as a “Termination Event,” Executive shall reimburse Company one hundred percent (100%) of any payments made in accordance with the terms of this Section 3.2, if such Termination Event occurs during the same calendar year in which the payment is made, and fifty percent (50%) of any payment if such Termination Event occurs during the calendar year immediately following the calendar year in which such payment is made. Any reimbursement payments provide required under this Section 3.2 shall be due within 15 days of the applicable Termination Event. After the calendar year immediately following the calendar year in which such payment is made (which date is no longer than two (2) years from the date of the initial payment), the Employee does not have to reimburse the Company for any reason.

3.3 **Exit Payment.** Executive shall also be eligible for a payment of an amount equal to the amount Executive is required to pay her former employer due to resignation from her prior employment, but in no case shall this amount exceed seventy five thousand dollars ($75,000).

3.4 **Discretionary Bonus.** Provided the Executive meets the conditions stated in this Section 3.4, the Executive shall be eligible for an annual discretionary bonus (hereinafter referred to as the “Bonus”) with a target amount of sixty percent (60%) of the Executive’s Base Salary, not to exceed two hundred percent (200%) of Executive’s Base Salary, subject to standard deductions and withholdings, based on the Board’s determination, in good faith, and based upon the Executive’s individual achievement and company performance objectives as set by the Board or the compensation committee thereof, of whether the Executive has met such performance milestones as are established for the Executive by the Board or the compensation committee thereof, in good faith, in consultation with the Executive (hereinafter referred to as the “Performance Milestones”). The Performance Milestones will be based on certain factors including, but not limited to, the Executive’s performance and the Company’s financial performance. The Executive’s Bonus target will be reviewed annually and may be adjusted by the Board or the compensation committee thereof in its discretion, provided however, that the Bonus target may only be materially reduced upon Executive’s written consent. The Executive must be employed on the date the Bonus is awarded to be eligible for the Bonus, subject to the termination provisions thereof. TheBonus shall be paid during the calendar year following the performance calendar year.

3.5 **Equity Awards.** As an inducement to the Executive’s commencement of employment with the Company, and subject to approval by the Compensation Committee, the Executive will be granted the following equity awards as “Inducement Awards” pursuant to and subject to the terms of the Horizon Pharma Public Limited Company 2014 Equity Incentive Plan (“2014 Equity Incentive Plan”) and its form of stock option and restricted stock unit award agreements, in the forms to be provided to Executive (collectively the “Equity Plan Documents”) and compliance with applicable securities laws:
3.5.1 Inducement Option. A stock option to purchase ordinary shares of Horizon Pharma plc with a fair value of $1,100,000 as of January 4, 2018 (the “Option”). The number of ordinary shares subject to the Option will be calculated based on the fair value of the Option determined under the Black-Scholes Method as of January 4, 2018. The Option will have an exercise price equal to the closing price of Horizon Pharma plc’s ordinary shares on the applicable date of grant, which will be January 4, 2018 (the “Vesting Commencement Date”). All options will be issued as nonstatutory stock options. Subject to Executive’s continued provision of services to the Company through the applicable vesting dates, the Option shall vest as follows: 25% of the total number of shares subject to the Option shall vest on the first anniversary of the Vesting Commencement Date or January 4, 2019 and 1/36 of the remaining number of shares subject to the Option shall vest on each monthly anniversary thereafter so that the Option would fully vest on the four (4) year anniversary of the Vesting Commencement Date subject to Executive’s continued services with the Company through such date.

3.5.2 Inducement RSU. A restricted stock unit award in respect of number of ordinary shares of Horizon Pharma plc having a fair value of $1,100,000 as of January 4, 2018, which will be the applicable date of grant (the “RSU Award”). Subject to Executive’s continued provision of services to the Company through the applicable vesting dates, the RSU Award shall vest as follows: 25% of the total number of units subject to the RSU Award shall vest on the first anniversary of the Vesting Commencement Date, and thereafter 25% of the total number of units subject to the RSU Award shall vest on each anniversary thereafter, so that the RSU Award would fully vest on the fourth anniversary of the Vesting Commencement Date, subject to Executive’s continued services with the Company through such date.

3.5.3 Annual Long Term Incentive Plan. As of January 4, 2018 Executive will participate in the Annual Long-Term Incentive Plan (“ALTIP”) currently under development by the Board of Directors for executives, subject to adoption of the ALTIP by the Board of Directors and all applicable terms which may apply. The annual grant for the Executive is anticipated to be between $2.0M—$2.7M in a mix of RSUs and PSUs. The final target amount, vesting schedule and other terms and criteria for the ALTIP are expected to be determined by the Board of Directors in late December 2017 and may be subject to shareholder approval.

3.5.4 Legal Review. Upon the Executive’s submission of appropriate itemized proof and verification of reasonable and customary legal fees incurred by the Executive in obtaining legal advice associated with the review, preparation, approval, and execution of this Agreement, the Company shall pay for up to $10,000.00 of such legal fees subject to receipt of appropriate proof and verification of such legal fees no later than sixty (60) days of receipt of an invoice for legal services from the Executive and/or her attorneys. To be eligible for reimbursement, the invoice must be submitted no later than ninety (90) days after the legal fees are incurred.

3.6 Changes to Compensation. The Executive’s compensation may be changed from time to time by mutual agreement of the Executive and the Company. In the event that the Executive’s base salary is materially decreased without her written consent, said decrease will be Good Reason for the Executive to terminate the Agreement as set forth in and subject to Section 4.5.2 of this Agreement.
3.7 **Taxes.** All amounts paid under this Agreement to the Executive by the Company will be paid less applicable tax withholdings and any other withholdings required by law or authorized by the Executive.

3.8 **Benefits.** The Executive shall, in accordance with Company policy and the terms of the applicable plan documents, be eligible to participate in benefits under any executive benefit plan or arrangement which may be in effect from time to time and made available to the Company’s executives or key management employees, provided, however, that the Executive shall be entitled to at least four (4) weeks of paid vacation annually.

4. **Termination.**

4.1 **Termination by the Company.** The Executive’s employment with the Company may be terminated only under the following conditions:

4.1.1 **Termination for Death or Disability.** The Executive’s employment with the Company shall terminate effective upon the date of the Executive’s death or “Complete Disability” (as defined in Section 4.5.1), provided, however, that this Section 4.1.1 shall in no way limit the Company’s obligations to provide such reasonable accommodations to the Executive and/or her heirs as may be required by law.

4.1.2 **Termination by the Company For Cause.** The Company may terminate the Executive’s employment under this Agreement for “Cause” (as defined in Section 4.5.3) by delivery of written notice to the Executive specifying the Cause or Causes relied upon for such termination, provided that such notice is delivered within two (2) months following the occurrence or discovery of any event or events constituting “Cause”. Any notice of termination given pursuant to this Section 4.1.2 shall effect termination as of the date of the notice or such date as specified in the notice. The Executive shall have the right to appear before the CEO before any termination for Cause becomes effective and binding upon the Executive.

4.1.3 **Termination by the Company Without Cause.** The Company may terminate the Executive’s employment under this Agreement at any time and for any reason or no reason subject to the requirements set out in Section 4.4 of this Agreement. Such termination shall be effective on the date the Executive is so informed or as otherwise specified by the Company, pursuant to notice requirements set forth in Section 6 of this Agreement.

4.2 **Termination By The Executive.** The Executive may terminate her employment with the Company at any time and for any reason or no reason, including, but not limited, to the following conditions:

4.2.1 **Good Reason.** The Executive may terminate her employment under this Agreement for “Good Reason” (as defined below in Section 4.5.2) by delivery of written notice to the Company specifying the Good Reason relied upon by the Executive for such termination in accordance with the requirements of such section.
4.2.2 **Without Good Reason.** The Executive may terminate the Executive’s employment hereunder for other than Good Reason upon thirty (30) days written notice to the Company.

4.3 **Termination by Mutual Agreement of the Parties.** The Executive’s employment pursuant to this Agreement may be terminated at any time upon a mutual agreement in writing of the Parties. Any such termination of employment shall have the consequences specified in such mutual agreement.

4.4 **Compensation to Executive Upon Termination.** In connection with any termination of the Executive’s employment for any reason, the Executive or the Executive’s estate, as applicable, shall be entitled to any amounts payable to the Executive or the Executive’s beneficiaries subject to and in accordance with the terms of the Company’s employee welfare benefit plans or policies (excluding any severance pay).

4.4.1 **Death or Complete Disability.** If the Executive’s employment shall be terminated by death or Complete Disability as provided in Section 4.1.1, the Company shall pay to Executive, and/or Executive’s heirs, all earned but unpaid Base Salary, any earned but unpaid discretionary bonuses for any prior period at such time as bonuses would have been paid if the Executive remained employed, all accrued but unpaid business expenses, and all accrued but unused vacation time earned through the date of termination at the rate in effect at the time of termination (hereinafter referred to as the "Accrued Amounts"), less standard deductions and withholdings. The Executive shall also be eligible to receive a pro-rated bonus for the year of termination, as determined by the Board or the Compensation Committee of the Board based on actual performance and the period of the year she was employed (hereinafter referred to as the "Pro-rata Bonus"), less standard deductions and withholdings, to be paid as a lump sum within thirty (30) days after the date of termination.

4.4.2 **With Cause or Without Good Reason.** If the Executive’s employment shall be terminated by the Company for Cause, or if the Executive terminates employment hereunder without Good Reason, the Company shall pay the Executive’s Base Salary, accrued but unpaid business expenses and accrued and unused vacation benefits earned through the date of termination at the rate in effect at the time of termination, less standard deductions and withholdings.

4.4.3 **Without Cause or For Good Reason.**

   (i) **Not in Connection With a Change in Control.** If the Company terminates the Executive’s employment without Cause or the Executive terminates her employment for Good Reason, and Section 4.4.3(ii) below does not apply, the Company shall pay the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company an executed waiver and release of claims (the form of which is attached hereto as Exhibit A) (the "Release") within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such Release to become effective in accordance with its terms (the "Release Effective Date"), and subject to Executive entering into
no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period (as defined below), substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, the Executive shall be entitled to:

(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid for a period of twelve (12) months following the date of termination (hereinafter referred to as the “Non Change in Control Severance Period”), less standard deductions and withholdings, to be paid during the Non Change in Control Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date; and

(b) in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination up until the earlier of either (i) the last day of the Non Change in Control Severance Period or, (ii) the date on which the Executive begins full-time employment with another company or business entity which offers comparable health insurance coverage to the Executive (such period, the “Non Change in Control COBRA Payment Period”). Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive a taxable cash amount, which payment shall be made regardless of whether the Executive or her qualifying family members elect COBRA continuation coverage (the “Health Care Benefit Payment”). The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the Non Change in Control COBRA Payment Period.

(ii) In Connection With a Change in Control. If the Company (or its successor) terminates the Executive’s employment without Cause or the Executive terminates her employment for Good Reason within the period commencing three (3) months immediately prior to a Change in Control of the Company and ending eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the Executive shall receive the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company (or its successor) an executed Release within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such Release to become effective in accordance with its terms, and subject to Executive entering into no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period, substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, then in lieu of (and not additional to) the benefits provided pursuant to Section 4.4.3(i) above, the Executive shall be entitled to:

7.
(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid for a period of eighteen (18) months following the date of termination (hereinafter referred to as the “Change in Control Severance Period”), less standard deductions and withholdings, to be paid during the Change in Control Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date;

(b) one and half (1.5) times Executive’s target Bonus in effect at the time of termination, or if none, one and half (1.5) times the last target Bonus in effect for Executive, less standard deductions and withholdings, to be paid in a lump sum within ten (10) days following the later of (i) the Release Effective Date, or (ii) the effective date of the Change in Control; and

(c) in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination until the expiration of the Change in Control Severance Period. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive the Health Care Benefit Payment, which payment shall be made regardless of whether the Executive or her qualifying family members elect COBRA continuation coverage. The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the Change in Control Severance Period.

