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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2014

or

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

For the transition period from to

Commission File Number: 001-33500

JAZZ PHARMACEUTICALS PUBLIC LIMITED COMPANY
(Exact name of registrant as specified in its charter)

Ireland	**98-1032470**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

Fourth Floor, Connaught House,
One Burlington Road, Dublin 4, Ireland
011-353-1-634-7800
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	**Name of each exchange on which registered**
Ordinary shares, nominal value $0.0001 per share	**The NASDAQ Stock Market LLC**

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, as of June 30, 2014, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $8,420,403,204 based upon the last sale price reported for the registrant's ordinary shares on such date on The NASDAQ Global Select Market. The calculation of the aggregate market value of voting and non-voting common equity excludes 2,311,701 ordinary shares of the registrant held by executive officers, directors and shareholders that the registrant concluded were affiliates of the registrant on that date. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

As of February 18, 2015, a total of 60,657,182 ordinary shares, nominal value $0.0001 per share, of the registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2015 Annual General Meeting of Shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K are incorporated by reference in Part III, Items 10-14 of this Form 10-K.

JAZZ PHARMACEUTICALS PLC
2014 ANNUAL REPORT ON FORM 10-K

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We own or have rights to various copyrights, trademarks, and trade names used in our business in the United States and/or other countries, including the following: Jazz Pharmaceuticals®, Xyrem® (sodium oxybate) oral solution, Xyrem Success Program®, Erwinaze® (asparaginase *Erwinia chrysanthemi*), Erwinase®, Defitelio® (defibrotide), Prialt® (ziconotide) intrathecal infusion, FazaClo® (clozapine, USP), Versacloz® (clozapine) oral suspension, Leukotac™ (inolimomab) and ProstaScint® (capromab pendetide). This report also includes trademarks, service marks, and trade names of other companies. Service marks, trademarks and trade names appearing in this Annual Report on Form 10-K are the property of their respective owners.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the "safe harbor" created by those sections. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "project," "predict," "propose," "intend," "continue," "potential," "possible," "foreseeable," "likely," "unforeseen" and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in this Annual Report on Form 10-K in greater detail under the heading "Risk Factors." Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this filing. You should read this Annual Report on Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by our cautionary statements. Except as required by law, we assume no obligation to update our forward-looking statements publicly, or to update the reasons that actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

NOTE REGARDING COMPANY REFERENCE

In this report, unless otherwise indicated or the context otherwise requires, all references to "Jazz Pharmaceuticals," "the registrant," "we," "us," and "our" refer to Jazz Pharmaceuticals plc and its consolidated subsidiaries, except when the context makes clear that the time period being referenced is prior to January 18, 2012, in which case such terms are references to Jazz Pharmaceuticals, Inc. and its consolidated subsidiaries. On January 18, 2012, the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma Public Limited Company, or Azur Pharma, were combined in a merger transaction, or the Azur Merger, in connection with which Azur Pharma was re-named Jazz Pharmaceuticals plc and we became the parent company of and successor to Jazz Pharmaceuticals, Inc., with Jazz Pharmaceuticals, Inc. becoming our wholly-owned subsidiary. Jazz Pharmaceuticals, Inc. was treated as the acquiring company in the Azur Merger for accounting purposes, and as a result, the historical consolidated financial statements of Jazz Pharmaceuticals, Inc. became our consolidated financial statements.

PART I

Item 1. Business

Overview

Jazz Pharmaceuticals plc is an international biopharmaceutical company focused on improving patients' lives by identifying, developing and commercializing meaningful products that address unmet medical needs.

Our strategy is to create shareholder value by:

- Growing sales of the existing products in our portfolio, including by identifying new growth opportunities;
- Acquiring additional differentiated products that are on the market or product candidates that are in late-stage development; and
- Pursuing focused development of a pipeline of post-discovery differentiated product candidates.

We have made substantial progress in the execution of our strategy. We have a diverse portfolio of products and product candidates, with a focus in the areas of sleep and hematology/oncology.