(iii) No Duplication of Benefits. For the avoidance of doubt, in no event will Executive be entitled to benefits under Section 4.4.3(i) and Section 4.4.3(ii) if Executive commences to receive benefits under Section 4.4.3(i) due to a qualifying termination prior to a Change in Control and thereafter becomes entitled to benefits under Section 4.4.3(ii), any benefits provided to Executive under Section 4.4.3(i) shall offset the benefits to be provided to Executive under Section 4.4.3(ii) and shall be deemed to have been provided to Executive pursuant to Section 4.4.3(ii).

4.4.4 Equity Award Acceleration.

(i) Not in Connection With a Change in Control. In the event that the Executive’s employment is terminated without Cause or for Good Reason and Section 4.4.4 (ii) below does not apply, the vesting of any equity awards granted to Executive that vest solely subject to Executive’s continued services to the Company (the “Time-Based Vesting Equity Awards”) shall be deemed vested and immediately exercisable (if applicable) by the Executive with respect to such number of shares as determined in accordance with their applicable vesting schedules as if Executive had provided an additional twelve (12) months of services as of the
date of termination. Treatment of any performance based vesting equity awards will be governed solely by the terms of the agreements under which such awards were granted and will not be eligible to accelerate vesting pursuant to the foregoing provision.

(ii) In Connection With a Change in Control. In the event that the Executive’s employment is terminated without Cause or for Good Reason within the three (3) months immediately preceding or during the eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the vesting of any Time-Based Vesting Equity Awards granted to Executive shall be fully accelerated such that on the effective date of such termination (or if later, the date of the Change in Control) one hundred percent (100%) of any Time-Based Vesting Equity Awards granted to Executive prior to such termination shall be fully vested and immediately exercisable, if applicable, by the Executive. Treatment of any performance based vesting equity awards will be governed solely by the terms of the agreements under which such awards were granted and will not be eligible to accelerate vesting pursuant to the foregoing provision.

(iii) Release and Waiver. Any equity vesting acceleration pursuant to this Section 4.4.4 shall be conditioned upon and subject to the Executive’s delivery to the Company of a fully effective Release in accordance with the terms specified by Section 4.4.3 hereof and such vesting acceleration benefit shall be in addition to the benefits provided by Section 4.4.3 hereof.

4.5 Definitions. For purposes of this Agreement, the following terms shall have the following meanings:

4.5.1 Complete Disability. “Complete Disability” shall mean the inability of the Executive to perform the Executive’s duties under this Agreement, whether with or without reasonable accommodation, because the Executive has become permanently disabled within the meaning of any policy of disability income insurance covering employees of the Company then in force. In the event the Company has no policy of disability income insurance covering employees of the Company in force when the Executive becomes disabled, the term “Complete Disability” shall mean the inability of the Executive to perform the Executive’s duties under this Agreement, whether with or without reasonable accommodation, by reason of any incapacity, physical or mental, which the Board, based upon medical advice or an opinion provided by a licensed physician, determines to have incapacitated the Executive from satisfactorily performing all of the Executive’s usual services for the Company, with or without reasonable accommodation, for a period of at least one hundred eighty (180) days during any twelve (12) month period that need not be consecutive.

4.5.2 Good Reason. “Good Reason” for the Executive to terminate the Executive’s employment hereunder shall mean the occurrence of any of the following events without the Executive’s consent:

(i) a material reduction in the Executive’s duties, authority, or responsibilities relative to the duties, authority, or responsibilities in effect immediately prior to such reduction, including by way of example, having the same title, duties, authority and responsibilities at a subsidiary level following a Change in Control;
the relocation of the Executive’s primary work location to a point more than thirty-five (35) miles from the Executive’s current work location set forth in Section 1.5 that requires a material increase in Executive’s one-way driving distance;

(iii) a material reduction by the Company of the Executive’s base salary or annual target Bonus opportunity, without the written consent of the Executive, as initially set forth herein or as the same may be increased from time to time pursuant to this Agreement; and

(iv) a material breach by the Company of Section 1.2 of this Agreement.

Provided, however that, such termination by the Executive shall only be deemed for Good Reason pursuant to the foregoing definition if (i) the Company is given written notice from the Executive within sixty (60) days following the first occurrence of the condition that she considers to constitute Good Reason describing the condition and the Company fails to satisfactorily remedy such condition within thirty (30) days following such written notice, and (ii) the Executive terminates employment within thirty (30) days following the end of the period within which the Company was entitled to remedy the condition constituting Good Reason but failed to do so.

4.5.3 Cause. “Cause” for the Company to terminate Executive’s employment hereunder shall mean the occurrence of any of the following events, as determined reasonably and in good faith by the Board or a committee designated by the Board:

(i) the Executive’s gross negligence or willful failure to substantially perform her duties and responsibilities to the Company or willful and deliberate violation of a Company policy;

(ii) the Executive’s conviction of a felony or the Executive’s commission of any act of fraud, embezzlement or dishonesty against the Company or involving moral turpitude that is likely to inflict or has inflicted material injury on the business of the Company, to be determined by the sole discretion of the Company;

(iii) the Executive’s unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party that the Executive owes an obligation of nondisclosure as a result of the Executive’s relationship with the Company; and

(iv) the Executive’s willful and deliberate breach of the obligations under this Agreement that causes material injury to the business of the Company.

4.5.4 Change in Control. For purposes of this Agreement, “Change in Control” means: (i) a sale of all or substantially all of the assets of the Company; (ii) a merger or consolidation in which the Company is not the surviving entity and in which the holders of the Company’s outstanding voting stock immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the entity surviving such transaction or, where the surviving entity is a wholly-owned subsidiary of another entity, the surviving entity’s parent; (iii) a reverse merger in which the Company is
the surviving entity but the shares of Common Stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities of the surviving entity’s parent, cash or otherwise, and in which the holders of the Company’s outstanding voting stock immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the Company or, where the Company is a wholly-owned subsidiary of another entity, the Company’s parent; or (iv) an acquisition by any person, entity or group (excluding any employee benefit plan, or related trust, sponsored or maintained by the Company or subsidiary of the Company or other entity controlled by the Company) of the beneficial ownership of securities of the Company representing at least seventy-five percent (75%) of the combined voting power entitled to vote in the election of Directors; provided, however, that nothing in this paragraph shall apply to a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company.

4.6 Application of Internal Revenue Code Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement (the “Severance Benefits”) that constitute “deferred compensation” within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the “Code”) and the regulations and other guidance thereunder and any state law of similar effect (collectively “Section 409A”) shall not commence in connection with Executive’s termination of employment unless and until Executive has also incurred a “separation from service” (as such term is defined in Treasury Regulation Section 1.409A-1(h) (“Separation From Service”), unless the Company reasonably determines that such amounts may be provided to Executive without causing Executive to incur the additional 20% tax under Section 409A.

It is intended that each installment of the Severance Benefits payments provided for in this Agreement is a separate “payment” for purposes of Treasury Regulation Section 1.409A–2(b)(2)(i). For the avoidance of doubt, it is intended that payments of the Severance Benefits set forth in this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9). However, if the Company (or, if applicable, the successor entity thereto) determines that the Severance Benefits constitute “deferred compensation” under Section 409A and Executive is, on the termination of service, a “specified employee” of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance Benefit payments shall be delayed until the earlier to occur of: (i) the date that is six months and one day after Executive’s Separation From Service, or (ii) the date of Executive’s death (such applicable date, the “Specified Employee Initial Payment Date”). the Company (or the successor entity thereto, as applicable) shall (A) pay to Executive a lump sum amount equal to the sum of the Severance Benefit payments that Executive would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of the Severance Benefits had not been so delayed pursuant to this Section and (B) commence paying the balance of the Severance Benefits in accordance with the applicable payment schedules set forth in this Agreement.

Notwithstanding anything to the contrary set forth herein, Executive shall receive the Severance Benefits described above, if and only if Executive duly executes and returns to the
Company within the applicable time period set forth therein, but in no event more than forty-five days following Separation From Service, the Company’s standard form of release of claims in favor of the Company (attached to this Agreement as Exhibit A) (the “Release”) and permits the release of claims contained therein to become effective in accordance with its terms (such latest permitted date, the “Release Deadline”). If the severance benefits are not covered by one or more exemptions from the application of Section 409A and the Release could become effective in the calendar year following the calendar year in which Executive separates from service, the Release will not be deemed effective any earlier than the Release Deadline. Notwithstanding any other payment schedule set forth in this Agreement, none of the Severance Benefits will be paid or otherwise delivered prior to the effective date (or deemed effective date) of the Release. Except to the extent that payments may be delayed until the Specified Employee Initial Payment Date pursuant to the preceding paragraph, on the first regular payroll pay day following the effective date of the Release, the Company will pay Executive the Severance Benefits Executive would otherwise have received under the Agreement on or prior to such date but for the delay in payment related to the effectiveness of the Release, with the balance of the Severance Benefits being paid as originally scheduled.

The severance benefits are intended to qualify for an exemption from application of Section 409A or comply with its requirements to the extent necessary to avoid adverse personal tax consequences under Section 409A, and any ambiguities herein shall be interpreted accordingly.

4.7 Application of Internal Revenue Code Section 280G. If any payment or benefit Executive would receive pursuant to a Change in Control from the Company or otherwise (“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 such Payment shall be equal to the Reduced Amount. The “Reduced Amount” shall be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount, after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive’s receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in payments or benefits constituting “parachute payments” is necessary so that the Payment equals the Reduced Amount, reduction shall occur in the manner that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata.

In the event it is subsequently determined by the Internal Revenue Service that some portion of the Reduced Amount as determined pursuant to clause (x) in the preceding paragraph is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment so that no portion of the Reduced Amount is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount is determined pursuant to clause (y) in the preceding paragraph, Executive will have no obligation to return any portion of the Payment pursuant to the preceding sentence.
Unless Executive and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the Change in Control, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder.

The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive’s right to a Payment is triggered (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

4.8 **Indemnification Agreements.** Concurrently with the execution of this Agreement, the Company and the Executive shall enter into indemnification agreements, copies of which are attached hereto as Exhibit B-1 and Exhibit B-2.

4.9 **Confidential Information and Invention Assignment Agreement.** The Executive shall execute the Company’s Confidential Information and Invention Assignment Agreement the terms of which shall govern the terms of Executive’s employment following the Effective Date, and a copy of which is attached as Exhibit C.

4.10 **No Mitigation or Offset.** The Executive shall not be required to seek or accept other employment, or otherwise to mitigate damages, as a condition to receipt of the Severance Benefits, and the Severance Benefits shall not be offset by any amounts received by the Executive from any other source, except to the extent that the Executive’s rights to the benefits described in Sections 4.4.3(i)(b) or 4.4.3(ii)(c), as applicable, are terminated by reason of the Executive obtaining full-time employment with another company or business entity which offers comparable health insurance coverage.

5. **Assignment and Binding Effect.**

This Agreement shall be binding upon the Executive and the Company and inure to the benefit of the Executive and the Executive’s heirs, executors, personal representatives, assigns, administrators and legal representatives. Because of the unique and personal nature of the Executive’s duties under this Agreement, neither this Agreement nor obligations under this Agreement shall be assignable by the Executive. This Agreement shall be binding upon and inure to the benefit of the Company and its successors, assigns and legal representatives, provided that the Agreement may only be assigned to an acquirer of all or substantially all of the Company’s assets. Any such successor of the Company will be deemed substituted for the Company under the terms of this Agreement for all purposes. For this purpose, “successor” means any person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company.
6. **Notice.**

For the purposes of this Agreement, notices, demands, and all other forms of communication provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or (unless otherwise specified) mailed by registered mail, return receipt requested, postage prepaid, or by confirmed facsimile, addressed as set forth below, or to such other address as any party may have furnished to the other in writing in accordance herewith, except that notices of address shall be effective only upon receipt, as follows:

- **If to the Company:**
  Horizon Pharma, Inc.
  150 S. Saunders Rd.
  Lake Forest, IL 60045
  Attention: Timothy P. Walbert, Chairman, President & CEO
  Fax: 847-572-1372

- **If to the Executive:**
  1111 Evergreen Dr.
  Lake Forest, IL 60045

Any such written notice shall be deemed given on the earlier of the date on which such notice is personally delivered or five (5) days after its deposit in the United States mail as specified above. Either Party may change its address for notices by giving written notice to the other Party in the manner specified in this section.

7. **Choice of Law.**

This Agreement shall be governed by the laws of the State of Illinois, without regard to any conflicts of law principals thereof that would call for the application of the laws of any other jurisdiction. The Parties consent to the exclusive jurisdiction and venue of the federal court in the Northern District of Illinois, and state courts located in the state of Illinois, county of Cook. Nothing in this Section 7 limits the rights of the Parties to seek appeal of a decision of an Illinois court outside of Illinois that has proper jurisdiction over the decision of a court sitting in Illinois.

8. **Integration.**

This Agreement, including Exhibit A, Exhibit B-1 and B-2, Exhibit C, the 2014 Equity Incentive Plan and the Equity Plan Documents, contains the complete, final and exclusive agreement of the Parties relating to the terms and conditions of the Executive’s employment and the termination of Executive’s employment, and supersedes all prior and contemporaneous oral and written employment agreements or arrangements between the Parties.

9. **Amendment.**

This Agreement cannot be amended or modified except by a written agreement signed by the Executive and the Company.
10. **Waiver.**

No term, covenant or condition of this Agreement or any breach thereof shall be deemed waived, except with the written consent of the Party against whom the waiver is claimed, and any waiver or any such term, covenant, condition or breach shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other term, covenant, condition or breach.

11. **Severability.**

The finding by a court of competent jurisdiction of the unenforceability, invalidity or illegality of any provision of this Agreement shall not render any other provision of this Agreement unenforceable, invalid or illegal. Such court shall have the authority to modify or replace the invalid or unenforceable term or provision with a valid and enforceable term or provision, which most accurately represents the Parties’ intention with respect to the invalid, unenforceable, or illegal term or provision.

12. **Interpretation; Construction.**

The headings set forth in this Agreement are for convenience of reference only and shall not be used in interpreting this Agreement. This Agreement has been drafted and negotiated by legal counsel representing the Company and the Executive. The Parties acknowledge that each Party and its counsel has reviewed and revised, or had an opportunity to review and revise, this Agreement, and any rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

13. **Execution by Facsimile Signatures and in Counterparts.**

The parties agree that facsimile signatures shall have the same force and effect as original signatures. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

14. **Survival.**

The provisions of this Agreement, and of all other agreements referenced herein, shall survive the termination of this Agreement, and of the Executive’s employment by the Company for any reason, to the extent necessary to enable the parties to enforce their respective rights hereunder.

[Remainder of Page Intentionally Left Blank]
IN WITNESS WHEREFORE, the parties have signed this Agreement on the date first written above.

HORIZON PHARMA, INC.
HORIZON PHARMA USA, INC.

By:
Title: Chairman, President & CEO
Print Name: Timothy P. Walbert

/s/ Timothy P. Walbert
Signature:
As authorized agent of the Company

EXECUTIVE:

SHAO-LEE LIN

/s/ Shao-Lee Lin
Shao-Lee Lin, individually

16.
EXHIBIT 10.68
EXECUTIVE EMPLOYMENT
AGREEMENT BY AND BETWEEN
HORIZON PHARMA, INC., HORIZON PHARMA USA, INC. AND
MICHAEL DESJARDIN

This Executive Employment Agreement (hereinafter referred to as the “Agreement”), is entered into by and between Horizon Pharma, Inc., a Delaware corporation, and its wholly owned subsidiary, Horizon Pharma USA, Inc., a Delaware corporation, each having a principal place of business at 150 S. Saunders Road, Lake Forest, IL 60045 (hereinafter referred to together as the “Company”) and Michael DesJardin (hereinafter referred to as the “Executive”). The terms of this Agreement shall be effective commencing February 16, 2017 (the “Effective Date”). Certain capitalized terms used in this Agreement have the meanings as set forth in Section 4.5.

RECITALS

WHEREAS, the Executive previously entered into: (i) an employment offer letter agreement with Raptor Pharmaceuticals Corp. (“Raptor”) on February 17, 2015, (ii) a Change in Control Severance Agreement with Raptor, and (iii) a Retention Agreement with the Company dated January 13, 2017 (the “Retention Agreement”) (collectively, the “Prior Agreement”);

WHEREAS, the Company’s parent entity, Horizon Pharma Public Limited Company (“Horizon plc”) acquired Raptor on October 25, 2016, and Raptor became a wholly owned subsidiary of Horizon plc;

WHEREAS, on December 12, 2016, Executive’s employment was transferred from Raptor to the Company;

WHEREAS, the Company desires assurance of the continued association and services of the Executive in order to continue to retain the Executive’s experience, skills, background and knowledge, and is willing to continue to engage the Executive’s services on the terms and conditions set forth in this Agreement, which as of the Effective Date shall replace and supersede in its entirety the terms of the Prior Agreement; and

WHEREAS, Executive desires to be in the continued employ of the Company, and is willing to accept such continued employment on the terms and conditions set forth in (i) this Agreement, and (ii) the letter agreement by and between the Executive and Raptor dated October 13, 2016 (the “Transition Services Agreement”) which will continue in full force and effect following the Effective Date.

AGREEMENT

1. Employment.

1.1 Term. The Company hereby agrees to continue to employ the Executive, and the Executive hereby accepts continued employment by the Company, upon the terms and
1. Title. From and after the Effective Date the Executive will have the title of Executive Vice President, Technical Operations (such position held by Executive during such period is hereinafter referred to as "EVP TO") and Executive shall continue to serve in such other capacity or capacities commensurate with his position as EVP TO as the President and CEO of the Company may from time to time prescribe.

1.2 Duties. The Executive shall do and perform all services, acts or things necessary or advisable to manage and conduct the business of the Company and shall have the authority and responsibilities which are generally associated with the position of EVP TO including being responsible for the Company's technical operations. The Executive shall report to the President and CEO.

1.3 Policies and Practices. The employment relationship between the parties shall be governed by this Agreement and the policies and practices established by the Company and the Board of Directors (hereinafter referred to as the "Board"). In the event that the terms of this Agreement differ from or are in conflict with the Company's policies or practices or the Company's Employee Handbook, this Agreement shall control.

1.4 Location. The Executive shall perform the services the Executive is required to perform pursuant to this Agreement in Novato California. The Company may from time to time require the Executive to travel temporarily to other locations outside of the Novato California area in connection with the Company’s business.

2. Loyalty of Executive.

2.1 Loyalty. During the Executive’s employment by the Company, the Executive shall devote the Executive’s business energies, interest, abilities and productive time to the proper and efficient performance of Executive’s duties under this Agreement. Subject to the prior written consent of the President and CEO, the Executive is permitted to serve on the board of directors of one other company, so long as the other company does not compete with the Company.

2.2 Exclusive Employment. Except with the prior written consent of the Chief Executive Officer, Executive shall not, during the term of this Agreement, undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor. Executive may engage in any civic and not-for-profit activities so long as such activities do not materially interfere with the performance of his duties hereunder or present a conflict of interest with the Company.

2.3 Agreement not to Participate in Company’s Competitors. During the Term of this Agreement, the Executive agrees not to acquire, assume or participate in, directly or indirectly, any position, investment or interest known by Executive to be adverse or antagonistic to the Company, its business or prospects, financial or otherwise or in any company, person or entity that is, directly or indirectly, in competition with the business of the Company or any of its
3. Compensation to Executive.

3.1 Base Salary. The Company shall pay the Executive a base salary at the initial annualized rate of four hundred twenty-five thousand dollars ($425,000) per year, subject to standard deductions and withholdings, or such higher rate as may be determined from time to time by the Board or the compensation committee thereof (hereinafter referred to as the “Base Salary”). Such Base Salary shall be paid in accordance with the Company’s standard payroll practice. Payments of salary installments shall be made no less frequently than once per month. Executive’s Base Salary will be reviewed annually and Executive shall be eligible to receive a salary increase (but not decrease) annually in an amount to be determined by the Board or the compensation committee thereof in its sole and exclusive discretion. Once increased, the new salary shall become the Base Salary for purposes of this Agreement and shall not be reduced without the Executive’s written consent. Any material reduction in the Base Salary of the Executive, without his written consent, may be deemed Good Reason as set forth in and subject to Section 4.5.2 of this Agreement.

3.2 Discretionary Bonus. Executive’s eligibility to receive a bonus for the 2016 calendar year will continue to be governed by the terms of Transition Services Agreement. Provided the Executive meets the conditions stated in this Section 3.2, commencing with the 2017 calendar year the Executive shall be eligible for an annual discretionary bonus (hereinafter referred to as the “Bonus”) with a target amount of fifty percent (50%) of the Executive’s Base Salary, subject to standard deductions and withholdings, based on the Board’s determination, in good faith, and based upon the Executive’s individual achievement and company performance objectives as set by the Board or the compensation committee thereof, of whether the Executive has met such performance milestones as are established for the Executive by the Board or the compensation committee thereof, in good faith, in consultation with the Executive (hereinafter referred to as the “Performance Milestones”). The Performance Milestones will be based on certain factors including, but not limited to, the Executive’s performance and the Company’s financial performance. The Executive’s Bonus target will be reviewed annually and may be adjusted by the Board or the compensation committee thereof in its discretion, provided however, that the Bonus target may only be materially reduced upon Executive’s written consent. The Executive must be employed on the date the Bonus is awarded to be eligible for the Bonus, subject to the termination provisions thereof. The Bonus shall be paid during the calendar year following the performance calendar year.

3.3 Retention Bonuses.

3.3.1 Transition Service Agreement Retention Bonus. Executive shall continue to be eligible to earn a retention bonus on the terms set forth in the Transition Services Agreement.

3.3.2 Additional Retention Bonus. Executive is eligible to earn an additional one-time retention bonus in the aggregate amount of $630,000 (the “Additional Retention Bonus”).
**Bonus**), less applicable taxes and withholdings. In order to earn the Additional Retention Bonus, Executive must remain employed by the Company or any other Affiliate (together, the “Horizon Employer”) regularly working at least 30 hours per week and in good performance standing for the period from March 31, 2017 through and including November 1, 2017 (the “Earn Date”). The period from March 31, 2017 through and including the Earn Date is the “Additional Retention Bonus Period.” If earned, the Additional Retention Bonus will be paid in a lump sum by the Company or its Affiliate, less applicable taxes and withholdings, on the first administratively practicable payroll pay date after the Earn Date.

3.3.3 Effect of Qualifying Termination. If during the Additional Retention Bonus Period, the Horizon Employer terminates Executive’s employment without Cause, or Executive’s employment with the Horizon Employer is terminated due to Executive’s death or Complete Disability, Executive will be eligible for the following benefits, subject to Executive’s satisfaction of the additional conditions specified below:

(i) If the Horizon Employer terminates Executive’s employment without Cause during the Additional Retention Bonus Period, Executive will be eligible for the full amount of the Additional Retention Bonus.

(ii) If Executive’s employment with the Horizon Employer is terminated due to Executive’s death or Complete Disability during the Additional Retention Bonus Period, Executive will be eligible for a pro-rata portion of the Additional Retention Bonus, with such pro-rata portion determined by dividing the number of days Executive was actually employed by the Horizon Employer during the Additional Retention Bonus Period by the total number of days in the Additional Retention Bonus Period (the “Pro-Rata Additional Retention Bonus”).