Our lead marketed products are:

- **Xyrem® (sodium oxybate) oral solution**, the only product approved by the United States Food and Drug Administration, or FDA, for the treatment of both cataplexy and excessive daytime sleepiness, or EDS, in patients with narcolepsy;
- **Erwinaze® (asparaginase *Erwinia chrysanthemi*)**, a treatment approved in the United States and in certain markets in Europe (where it is marketed as Erwinase®) for patients with acute lymphoblastic leukemia, or ALL, who have developed hypersensitivity to *E. coli*-derived asparaginase; and
- **Defitelio® (defibrotide)**, a product approved in Europe for the treatment of severe hepatic veno-occlusive disease, or VOD, in adults and children undergoing hematopoietic stem cell transplantation, or HSCT, therapy.

Our research and development activities include clinical development of new product candidates, line extensions for existing products and the generation of additional clinical data for existing products. A summary of our development pipeline activities is provided below:

Project	Disease Area	Status
Sleep		
JZP-110	EDS in narcolepsy	Expect to initiate a Phase 3 clinical trial in the second quarter of 2015
	EDS in obstructive sleep apnea, or OSA	Expect to initiate two Phase 3 clinical trials in the second quarter of 2015
JZP-386	EDS in narcolepsy	Phase 1 clinical trial in progress; expect additional data in the second quarter of 2015
Xyrem	Cataplexy in narcolepsy in children and adolescents	Phase 3 clinical trial initiated in the fourth quarter of 2014
Hematology/Oncology		
Defibrotide	Severe VOD	Rolling new drug application, or NDA, submission initiated in the United States in December 2014; expect to complete the submission in mid-2015
Erwinaze	ALL in young adult population	Pharmacokinetic study in Phase 2 initiated in the second quarter of 2014
JZP-416	ALL	Phase 1 clinical trial in Europe completed; enrollment suspended in pivotal Phase 2 clinical trial in North America in first quarter of 2015
Leukotac™	Steroid refractory acute graft vs. host disease, or GvHD	Phase 3 clinical trial enrollment complete; expect preliminary data in mid-2015

Our Products

Xyrem® (sodium oxybate) oral solution

Xyrem is the only treatment approved by the FDA for both EDS and cataplexy in patients with narcolepsy. Sodium oxybate, the active pharmaceutical ingredient in Xyrem, is a formulation of the sodium salt of gamma-hydroxybutyrate, an endogenous neurotransmitter and metabolite of gamma-aminobutyric acid. Xyrem was approved in the United States for the treatment of cataplexy in patients with narcolepsy in 2002 and was approved for EDS in patients with narcolepsy in 2005. The American Academy of Sleep Medicine recommended Xyrem as a standard of care for the treatment of both EDS and cataplexy associated with narcolepsy.

Narcolepsy is a chronic neurological disorder caused by a loss of neurons that produce the neurotransmitter hypocretin (also known as orexin), which is hypothesized to stabilize sleep-wake states. The primary symptoms of narcolepsy include EDS, cataplexy, sleep paralysis, hypnogogic hallucinations and disrupted nighttime sleep. EDS is an essential symptom of narcolepsy, is present in all narcolepsy patients and is characterized by chronic, pervasive sleepiness as well as sudden irresistible and overwhelming urges to sleep (inadvertent naps and sleep attacks). Cataplexy, the sudden loss of muscle tone, can be one of the most debilitating symptoms of narcolepsy. Cataplexy is present in approximately 70% of patients with narcolepsy. Cataplexy can range from slight weakness or a drooping of facial muscles to the complete loss of muscle tone resulting in postural collapse. It may also impair a patient's vision or speech. Cataplexy is often triggered by strong emotions such as laughter, anger or surprise. Cataplexy can severely impair a patient's quality of life and ability to function.

Narcolepsy may affect many areas of life, including limiting a patient's education and employment opportunities and leading to driving or machinery accidents or difficulties at work resulting in disability or job dismissal. Patients with narcolepsy may also suffer from significant medical comorbidities, including social anxiety disorder, OSA, bipolar disorder, depression, hypercholesterolaemia, diseases of the digestive system, cardiovascular diseases, upper respiratory tract diseases and hypertension.