For the avoidance of doubt, if prior to expiration of the Additional Retention Bonus Period: (i) Executive provides notice of employment resignation, or actually severs the employment relationship by resignation (for any reason, including due to retirement or resignation for Good Reason), or (ii) the Horizon Employer terminates Executive’s employment for Cause; then Executive will not be eligible for and will not earn the full Additional Retention Bonus or any Pro-Rata Additional Retention Bonus. Under no circumstances will Executive be eligible to receive both the full Additional Retention Bonus and a Pro-Rata Additional Retention Bonus.

3.3.4 Additional Conditions to Earn Additional Retention Bonus. Notwithstanding the foregoing, in order to earn the full Additional Retention Bonus or Pro-Rata Additional Retention Bonus in connection with any employment termination, Executive (or Executive’s estate or legal guardian, if applicable) must execute and deliver to Horizon the Release, and such Release must become effective in accordance with its terms, but in no event later than sixty (60) days following the employment termination date. If earned, such bonus payment will be paid in a lump sum by the Horizon Employer or its Affiliate, less applicable taxes and withholdings, on the first administratively practicable payroll pay date after the Release becomes effective.
3.4 Equity Awards.

3.4.1 Prior Equity Grants. All Company equity awards granted to Executive prior to the Effective Date shall continue in effect from and following the Effective Date in accordance with their existing terms.

3.4.2 New Equity Grants. Subject to Executive’s timely acceptance and execution of this Agreement, on February 21, 2017 Executive was granted the following equity awards pursuant to and subject to the terms of the Horizon Pharma plc 2014 Equity Incentive Plan (“2014 Equity Incentive Plan”) and its form of stock option and restricted stock unit award agreements, in the forms provided to Executive concurrently with this Agreement (collectively the “Equity Plan Documents”) and compliance with applicable securities laws:

   (i) Option. A stock option to purchase up to 17,824 ordinary shares of Horizon plc (the “Option”). The Option has an exercise price equal to the fair market value of Horizon plc’s ordinary shares on the applicable date of grant, which is February 21, 2017. The Option will be an incentive stock option to the maximum extent permitted by applicable tax laws. Any portion of the Option that does not qualify as an incentive stock option will be a nonstatutory stock option. Subject to Executive’s continued provision of services to the Company through the applicable vesting dates, the Option shall vest as follows: 25% of the total number of shares subject to the Option shall vest on the first anniversary of the date of grant (the “Vesting Commencement Date”) and 1/36 of the remaining number of shares subject to the Option shall vest on each monthly anniversary thereafter so that the Option would fully vest on the four (4) year anniversary of the Vesting Commencement Date subject to Executive’s continued services with the Company through such date.

   (ii) Restricted Stock Unit Award. A restricted stock unit award in respect of 8,726 ordinary shares of Horizon plc (the “RSU Award”). Subject to Executive’s continued provision of services to the Company through the applicable vesting dates, the RSU Award shall vest as follows: 25% of the total number of units subject to the RSU Award shall vest on the first anniversary of the Vesting Commencement Date, and thereafter 25% of the total number of units subject to the RSU Award shall vest on each anniversary thereafter, so that the RSU Award would fully vest on the fourth anniversary of the Vesting Commencement Date, subject to Executive’s continued services with the Company through such date.

3.5 Legal Review. Upon the Executive’s submission of appropriate itemized proof and verification of reasonable and customary legal fees incurred by the Executive in obtaining legal advice associated with the review, preparation, approval, and execution of this Agreement, the Company shall pay for up to $10,000.00 of such legal fees subject to receipt of appropriate proof and verification of such legal fees no later than sixty (60) days of receipt of an invoice for legal services from the Executive and/or his attorneys. To be eligible for reimbursement, the invoice must be submitted no later than ninety (90) days after the legal fees are incurred.

3.6 Changes to Compensation. The Executive’s compensation may be changed from time to time by mutual agreement of the Executive and the Company. In the event that the Executive’s base salary is materially decreased without his written consent, said decrease will be Good Reason for the Executive to terminate the Agreement as set forth in and subject to Section 4.5.2 of this Agreement.
3.7 **Taxes.** All amounts paid under this Agreement to the Executive by the Company will be paid less applicable tax withholdings and any other withholdings required by law or authorized by the Executive.

3.8 **Benefits.** The Executive shall, in accordance with Company policy and the terms of the applicable plan documents, be eligible to participate in benefits under any executive benefit plan or arrangement which may be in effect from time to time and made available to the Company’s executives or key management employees, provided, however, that the Executive shall be entitled to at least four (4) weeks of paid vacation annually.

4. **Termination.**

4.1 **Termination by the Company.** The Executive’s employment with the Company may be terminated only under the following conditions:

4.1.1 **Termination for Death or Disability.** The Executive’s employment with the Company shall terminate effective upon the date of the Executive’s death or “Complete Disability” (as defined in Section 4.5.1), provided, however, that this Section 4.1.1 shall in no way limit the Company’s obligations to provide such reasonable accommodations to the Executive and/or his heirs as may be required by law.

4.1.2 **Termination by the Company For Cause.** The Company may terminate the Executive’s employment under this Agreement for “Cause” (as defined in Section 4.5.3) by delivery of written notice to the Executive specifying the Cause or Causes relied upon for such termination, provided that such notice is delivered within two (2) months following the occurrence or discovery of any event or events constituting “Cause”. Any notice of termination given pursuant to this Section 4.1.2 shall effect termination as of the date of the notice or such date as specified in the notice. The Executive shall have the right to appear before the CEO before any termination for Cause becomes effective and binding upon the Executive.

4.1.3 **Termination by the Company Without Cause.** The Company may terminate the Executive’s employment under this Agreement at any time and for any reason or no reason subject to the requirements set out in Section 4.4 of this Agreement. Such termination shall be effective on the date the Executive is so informed or as otherwise specified by the Company, pursuant to notice requirements set forth in Section 6 of this Agreement.

4.2 **Termination By The Executive.** The Executive may terminate his employment with the Company at any time and for any reason or no reason, including, but not limited to, the following conditions:

4.2.1 **Good Reason.** The Executive may terminate his employment under this Agreement for “Good Reason” (as defined below in Section 4.5.2) by delivery of written notice to the Company specifying the Good Reason relied upon by the Executive for such termination in accordance with the requirements of such section.

4.2.2 **Without Good Reason.** The Executive may terminate the Executive’s employment hereunder for other than Good Reason upon thirty (30) days written notice to the Company.
4.3 Termination by Mutual Agreement of the Parties. The Executive’s employment pursuant to this Agreement may be terminated at any time upon a mutual agreement in writing of the parties. Any such termination of employment shall have the consequences specified in such mutual agreement.

4.4 Compensation to Executive Upon Termination. In connection with any termination of the Executive’s employment for any reason, the Executive or the Executive’s estate, as applicable, shall be entitled to any amounts payable to the Executive or the Executive’s beneficiaries subject to and accordance with the terms of the Company’s employee welfare benefit plans or policies (excluding any severance pay).

4.4.1 Death or Complete Disability. If the Executive’s employment shall be terminated by death or Complete Disability as provided in Section 4.1.1, the Company shall pay to Executive, and/or Executive’s heirs, all earned but unpaid Base Salary, any earned but unpaid discretionary bonuses for any prior period at such time as bonuses would have been paid if the Executive remained employed, all accrued but unpaid business expenses, and all accrued but unused vacation time earned through the date of termination at the rate in effect at the time of termination (hereinafter referred to as the “Accrued Amounts”), less standard deductions and withholdings. The Executive shall also be eligible to receive a pro-rated bonus for the year of termination, as determined by the Board or the Compensation Committee of the Board based on actual performance and the period of the year he was employed (hereinafter referred to as the “Pro-rata Bonus”), less standard deductions and withholdings, to be paid as a lump sum within thirty (30) days after the date of termination.

4.4.2 With Cause or Without Good Reason. If the Executive’s employment shall be terminated by the Company for Cause, or if the Executive terminates employment hereunder without Good Reason, the Company shall pay the Executive’s Base Salary, accrued but unpaid business expenses and accrued and unused vacation benefits earned through the date of termination at the rate in effect at the time of termination, less standard deductions and withholdings.

4.4.3 Without Cause or For Good Reason.

(i) Not in Connection With a Change in Control. If the Company terminates the Executive’s employment without Cause or the Executive terminates his employment for Good Reason, and Section 4.4.3(ii) below does not apply, the Company shall pay the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company an executed (the “Release”) within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such Release to become effective in accordance with its terms (the “Release Effective Date”), and subject to Executive entering into no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period (as defined below), substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, the Executive shall be entitled to:
(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid for a period of twelve (12) months following the date of termination (hereinafter referred to as the “Severance Period”), less standard deductions and withholdings, to be paid during the Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date; and

(b) in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination up until the earlier of either (i) the last day of the Severance Period or, (ii) the date on which the Executive begins full-time employment with another company or business entity which offers comparable health insurance coverage to the Executive (such period, the “COBRA Payment Period”). Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive a taxable cash amount, which payment shall be made regardless of whether the Executive or his qualifying family members elect COBRA continuation coverage (the “Health Care Benefit Payment”). The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the COBRA Payment Period.

(ii) In Connection With a Change in Control. If the Company (or its successor) terminates the Executive’s employment without Cause or the Executive terminates his employment for Good Reason within the period commencing ninety (90) days immediately prior to a Change in Control of the Company and ending eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the Executive shall receive the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company (or its successor) an executed Release within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such Release to become effective in accordance with its terms, and subject to Executive entering into no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period, substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, then in lieu of (and not additional to) the benefits provided pursuant to Section 4.4.3(i) above, the Executive shall be entitled to:

(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid during the Severance Period, less standard deductions and withholdings, to be paid during the Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date;
Executive’s target Bonus in effect at the time of termination, or if none, the last target Bonus in effect for Executive, less standard deductions and withholdings, to be paid in a lump sum within ten (10) days following the later of (i) the Release Effective Date, or (ii) the effective date of the Change in Control; and

in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination until the expiration of the COBRA Payment Period. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive the Health Care Benefit Payment, which payment shall be made regardless of whether the Executive or his qualifying family members elect COBRA continuation coverage. The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the COBRA Payment Period.

(iii) No Duplication of Benefits. For the avoidance of doubt, in no event will Executive be entitled to benefits under Section 4.4.3(i) and Section 4.4.3(ii). If Executive commences to receive benefits under Section 4.4.3(i) due to a qualifying termination prior to a Change in Control and thereafter becomes entitled to benefits under Section 4.4.3(ii), any benefits previously provided to Executive under Section 4.4.3(i) shall offset the benefits to be provided to Executive under Section 4.4.3(ii) and shall be deemed to have been provided to Executive pursuant to Section 4.4.3(ii).

4.4.4 Equity Award Acceleration.

(i) In Connection With a Change in Control. In the event that the Executive’s employment is terminated without Cause or for Good Reason within the ninety (90) days immediately preceding or during the eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the vesting of the Option, the RSU Award and any other time-based vesting Company equity awards granted to Executive shall be fully accelerated such that on the effective date of such termination (or, if later, the date of the Change in Control) one hundred percent (100%) of the equity award shares granted to Executive prior to such termination shall be fully vested and immediately exercisable, if applicable, by the Executive.
(ii) Release and Waiver. Any equity vesting acceleration pursuant to this Section 4.4.4 shall be conditioned upon and subject to the Executive’s delivery to the Company of a fully effective Release in accordance with the terms specified by Section 4.4.3 hereof and such vesting acceleration benefit shall be in addition to the benefits provided by Section 4.4.3 hereof.

4.5 Definitions. For purposes of this Agreement, the following terms shall have the following meanings:

4.5.1 Affiliate. “Affiliates” means Horizon Pharma plc and each of its majority owned subsidiaries and “Affiliate” means any of the Affiliates.

4.5.2 Cause. “Cause” for the Company to terminate Executive’s employment hereunder shall mean the occurrence of any of the following events, as determined reasonably and in good faith by the Board or a committee designated by the Board:

(i) the Executive’s gross negligence or willful failure to substantially perform his duties and responsibilities to the Company or willful and deliberate violation of a Company policy;

(ii) the Executive’s conviction of a felony or the Executive’s commission of any act of fraud, embezzlement or dishonesty against the Company or involving moral turpitude that is likely to inflict or has inflicted material injury on the business of the Company, to be determined by the sole discretion of the Company;

(iii) the Executive’s unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party that the Executive owes an obligation of nondisclosure as a result of the Executive’s relationship with the Company; and

(iv) the Executive’s willful and deliberate breach of the obligations under this Agreement that causes material injury to the business of the Company.

4.5.3 Change in Control. For purposes of this Agreement, “Change in Control” means: (i) a sale of all or substantially all of the assets of the Company; (ii) a merger or consolidation in which the Company is not the surviving entity and in which the holders of the Company’s outstanding voting stock immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the entity surviving such transaction or, where the surviving entity is a wholly-owned subsidiary of another entity, the surviving entity’s parent; (iii) a reverse merger in which the Company is the surviving entity but the shares of Common Stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities of the surviving entity’s parent, cash or otherwise, and in which the holders of the Company’s outstanding voting stock immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the Company or, where the Company is a wholly-owned subsidiary of another entity, the Company’s parent; or (iv) an acquisition by any person, entity or group (excluding any employee benefit plan, or related trust, sponsored or maintained by the Company or subsidiary of the Company or other entity controlled by the Company) of the beneficial ownership of securities of
the Company representing at least seventy-five percent (75%) of the combined voting power entitled to vote in the election of Directors; provided, however, that nothing in this paragraph shall apply to a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company.

4.5.4 Complete Disability. “Complete Disability” shall mean the inability of the Executive to perform the Executive’s duties under this Agreement, whether with or without reasonable accommodation, because the Executive has become permanently disabled within the meaning of any policy of disability income insurance covering employees of the Company then in force. In the event the Company has no policy of disability income insurance covering employees of the Company in force when the Executive becomes disabled, the term “Complete Disability” shall mean the inability of the Executive to perform the Executive’s duties under this Agreement, whether with or without reasonable accommodation, by reason of any incapacity, physical or mental, which the Board, based upon medical advice or an opinion provided by a licensed physician, determines to have incapacitated the Executive from satisfactorily performing all of the Executive’s usual services for the Company, with or without reasonable accommodation, for a period of at least one hundred eighty (180) days during any twelve (12) month period that need not be consecutive.

4.5.5 Good Reason. “Good Reason” for the Executive to terminate the Executive’s employment hereunder shall mean the occurrence of any of the following events without the Executive’s consent:

(i) a material reduction in the Executive’s duties, authority, or responsibilities relative to the duties, authority, or responsibilities in effect immediately prior to such reduction, including by way of example, having the same title, duties, authority and responsibilities at a subsidiary level following a Change in Control;

(ii) the relocation of the Executive’s primary work location to a point more than fifty (50) miles from the Executive’s current work location set forth in Section 1.5 that requires a material increase in Executive’s one-way driving distance;

(iii) a material reduction by the Company of the Executive’s base salary or annual target Bonus opportunity, without the written consent of the Executive, as initially set forth herein or as the same may be increased from time to time pursuant to this Agreement; and

(iv) a material breach by the Company of Section 1.2 of this Agreement.

Provided, however that, such termination by the Executive shall only be deemed for Good Reason pursuant to the foregoing definition if (i) the Company is given written notice from the Executive within sixty (60) days following the first occurrence of the condition that he considers to constitute Good Reason describing the condition and the Company fails to satisfactorily remedy such condition within thirty (30) days following such written notice, and (ii) the Executive terminates employment within thirty (30) days following the end of the period within which the Company was entitled to remedy the condition constituting Good Reason but failed to do so.
4.5.6 Release. “Release” means a waiver and release of claims in a form acceptable to the Company and substantially as attached hereto as Exhibit A.

4.6 Application of Internal Revenue Code Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement (the “Severance Benefits”) that constitute “deferred compensation” within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the “Code”) and the regulations and other guidance thereunder and any state law of similar effect (collectively “Section 409A”) shall not commence in connection with Executive’s termination of employment unless and until Executive has also incurred a “separation from service” (as such term is defined in Treasury Regulation Section 1.409A-1(h) (“Separation From Service”), unless the Company reasonably determines that such amounts may be provided to Executive without causing Executive to incur the additional 20% tax under Section 409A.

It is intended that each installment of the Severance Benefits payments provided for in this Agreement is a separate “payment” for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that payments of the Severance Benefits set forth in this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9). However, if the Company (or, if applicable, the successor entity thereto) determines that the Severance Benefits constitute “deferred compensation” under Section 409A and Executive is, on the termination of service, a “specified employee” of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance Benefit payments shall be delayed until the earlier to occur of: (i) the date that is six months and one day after Executive’s Separation From Service, or (ii) the date of Executive’s death (such applicable date, the “Specified Employee Initial Payment Date”), the Company (or the successor entity thereto, as applicable) shall (A) pay to Executive a lump sum amount equal to the sum of the Severance Benefit payments that Executive would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of the Severance Benefits had not been so delayed pursuant to this Section and (B) commence paying the balance of the Severance Benefits in accordance with the applicable payment schedules set forth in this Agreement.

Notwithstanding anything to the contrary set forth herein, Executive shall receive the Severance Benefits described above, if and only if Executive duly executes and returns to the Company within the applicable time period set forth therein, but in no event more than forty-five days following Separation From Service, the Company’s standard form of release of claims in favor of the Company (attached to this Agreement as Exhibit A) (the “Release”) and permits the release of claims contained therein to become effective in accordance with its terms (such latest permitted date, the “Release Deadline”). If the severance benefits are not covered by one or more exemptions from the application of Section 409A and the Release could become effective in the calendar year following the calendar year in which Executive separates from service, the Release will not be deemed effective any earlier than the Release Deadline. Notwithstanding any
other payment schedule set forth in this Agreement, none of the Severance Benefits will be paid or otherwise delivered prior to the effective date (or deemed effective date) of the Release. Except to the extent that payments may be delayed until the Specified Employee Initial Payment Date pursuant to the preceding paragraph, on the first regular payroll pay day following the effective date of the Release, the Company will pay Executive the Severance Benefits Executive would otherwise have received under the Agreement on or prior to such date but for the delay in payment related to the effectiveness of the Release, with the balance of the Severance Benefits being paid as originally scheduled.

The severance benefits are intended to qualify for an exemption from application of Section 409A or comply with its requirements to the extent necessary to avoid adverse personal tax consequences under Section 409A, and any ambiguities herein shall be interpreted accordingly.

4.7 Application of Internal Revenue Code Section 280G. If any payment or benefit Executive would receive pursuant to a Change in Control from the Company or otherwise (“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 such Payment shall be equal to the Reduced Amount. The “Reduced Amount” shall be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount, after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive’s receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in payments or benefits constituting “parachute payments” is necessary so that the Payment equals the Reduced Amount, reduction shall occur in the manner that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata.

In the event it is subsequently determined by the Internal Revenue Service that some portion of the Reduced Amount as determined pursuant to clause (x) in the preceding paragraph is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment so that no portion of the Reduced Amount is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount is determined pursuant to clause (y) in the preceding paragraph, Executive will have no obligation to return any portion of the Payment pursuant to the preceding sentence.

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

4.8 Indemnification Agreements. Concurrently with the execution of this Agreement, the Company and the Executive shall enter into indemnification agreements, copies of which are attached hereto as Exhibit B-1 and Exhibit B-2.

4.9 Confidential Information and Invention Assignment Agreement. Concurrently with the execution of this Agreement, Executive shall enter into Company’s Confidential Information and Invention Assignment Agreement, a copy of which is attached as Exhibit C.

4.10 Arbitration Agreement. Concurrently with the execution of this Agreement and in consideration for the benefits provided hereunder, Executive shall enter into Company’s Arbitration Agreement, a copy of which is attached as Exhibit D.

4.11 Insider Trading Policy; Window Period Policy. Executive hereby acknowledges that Executive has received and read a copy of the Horizon Pharma plc Insider Trading Policy and Horizon Pharma plc Window Period Policy (the “Trading and Window Period Policies”). Executive agrees to comply with the specific requirements of the Trading and Window Period Policies in all respects during Executive’s employment or other service relationship with the Company and/or an Affiliate. Executive understands that the Trading and Window Period Policies constitutes a material term of Executive’s employment or other service relationship with the Company and/or an Affiliate and that Executive’s failure to comply in all respects with the Trading and Window Period Policies is a basis for termination for Cause.

4.12 No Mitigation or Offset. The Executive shall not be required to seek or accept other employment, or otherwise to mitigate damages, as a condition to receipt of the Severance Benefits, and the Severance Benefits shall not be offset by any amounts received by the Executive from any other source, except to the extent that the Executive’s rights to the benefits described in Sections 4.4.3(i)(b) or 4.4.3(ii)(c), as applicable, are terminated by reason of the Executive obtaining full-time employment with another company or business entity which offers comparable health insurance coverage.

5. Assignment and Binding Effect.

This Agreement shall be binding upon the Executive and the Company and inure to the benefit of the Executive and the Executive’s heirs, executors, personal representatives, assigns, administrators and legal representatives. Because of the unique and personal nature of the Executive’s duties under this Agreement, neither this Agreement nor obligations under this Agreement shall be assignable by the Executive. This Agreement shall be binding upon and inure to the benefit of the Company and its successors, assigns and legal representatives, provided that the Agreement may only be assigned to an acquirer of all or substantially all of the Company’s assets. Any such successor of the Company will be deemed substituted for the

For the purposes of this Agreement, notices, demands, and all other forms of communication provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or (unless otherwise specified) mailed by registered mail, return receipt requested, postage prepaid, or by confirmed facsimile, addressed as set forth below, or to such other address as any party may have furnished to the other in writing in accordance herewith, except that notices of address shall be effective only upon receipt, as follows:

   If to the Company:
   Horizon Pharma, Inc.
   150 S. Saunders Road
   Lake Forest, IL 60045
   Attention: Timothy P. Walbert, Chairman, President & CEO
   Fax: 847-572-1372

   If to the Executive:
   Michael DesJardin
   1520 Valencia Road
   Aptos, CA 95003

Any such written notice shall be deemed given on the earlier of the date on which such notice is personally delivered or five (5) days after its deposit in the United States mail as specified above. Either party may change its address for notices by giving written notice to the other party in the manner specified in this section.

7. Choice of Law.

This Agreement shall be governed by the laws of the State of California, without regard to any conflicts of law principals thereof that would call for the application of the laws of any other jurisdiction.

8. Integration.

This Agreement, including Exhibit A, Exhibit B-1, Exhibit B-2, Exhibit C, Exhibit D, the Trading and Window Period Policies, the Equity Plan Documents, and the Transition Services Agreement contains the complete, final and exclusive agreement of the parties relating to the terms and conditions of the Executive’s employment and the termination of Executive’s employment, and supersedes all prior and contemporaneous oral and written employment agreements or arrangements between the parties, including but not limited to the Prior Agreement. By executing this Agreement, Executive hereby agrees that Executive’s Prior
9. Amendment.

This Agreement cannot be amended or modified except by a written agreement signed by the Executive and the Company.

10. Waiver.

No term, covenant or condition of this Agreement or any breach thereof shall be deemed waived, except with the written consent of the party against whom the waiver is claimed, and any waiver or any such term, covenant, condition or breach shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other term, covenant, condition or breach.

11. Severability.

The finding by a court of competent jurisdiction of the unenforceability, invalidity or illegality of any provision of this Agreement shall not render any other provision of this Agreement unenforceable, invalid or illegal. Such court shall have the authority to modify or replace the invalid or unenforceable term or provision with a valid and enforceable term or provision, which most accurately represents the parties’ intention with respect to the invalid, unenforceable, or illegal term or provision.