It is estimated that narcolepsy affects approximately 1 in 2,000 people in the United States, or approximately 160,000 people in 2014. Less than half of those people have been definitively diagnosed with narcolepsy. In the fourth quarter of 2014, the average number of patients in the United States receiving Xyrem treatment was approximately 12,250 patients, and we believe that there are significantly more patients with narcolepsy and cataplexy and/or EDS who might benefit from treatment with Xyrem. In an effort to reach more patients, we have implemented a number of initiatives including increased outreach to prescribers who treat narcolepsy and physician/healthcare provider disease education programs.

In 2014, net product sales of Xyrem were $778.6 million, which represented 67.0% of our total net product sales.

We promote Xyrem in the United States through a specialty sales force of approximately 100 sales professionals dedicated to Xyrem. Our marketing, sales and distribution of Xyrem are subject to a risk management and controlled distribution system, or Xyrem Risk Management Program, which was required in conjunction with Xyrem's approval by the

FDA to ensure the safe distribution of Xyrem and minimize the risk of misuse, abuse and diversion of sodium oxybate. The Xyrem Risk Management Program includes a number of elements including patient and physician education, a database of information so that we may track and report certain information, and the use of a single central pharmacy to distribute Xyrem.

Under our current Xyrem Risk Management Program, all of the Xyrem sold in the United States must be dispensed and shipped directly to patients through a single central pharmacy, Express Scripts Specialty Distribution Services and its affiliate CuraScript, Inc., or ESSDS. Xyrem may not be stocked in retail pharmacies. Physicians and patients must enroll in the Xyrem Success Program®, which is part of our Xyrem Risk Management Program, prior to fulfillment of Xyrem prescriptions. Each physician and patient receives materials concerning the risks and benefits of Xyrem before the physician can prescribe, or a patient can receive, the product. Whenever a prescription is received by the central pharmacy, the central pharmacy verifies the prescription and must speak with the patient before each prescription of Xyrem is filled and sent to the patient. The central pharmacy ships the product directly to the patient by a courier service, and the patient or his/her designee signs for the package. The initial shipment may only be for up to a one-month supply, and refill orders may only be for up to a three-month supply.

Pursuant to our agreement, ESSDS exclusively distributes Xyrem in the United States and provides customer support services related to the sales and marketing of Xyrem. For example, ESSDS provides reimbursement support to patients by coordinating insurance coverage for Xyrem, and as applicable, referring qualified patients to various patient savings or assistance programs. Our agreement with ESSDS, which has been in effect since July 2002, expires on June 30, 2015, subject to automatic two-year extensions unless either party provides notice to the other of its intent to terminate the agreement not less than 120 days before the end of the then current term. We do not intend to exercise our termination right, and ESSDS has informed us that it does not intend to exercise its termination right, in connection with the expiration of the current term. Under the agreement, we own all of the standard operating procedures, business rules and intellectual property, and the agreement provides for ESSDS to assist in the orderly transfer of the services that ESSDS provides to us and the related intellectual property, including intellectual property related to the patient database, to any new pharmacy that we may we engage.

Elements of the Xyrem Risk Management Program, adopted in 2002 before the FDA had authority to require a risk evaluation and mitigation strategy, or REMS, are deemed to be an approved REMS pursuant to the Food and Drug Administration Amendments Act of 2007, or the FDAAA. The Xyrem Risk Management Program, however, is not in the form that is now required for REMS documents. The FDAAA requires that deemed REMS and related documents be updated to comply with the current requirements for REMS documents. We are engaged in ongoing communications with respect to our REMS documents for Xyrem, but have not reached agreement with the FDA on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014, and the process is ongoing. See more discussion regarding this matter under “Business—Government Regulation—Approval of Pharmaceutical Products” in Part I, Item 1 of this Annual Report on Form 10-K.