12. Interpretation; Construction.

The headings set forth in this Agreement are for convenience of reference only and shall not be used in interpreting this Agreement. This Agreement has been drafted and negotiated by legal counsel representing the Company and the Executive. The parties acknowledge that each party and its counsel has reviewed and revised, or had an opportunity to review and revise, this Agreement, and any rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

13. Execution by Facsimile Signatures and in Counterparts.

The parties agree that facsimile signatures shall have the same force and effect as original signatures. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.


The provisions of this Agreement, and of all other agreements referenced herein, shall survive the termination of this Agreement, and of the Executive’s employment by the Company for any reason, to the extent necessary to enable the parties to enforce their respective rights hereunder.
IN WITNESS WHEREFORE, the parties have signed this Agreement on the date first written above.

COMPANY:
HORIZON PHARMA, INC.
HORIZON PHARMA USA, INC.

By:

Title: Chairman, President & CEO
Print Name: Timothy P. Walbert

/s/ Timothy Walbert
Signature:
As authorized agent of the Company

March 16, 2017
Date

EXECUTIVE:
Michael DesJardin

/s/ Michael DesJardin
Michael DesJardin, individually

March 16, 2017
Date
In consideration of the payments and other benefits set forth in Section 3 of the Executive Employment Agreement dated February 16, 2017, (the “Employment Agreement”), to which this form is attached, I, Michael DesJardin, hereby furnish Horizon Pharma, Inc. and Horizon Pharma USA, Inc. (together the “Company”), with the following release and waiver (“Release and Waiver”).

In exchange for the consideration provided to me by the Employment Agreement that I am not otherwise entitled to receive, I hereby generally and completely release the Company and its directors, officers, employees, shareholders, partners, agents, attorneys, predecessors, successors, parent and subsidiary entities, insurers, Affiliates, and assigns from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring relating to my employment or the termination thereof prior to my signing this Release and Waiver. This general release includes, but is not limited to: (1) all claims arising out of or in any way related to my employment with the Company or the termination of that employment; (2) all claims related to my compensation or benefits from the Company, including, but not limited to, salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership interests in the Company; (3) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (4) all tort claims, including, but not limited to, claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (5) all federal, state, and local statutory claims, including, but not limited to, claims for discrimination, harassment, retaliation, attorneys’ fees, or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990, the federal Age Discrimination in Employment Act of 1967 (as amended) (“ADEA”), the California Labor Code (as amended), the California Family Rights Act, and the California Fair Employment and Housing Act (as amended). Notwithstanding the foregoing, this Release and Waiver, shall not release or waive my rights: to indemnification under the articles and bylaws of the Company, any and all indemnification agreements, or applicable law; to payments under Section 4 of the Employment Agreement; under any provision of the Employment Agreement that survives the termination of that agreement; under any applicable workers’ compensation statute; under any option, restricted share or other agreement concerning any equity interest in the Company; as a shareholder of the Company or any other right that is not waivable under applicable law.

I acknowledge that, among other rights, I am waiving and releasing any rights I may have under ADEA, that this Release and Waiver is knowing and voluntary, and that the consideration given for this Release and Waiver is in addition to anything of value to which I was already entitled as an executive of the Company. If I am 40 years of age or older upon execution of this Release and Waiver, I further acknowledge that I have been advised, as required by the Older Workers Benefit Protection Act, that: (a) the release
and waiver granted herein does not relate to claims under the ADEA which may arise after this Release and Waiver is executed; (b) I should consult with an attorney prior to executing this Release and Waiver; and (c) I have twenty-one (21) days from the date of termination of my employment with the Company in which to consider this Release and Waiver (although I may choose voluntarily to execute this Release and Waiver earlier); (d) I have seven (7) days following the execution of this Release and Waiver to revoke my consent to this Release and Waiver; and (e) this Release and Waiver shall not be effective until the seven (7) day revocation period has expired unexercised. If I am less than 40 years of age upon execution of this Release and Waiver, I acknowledge that I have the right to consult with an attorney prior to executing this Release and Waiver (although I may choose voluntarily not to do so); and (c) I have five (5) days from the date of termination of my employment with the Company in which to consider this Release and Waiver (although I may choose voluntarily to execute this Release and Waiver earlier).

I acknowledge my continuing obligations under my Confidential Information and Inventions Agreement dated March 15, 2017. Pursuant to the Confidential Information and Inventions Agreement I understand that among other things, I must not use or disclose any confidential or proprietary information of the Company and I must immediately return all Company property and documents (including all embodiments of proprietary information) and all copies thereof in my possession or control. I understand and agree that my right to the payments and other benefits I am receiving in exchange for my agreement to the terms of this Release and Waiver is contingent upon my continued compliance with my Confidential Information and Inventions Agreement.

This Release and Waiver, including my Confidential Information and Inventions Agreement dated March 15, 2017, constitutes the complete, final and exclusive embodiment of the entire agreement between the Company and me with regard to the subject matter hereof. I am not relying on any promise or representation by the Company that is not expressly stated herein. This Release and Waiver may only be modified by a writing signed by both me and a duly authorized officer of the Company.

Date: March 16, 2017

By: /s/ Michael DesJardin
   Michael DesJardin
HORIZON PHARMA, INC.

FIRST AMENDMENT TO
EXECUTIVE EMPLOYMENT AGREEMENT

This First Amendment to Executive Employment Agreement (this “Amendment”), amending that certain Executive Employment Agreement dated February 16, 2017 (the “Employment Agreement”), by and among Horizon Pharma, Inc., a Delaware corporation, and its wholly owned subsidiary, Horizon Pharma USA, Inc., a Delaware corporation (hereinafter referred to together as the “Company”), and Michael DesJardin (the “Executive”), is entered into as of May 4, 2017 by and among the Company and the Executive. Capitalized terms used herein which are not defined herein shall have the definition ascribed to them in the Employment Agreement.

RECITALS

WHEREAS, the Company and the Executive have previously entered into the Employment Agreement;

WHEREAS, Section 9 of the Employment Agreement provides that the Employment Agreement may be amended with the written agreement of the Company and the Executive; and

WHEREAS, the Company and the Executive desire to amend the Employment Agreement as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the promises and covenants contained herein and in the Employment Agreement, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Section 4.4.3 of the Employment Agreement. Section 4.4.3 of the Employment Agreement is hereby amended and restated in its entirety to read as follows:

"4.4.3 Without Cause or For Good Reason.

(i) Not in Connection With a Change in Control. If the Company terminates the Executive’s employment without Cause or the Executive terminates his employment for Good Reason, and Section 4.4.3(ii) below does not apply, the Company shall pay the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company an executed waiver and release of claims (the form of which is attached hereto as Exhibit A) (the "Release") within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such Release to become effective in accordance with its terms (the “Release

1.
Effective Date

and subject to Executive entering into no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period (as defined below), substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, the Executive shall be entitled to:

(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid for a period of twelve (12) months following the date of termination (hereinafter referred to as the “Non Change in Control Severance Period”), less standard deductions and withholdings, to be paid during the Non Change in Control Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date; and

(b) in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination up until the earlier of either (i) the last day of the Non Change in Control Severance Period or, (ii) the date on which the Executive begins full-time employment with another company or business entity which offers comparable health insurance coverage to the Executive (such period, the “Non Change in Control COBRA Payment Period”). Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive a taxable cash amount, which payment shall be made regardless of whether the Executive or his qualifying family members elect COBRA continuation coverage (the “Health Care Benefit Payment”). The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the Non Change in Control COBRA Payment Period.

(ii) In Connection With a Change in Control. If the Company (or its successor) terminates the Executive’s employment without Cause or the Executive terminates his employment for Good Reason within the period commencing three (3) months immediately prior to a Change in Control of the Company and ending eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the Executive shall receive the Accrued Amounts subject to standard deductions and withholdings, to be paid as a lump sum no later than thirty (30) days after the date of termination. In addition, subject to the limitations stated in this Agreement and upon the Executive’s furnishing to the Company (or its successor) an executed Release within the applicable time period set forth therein, but in no event later than forty-five days following termination of employment and permitting such
Release to become effective in accordance with its terms, and subject to Executive entering into no later than the Release Effective Date a non-competition agreement to be effective during the Severance Period, substantially similar to Section 2.3, and continuing to abide by its terms during the Severance Period, then in lieu of (and not additional to) the benefits provided pursuant to Section 4.4.3(i) above, the Executive shall be entitled to:

(a) the equivalent of the Executive’s Base Salary in effect at the time of termination will continue to be paid for a period of eighteen (18) months following the date of termination (hereinafter referred to as the “Change in Control Severance Period”), less standard deductions and withholdings, to be paid during the Change in Control Severance Period according to the Company’s regular payroll practices, subject to any delay in payment required by Section 4.6 in connection with the Release Effective Date;

(b) one and half (1.5) times Executive’s target Bonus in effect at the time of termination, or if none, one and half (1.5) times the last target Bonus in effect for Executive, less standard deductions and withholdings, to be paid in a lump sum within ten (10) days following the later of (i) the Release Effective Date, or (ii) the effective date of the Change in Control; and

(c) in the event the Executive timely elects continued coverage under COBRA, the Company will continue to pay the same portion of Executive’s COBRA health insurance premium as the percentage of health insurance premiums that it paid during the Executive’s employment, including any amounts that Company paid for benefits to the qualifying family members of the Executive, following the date of termination until the expiration of the Change in Control Severance Period. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that the Company cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company shall in lieu thereof pay Executive the Health Care Benefit Payment, which payment shall be made regardless of whether the Executive or his qualifying family members elect COBRA continuation coverage. The Health Care Benefit Payment shall be paid in monthly or bi-weekly installments on the same schedule that the COBRA premiums would otherwise have been paid to the insurer. The Health Care Benefit Payment shall be equal to the amount that the Company otherwise would have paid for COBRA insurance premiums (which amount shall be calculated based on the premium for the first month of coverage), and shall be paid until the expiration of the Change in Control Severance Period.

(iii) No Duplication of Benefits. For the avoidance of doubt, in no event will Executive be entitled to benefits under Section 4.4.3(i) and Section 4.4.3(ii). If Executive commences to receive benefits under Section 4.4.3(i) due to a qualifying termination prior to a Change in Control and thereafter becomes entitled to benefits under Section 4.4.3(ii), any benefits previously provided to Executive under Section 4.4.3(i) shall offset the benefits to be provided to Executive under Section 4.4.3(ii) and shall be deemed to have been provided to Executive pursuant to Section 4.4.3(ii).”
2. **Section 4.4.4 of the Employment Agreement.** Section 4.4.4 of the Employment Agreement is hereby amended and restated in its entirety to read as follows:

   **“4.4.4 Equity Award Acceleration.**

   (i) **Not in Connection With a Change in Control.** In the event that the Executive’s employment is terminated without Cause or for Good Reason and Section 4.4.4 (ii) below does not apply, the vesting of any equity awards granted to Executive that vest solely subject to Executive’s continued services to the Company (the “Time-Based Vesting Equity Awards”) shall be deemed vested and immediately exercisable (if applicable) by the Executive with respect to such number of shares as determined in accordance with their applicable vesting schedules as if Executive had provided an additional twelve (12) months of services as of the date of termination. Treatment of any performance based vesting equity awards will be governed solely by the terms of the agreements under which such awards were granted and will not be eligible to accelerate vesting pursuant to the foregoing provision.

   (ii) **In Connection With a Change in Control.** In the event that the Executive’s employment is terminated without Cause or for Good Reason within the three (3) months immediately preceding or during the eighteen (18) months immediately following a Change in Control of the Company (as defined in Section 4.5.4 of this Agreement), the vesting of any Time-Based Vesting Equity Awards granted to Executive shall be fully accelerated such that on the effective date of such termination (or if later, the date of the Change in Control) one hundred percent (100%) of any Time-Based Vesting Equity Awards granted to Executive prior to such termination shall be fully vested and immediately exercisable, if applicable, by the Executive. Treatment of any performance based vesting equity awards will be governed solely by the terms of the agreements under which such awards were granted and will not be eligible to accelerate vesting pursuant to the foregoing provision.

   (iii) **Release and Waiver.** Any equity vesting acceleration pursuant to this Section 4.4.4 shall be conditioned upon and subject to the Executive’s delivery to the Company of a fully effective Release in accordance with the terms specified by Section 4.4.3 hereof and such vesting acceleration benefit shall be in addition to the benefits provided by Section 4.4.3 hereof.”

3. **Effect of Amendment.** Except as expressly modified by this Amendment, the Employment Agreement shall remain unmodified and in full force and effect.

4. **Governing Law.** This Amendment shall be governed by the laws of the State of Illinois, without regard to any conflicts of law principals thereof that would call for the application of the laws of any other jurisdiction.

5. **Counterparts.** This Amendment may be executed via facsimile or electronic (i.e., PDF) transmission and in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

   [Remainder of Page Intentionally Left Blank]
IN WITNESS WHEREOF, the parties have executed this First Amendment to Executive Employment Agreement as of the date first written above.

COMPANY:

HORIZON PHARMA, INC.
HORIZON PHARMA USA, INC.

By: /s/ Timothy P. Walbert

TIMOTHY P. WALBERT, CHAIRMAN, PRESIDENT AND
CHIEF EXECUTIVE OFFICER

EXECUTIVE:

/s/ Michael DesJardin

MICHAEL DESJARDIN
CONSULTING AGREEMENT

THIS CONSULTING AGREEMENT is made by and between Horizon Pharma USA, Inc. with its principal place of business at 150 South Saunders Road, Lake Forest, Illinois 60045 ("Company"), and DAVID HAPPEL, an individual residing at PO Box 203, 2362 Caballo Ranchero Drive, Diablo, CA 94528 ("Consultant"), effective February 1, 2018 (the “Effective Date”), for the purpose of setting forth the exclusive terms and conditions by which Company will acquire Consultant’s services on a limited and temporary basis. Company and Consultant may be referred to herein individually as a “Party,” or collectively as the “Parties.”

In consideration of the mutual obligations specified in this Agreement, and any compensation paid to Consultant for his or her services, the Parties agree to the following:

1. Work, Payment and Term. Attached to this Agreement as EXHIBIT A hereto is a statement of the work performed or to be performed by Consultant, the payment terms for such work, the types of any expenses to be paid in connection with such work, any Background Technology (as defined in Section 3) to be used by Consultant in performing the work, and such other terms and conditions as the Parties deem appropriate or necessary for the performance of the work. Consultant shall perform all such work himself or herself, engaging the assistance of other individuals only with the prior written consent of Company.

2. Nondisclosure and Trade Secrets.

(a) During the term of this Agreement and in the course of Consultant’s performance hereunder, Consultant may receive and otherwise be exposed to confidential and proprietary information owned by Company or its parent, subsidiaries or group affiliates (collectively, with Company, the “Company Group”) or received by Company Group from third parties pursuant to an obligation of confidentiality with respect thereto, relating to the Company Group’s business practices, strategies and technologies. Such confidential and proprietary information may include, but not be limited to, any compound, chemical, peptide, protein, complex, conjugate, virus, extract, media, vector, cell, cell component, cell line, formulation or sample; any procedure, discovery, invention, formula, data, result, idea or technique; any trade secret, trade dress, copyright, patent or other intellectual property right, or any registration or application therefor, or materials relating thereto; and any information relating to any of the foregoing or to any research, development, manufacturing, engineering, marketing, servicing, sales, financing, legal or other business activities or to any present or future products, prices, plans, forecasts, suppliers, clients, customers, employees, consultants or investors; whether in oral, written, graphic or electronic form (collectively referred to as “Information”).

(b) Consultant acknowledges the confidential and secret nature of the Information, and agrees that the Information is the extremely valuable property of the Company Group or of the third party from which the Company Group received such Information. Accordingly, Consultant agrees not to reproduce any of the Information in any format, not to use the Information except in the performance of the work described in this Agreement, and not to disclose all or any part of the Information in any format to any third party, such obligations shall apply in each case during the term of this Agreement and for a period of ten (10) years thereafter, except with the prior written consent of Company. Upon termination of this Agreement for any reason, including expiration of the term of this Agreement, Consultant agrees to cease using and to return to Company all whole and partial copies and derivatives of the Information, whether in Consultant’s possession or under Consultant’s direct or indirect control.

Page 1

(a) Consultant shall specifically describe and identify in EXHIBIT A to this Agreement any and all technology, including without limitation information, materials and related intellectual property rights, which (i) Consultant intends to use in performing the work under this Agreement, (ii) is either owned solely by Consultant or controlled by Consultant such that Consultant possesses the right to grant a license or sublicense thereunder and (iii) is in existence prior to the Effective Date ("Background Technology").

(b) Consultant agrees that any and all ideas, developments, discoveries, improvements, inventions and works of authorship conceived, written, created, tested, or first reduced to practice in the performance of work under this Agreement, including but not limited to any and all ideas, developments, discoveries, improvements, inventions and works of authorship that are in any way conceived, written, created, improved, tested or first reduced to practice by use of any of the Company Group’s supplies, equipment, facilities, resources, or trade secret information, together with all intellectual property rights relating thereto ("Work Product") shall be the sole and exclusive property of Company. Consultant hereby assigns and transfers to Company all its right, title and interest in and to any and all such Work Product. If Consultant has any rights to Work Product that cannot, under applicable law, be assigned to Company, Consultant unconditionally and irrevocably waives the enforcement of such rights and all claims and causes of action of any kind against Company with respect to such rights. Consultant agrees, at the Company’s request and expense, to consent to and join in any action to enforce such rights. If Consultant has any right to Work Product that can neither be assigned to Company nor waived by Consultant, Consultant hereby grants to Company an exclusive, irrevocable, perpetual, worldwide, fully paid and royalty free license, with rights to sublicense through multiple levels of sublicensees, to develop, make, have made, use, sell, have sold, offer for sale and import such Work Product. Consultant agrees to maintain written records of all Work Product and to promptly make full written disclosure to Company of all Work Product.

(c) Company acknowledges that Consultant shall retain all of Consultant’s rights in any Background Technology. Consultant hereby grants to Company a non-exclusive, irrevocable, perpetual, worldwide, fully paid and royalty free license, with rights to sublicense through multiple levels of sublicensees, under the Background Technology to develop, make, have made, use, sell, have sold, offer for sale and import Company products, including Work Product.

(d) Consultant further agrees to execute all papers, including without limitation all patent applications, invention assignments and copyright assignments, and otherwise assist Company as reasonably required to perfect Company’s right, title and interest in Work Product as expressly granted to Company under this Agreement. Such assistance shall include but not be limited to providing affidavits or testimony in connection with patent interference, validity or infringement proceedings and participating in other legal proceedings. Reasonable costs related to such assistance, if required, shall be paid by Company. Consultant’s obligation to assist Company as described above in this paragraph shall continue beyond the termination of this Agreement. If Company is unable, after reasonable effort, to secure Consultant’s signature on any document as provided in this Section 3, Consultant hereby designates and appoints Company and its duly authorized officers and agents as its agent and
attorney in fact to execute, verify and file applications, and to do all other lawfully permitted acts necessary to achieve the intent of this Section 3 with the same legal force and effect as if executed by Consultant.

4. **Conflicting Engagements.** Consultant will notify Company in writing prior to entering into any employment or consulting arrangement with one or more third parties which involves either subject matter substantially similar to services that Consultant is to provide hereunder, services which Consultant is to provide for the benefit of third parties who are competitors of Company or services that Company might reasonably determine would impair Consultant’s ability to provide the services described in Exhibit A or otherwise fulfill his responsibilities or obligations provided for in this Agreement. During the term of this Agreement, Consultant shall not accept any employment or consulting work which conflicts with Consultant’s obligations to Company hereunder or which may involve use or disclosure of Information other than as permitted hereunder. Company expressly acknowledges that Consultant’s employment with Chrono Therapeutics (www.chronothera.com) is not a conflicting engagement under this Section 4.

5. **Term; Termination.** The term of this Agreement shall be for a period beginning on February 1, 2018 and ending on January 31, 2019 (the "Term"), unless previously terminated pursuant to this Section 5. During the Term, Company may terminate this Agreement upon ten (10) days prior written notice to Consultant, with no further obligations or liability owed to Consultant, if Company reasonably determines that Consultant: (1) materially breaches this Agreement in any manner, including, inter alia, a breach of Section 4, or (2) commits any acts, or engages in any activities, that Company reasonably determines are unlawful, dishonest or detrimental to the best interests of Company.

In the event this Agreement is terminated or expires, for whatever reason, Consultant shall cease work immediately after receiving notice from Company, return all Information (including all copies thereof) as provided in Section 2, deliver all Work Product and related documentation to Company, and provide Company with an invoice for any work for which compensation has not already been paid. If compensation has been advanced to Consultant, Consultant shall reimburse any amounts for which work has not been performed prior to the date of the notice of termination. Sections 2, 3, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16 and 17 shall survive the termination of this Agreement for any reason, including expiration of the term of this Agreement.

6. **Compliance with Applicable Laws.** Consultant warrants that all materials supplied and work performed under this Agreement shall be in compliance with all applicable laws and regulations.

7. **Independent Contractor.** Consultant is an independent contractor, is not an agent or employee of Company and is not authorized to act on behalf of Company. Consultant will not be eligible for any employee benefits, nor will Company make deductions from any amounts payable to Consultant for taxes or social securities. Payment of all taxes and social securities due on any amounts paid to Consultant hereunder shall be the sole responsibility of Consultant.

8. **Non-Solicitation.** For the period of this Agreement and for one (1) year thereafter, Consultant will not, either directly or indirectly, solicit or attempt to solicit any employee, independent contractor, or consultant of Company to terminate his, her, or its relationship with, Company in order to become an employee, consultant, or independent contractor to or for any other person or entity.
9. **Assignment.** The Parties’ rights and obligations under this Agreement will bind and inure to the benefit of their respective successors and assigns, except that Consultant may not delegate or assign any of his or her obligations or rights under this Agreement without Company’s prior written consent.

10. **Complete Agreement.** This Agreement and Exhibit A attached hereto and hereby incorporated herein, constitute the Parties’ final, exclusive and complete understanding and agreement with respect to the subject matter hereof, and supersede all prior and contemporaneous understandings and agreements relating to its subject matter.

11. **Waiver; Amendment; Severability.** This Agreement may not be waived, modified or amended unless mutually agreed upon in writing by both Parties. In the event any provision of this Agreement is found to be legally unenforceable, such unenforceability shall not prevent enforcement of any other provision of the Agreement.

12. **Choice of Law.** This Agreement shall be governed by the laws of the State of Illinois, without regard to any conflicts of law principals thereof that would call for the application of the laws of any other jurisdiction. The Parties consent to the exclusive jurisdiction and venue of the federal court in the Northern District of Illinois, and state courts located in the state of Illinois, county of Lake.

13. **Notice.** For the purposes of this Agreement, notices, demands, and all other forms of communication provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or (unless otherwise specified) mailed by registered mail, return receipt requested, postage prepaid, or by confirmed facsimile, addressed as set forth below, or to such other address as any party may have furnished to the other in writing in accordance herewith, except that notices of address shall be effective only upon receipt, as follows:

   **If to Company:**
   Horizon Pharma USA, Inc.
   150 South Saunders Road
   Lake Forest, IL 60045
   Attention: Human Resources, Irina Konstantinovsky
   Executive Vice President, Chief Human Resources Officer
   ikonstantinovsky@horizonpharma.com
   Fax: 224-383-3001

   **A copy to:**
   Horizon Pharma USA, Inc.
   150 South Saunders Road
   Lake Forest, IL 60045
   Attention: Legal Department, Nelson Alexander
   nalexander@horizonpharma.com
   Fax: 224-383-3001
Any such written notice shall be deemed given on the earlier of the date on which such notice is personally delivered, sent by telefax with a confirmatory copy sent by first class mail, upon confirmation of receipt in case of registered mail, or electronic mail. Either party may change its address for notices by giving written notice to the other party in the manner specified in this section.

14. Execution in Facsimile and Electronic Signatures. Facsimile and electronically transmitted signatures shall have the same force and effect as original signatures.

15. Execution in Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which together shall constitute a single instrument.

16. Legal and Equitable Remedies. Consultant hereby acknowledges and agrees that in the event of any breach of this Agreement by Consultant, including, without limitation, the actual or threatened disclosure of Information without the prior express written consent of Company, Company will suffer an irreparable injury, such that no remedy at law will afford it adequate protection against, or appropriate compensation for, such injury. Accordingly, Consultant agrees that Company shall have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond and without prejudice to any other rights and remedies that Company may have for a breach of this Agreement.

17. Warranty; Indemnification. Consultant warrants that he or she has good and marketable title to all Work Product. Consultant further warrants that the Work Product shall be free and clear of all liens, claims, encumbrances or demands of third parties, including any claims by any such third parties with respect to such third parties’ intellectual property rights in the Work Product. Consultant warrants that Consultant has not been debarred under any applicable law, rule or regulation including, without limitation, Section 306 (a) or 306 (b) of the Federal Food, Drug and Cosmetic Act (codified at 21 U.S.C. 335(a) and 335(b)). Consultant covenants that should Consultant be convicted in the future of any act for which a person can be debarred as described in any applicable law, rule or regulation including, without limitation, Section 306 (a) or 306 (b) of the Federal Food, Drug and Cosmetic Act, Consultant shall immediately notify Company of such conviction in writing. Consultant shall indemnify, defend and hold harmless Company and its officers, agents, directors, employees, and customers from and against any claim, liability, loss, judgment or expense (including reasonable attorneys’ and expert witnesses’ fees and costs).
resulting from or arising out of any such claims by any third parties which are based upon or are the result of any breach of such warranties. Should Company permit Consultant to use any of Company’s equipment, tools or facilities (the “Company Equipment”) in the performance of the services during the term of this Agreement, such permission will be gratuitous and Consultant shall indemnify, defend and hold harmless Company and its officers, directors, agents and employees from and against any claim, loss, expense or judgment of injury to person or property (including death) arising out of Consultant’s willful misconduct or negligent use of any such Company Equipment.

IN WITNESS WHEREFORE, the Parties have signed this Agreement on the date first written below.

TIMOTHY P. WALBERT
HORIZON PHARMA USA, INC.

/s/ Timothy P. Walbert
By:

Chairman, President and CEO
Title

January 23, 2018
Date:

DAVID HAPPEL

/s/ David Happel

Consultant
Title

February 19, 2018
Date:

[signature page to Consulting Agreement]

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EXHIBIT A

**Work to be performed:** Consultant will provide services supporting the Company’s orphan drug development programs and commercialization strategies. Consultant’s activities will be directed by Timothy P. Walbert ("Walbert"), or any Company representative designated by Walbert, and Consultant will report to Walbert, or any Company representative designated by Walbert.

**Type or rate of payment:** Payment for work performed during the Term will be in an amount equal to $5,000.00 a month, payable on approximately the 15th day of each month during the Term.

**Travel expenses:** Company will pay Consultant’s reasonable traveling expenses, incurred at Company’s written request and with its advance approval, in accordance with the procedures that the Company establishes from time to time.

**Other terms (if any):**
SECOND AMENDMENT TO THE SUPPLY AGREEMENT BETWEEN
HORIZON PHARMA IRELAND LIMITED
AND NUVO PHARMACEUTICALS INC

This AMENDMENT NO. 2 TO SUPPLY AGREEMENT (this “Amendment”) is made and entered into as of January 1, 2017 by and between Nuvo Pharmaceuticals, Inc., formerly known as Nuvo Research Inc., a company incorporated under the laws of the province of Ontario, Canada (“NUVO”), having offices at 7560 Airport Road, Unit 10, Mississauga, Ontario, L4T 4114, and Horizon Pharma Ireland Limited, a Irish limited company (“Horizon”), and amends that certain Supply Agreement, dated as of October 17, 2014, as amended by Amendment No. 1 to Supply Agreement, dated as of February 4, 2016 (the “Agreement”), by and between NUVO and Horizon. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Agreement.

AGREEMENT

1. Exhibit A Transfer Prices (formerly Schedule 5) of the Agreement is hereby amended and replaced with Revised Exhibit A attached hereto.

2. EFFECT OF THIS AMENDMENT. Except as expressly provided herein, this Amendment shall not constitute an amendment, modification or waiver of any provision of the Agreement or any rights or obligations of any party under or in respect of the Agreement. Except as modified by this Amendment, the Agreement shall continue in full force and effect. Upon the execution of this Amendment by each of the parties hereto, each reference in the Agreement to “this Agreement” or the words “hereunder,” “hereof,” “herein” or words of similar effect referring to the Agreement shall mean and be a reference to the Agreement as amended by this Amendment, and a reference to the Agreement in any other instrument or document shall be deemed a reference to the Agreement as amended by this Amendment. This Amendment shall be subject to, shall form a part of, and shall be governed by, the terms and conditions set forth in the Agreement, as amended by this Amendment.

3. GENERAL. This Amendment may be executed in multiple counterparts, each of which may be delivered via facsimile or other electronic means, which taken together shall constitute the original agreement.

[Signature Page to Follow.]
IN WITNESS WHEREOF, the parties to this Amendment indicate their agreement effective as of the date set forth at the beginning of this Amendment by signing below.

HORIZON PHARMA IRELAND LIMITED

By: /s/ David G. Kelly  
(Signed)

Name: David G. Kelly  
(Typed)

Title: EVP and Company Sec.

NUVO PHARMACEUTICALS INC.

By: /s/ Katina Loucaides  
(Signed)

Name: Katina Loucaides  
(Typed)

Title: VP, General Counsel
Supplied Product:

[...***...]

*** Confidential Treatment Requested
THIRD AMENDMENT TO THE SUPPLY AGREEMENT BETWEEN HORIZON PHARMA IRELAND LIMITED AND NUVO PHARMACEUTICALS INC

This AMENDMENT NO. 3 TO SUPPLY AGREEMENT (this “Amendment”) is made and entered into as of February 16, 2018 by and between Nuvo Pharmaceuticals Inc., formerly known as Nuvo Research Inc., a company incorporated under the laws of the province of Ontario, Canada (“NUVO”), having offices at 6733 Mississauga Road, Suite 610, Mississauga, ON L5N 6J5, Canada, and Horizon Pharma Ireland Limited, a Irish limited company (“Horizon Pharma”), and amends that certain Supply Agreement, dated as of October 17, 2014, as amended by Amendment No. 1 to Supply Agreement, dated as of February 4, 2016 and Amendment No. 2 to Supply Agreement, dated as of January 1, 2017 (collectively, the “Agreement”), by and between NUVO and Horizon Pharma. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Agreement.

AGREEMENT

1. Section 7.6 of the Supply Agreement is hereby repealed and replaced with the following:

   7.6 Safety Stock Reserve. NUVO agrees to hold and maintain (a) […] bottles) and primary Packaging supplies for the Supplied Product, (b) […] bottles for the Supplied Product and (c)(i) […] stock reserve of API until such time as the Alternate API Manufacturer is approved by the relevant Regulatory Authorities in the Horizon Pharma Territory and (ii) […] stock reserve of API after the Alternate API Manufacturer is approved by the relevant Regulatory Authorities in the Horizon Pharma Territory, in each case, based on Horizon Pharma’s most recent Forecast; provided, notwithstanding anything contained in this Agreement, NUVO shall as soon as practicable obtain a stock reserve of DMSO, equal to the amount necessary to supply […] of Supplied Product, based on Horizon Pharma’s Initial Forecast. Thereafter, NUVO shall maintain, at all times during the Term, a stock reserve of DMSO equal to […] of Supplied Product, based on Horizon Pharma’s most current Forecast. If NUVO obtains any Raw Materials, primary Packaging supplies, other components or DMSO for its stock reserve pursuant to this Section 7.6 and, as a result of changes in the Forecast, is unable to use such materials either to supply Supplied Product to Horizon Pharma or to a Third Party, the Parties will share the cost of such excess materials equally and Horizon Pharma will reimburse NUVO for its share of such costs within […] following receipt of an invoice therefor.

2. EFFECT OF THIS AMENDMENT. Except as expressly provided herein, this Amendment shall not constitute an amendment, modification or waiver of any provision of the Agreement or any rights or obligations of any party under or in respect of the Agreement. Except as modified by this Amendment, the Agreement shall continue in full force and effect. Upon the execution of this Amendment by each of the parties hereto,
each reference in the Agreement to “this Agreement” or the words “hereunder,” “hereof,” “herein” or words of similar effect referring to the Agreement shall mean and be a reference to the Agreement as amended by this Amendment, and a reference to the Agreement in any other instrument or document shall be deemed a reference to the Agreement as amended by this Amendment. This Amendment shall be subject to, shall form a part of, and shall be governed by, the terms and conditions set forth in the Agreement, as amended by this Amendment.

3. GENERAL. This Amendment may be executed in multiple counterparts, each of which may be delivered via facsimile or other electronic means, which taken together shall constitute the original agreement.

IN WITNESS WHEREOF, the parties to this Amendment indicate their agreement effective as of the date set forth at the beginning of this Amendment by signing below.

HORIZON PHARMA IRELAND LIMITED

By: /s/ Paul Condon

(Signed)

Name: Paul Condon

(Typed)

Title: Director

NUVO PHARMACEUTICALS INC.

By: /s/ Jesse Ledger

(Signed)

Name: Jesse Ledger

(Typed)

Title: President and CEO
Subsidiaries of Horizon Pharma Public Limited Company:

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-198865, 333-203933, 333-211118, 333-220316 and 333-222516) of Horizon Pharma plc of our report dated February 28, 2018 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
February 28, 2018
I, Timothy P. Walbert, certify that:

1. I have reviewed this annual report on Form 10-K of Horizon Pharma PLC (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 28, 2018

/s/ Timothy P. Walbert
Timothy P. Walbert
Chairman, President and Chief Executive Officer
(Principal Executive Officer)
Exhibit 31.2

Certification of Principal Financial Officer

I, Paul W. Hoelscher, certify that:

1. I have reviewed this annual report on Form 10-K of Horizon Pharma PLC (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 28, 2018

/s/ Paul W. Hoelscher
Paul W. Hoelscher
Executive Vice President, Chief Financial Officer
(Principal Financial Officer)
CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and 18 U.S.C. Section 1350, I, Timothy P. Walbert, President, Chief Executive Officer and Chairman of the Board of Horizon Pharma PLC (the “Company”), certify to the best of my knowledge that:

1. the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (the “Report”), to which this Certification is attached as Exhibit 32.1, fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2018

/s/ Timothy P. Walbert
Timothy P. Walbert
Chairman, President and Chief Executive Officer
(Principal Executive Officer)

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.
CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and 18 U.S.C. Section 1350, I, Paul W. Hoelscher, Executive Vice President and Chief Financial Officer of Horizon Pharma PLC (the “Company”), certify to the best of my knowledge that:

1. the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (the “Report”), to which this Certification is attached as Exhibit 32.2, fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2018

/s/ Paul W. Hoelscher
Paul W. Hoelscher
Executive Vice President, Chief Financial Officer
(Principal Financial Officer)

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.