Five companies have notified us that they have filed abbreviated new drug applications, or ANDAs, with the FDA seeking FDA approval to market a generic version of Xyrem. We initiated lawsuits against each of these companies, and the litigation proceedings are ongoing. In addition, certain of the ANDA filers have sought to challenge the validity of our patents covering the distribution system for Xyrem by filing petitions for covered business method, or CBM, post-grant patent review and/or inter partes review, or IPR, by the Patent Trial and Appeal Board, or PTAB, of the U.S. Patent and Trademark Office, or USPTO. The PTAB has issued decisions denying institution of CBM review for all of the CBM petitions and has not yet determined whether to institute proceedings with respect to the petitions for IPR. For a description of these matters, see “Legal Proceedings” in Part I, Item 3 of this Annual Report on Form 10-K.

We also expect to face pressure to license or share our Xyrem Risk Management Program, which is the subject of multiple issued patents, or elements of it, with generic competitors. In January 2014, the FDA held an initial meeting with us and the then-current Xyrem ANDA applicants to facilitate the development of a single shared system REMS for Xyrem (sodium oxybate). The parties have had numerous interactions with respect to a single shared system REMS since the initial meeting, and we expect the interactions to continue. In addition, if we do not develop a single shared system REMS or license or share our REMS with a generic competitor within a time frame or on terms that the FDA considers acceptable, the FDA may assert that its waiver authority permits it to allow the generic competitor to market a generic drug with a REMS that does not include the same elements that are in our deemed REMS or, when Xyrem REMS documents are approved, with a separate REMS that includes different, but comparable, elements to assure safe use, or ETASU. Similarly, it is possible that, consistent with the position that the FDA articulated in its December 2012 response denying a Citizen Petition we filed in July 2012, the FDA could approve an ANDA with a risk management plan that is separate from our Xyrem deemed REMS, rather than with a final REMS or a shared REMS for both the generic and Xyrem. For a more detailed explanation and discussion regarding these matters, see “Business—Government Regulation—The Hatch Waxman Act” in Part I, Item 1 of this Annual Report on Form 10-K.

For further discussion regarding the challenges we face with respect to Xyrem, see the risk factors in Part 1, Item 1A of this Annual Report on Form 10-K entitled "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem,*" "*If generic versions of Xyrem or other sodium oxybate products that compete with Xyrem are approved and launched, sales of Xyrem would be adversely affected,*" "*It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection,*" and "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

Xyrem is a controlled substance in the United States, subject to regulation by the U.S. Drug Enforcement Administration, or DEA, under the Controlled Substances Act, or CSA. Therefore, its manufacturing and distribution are highly restricted. The finished product and active pharmaceutical ingredient for Xyrem are each manufactured for us by a single source contract manufacturer. See more details regarding Xyrem supply under "Business—Manufacturing" in Part I, Item 1 of this Annual Report on Form 10-K.

Outside of the United States, UCB Pharma Limited, or UCB, has an exclusive license to market Xyrem for the treatment of narcolepsy in 54 countries and currently sells the product in 19 countries. We have licensed to Valeant Canada Limited, or Valeant, the Canadian marketing rights to Xyrem for the treatment of narcolepsy. We supply Xyrem to UCB and Valeant.

We have 19 U.S. patents covering Xyrem, which expire at various times from December 2019 to March 2033. Our issued patents relate to Xyrem's stable and microbially resistant formulation, its manufacturing process, its method of use, including its restricted distribution system, and its method of administration.

Erwinaze® / Erwinase® (asparaginase Erwinia chrysanthemi)

Erwinaze, a biologic product, is used in conjunction with chemotherapy to treat patients with ALL who have developed hypersensitivity to *E. coli*-derived asparaginase. Erwinaze is an asparaginase, a type of enzyme that can deprive leukemic cells of an amino acid essential for their growth. It is derived from a rare bacterium (*Erwinia chrysanthemi*) and is immunologically distinct from *E. coli*-derived asparaginase and suitable for patients with hypersensitivity to *E. coli*-derived treatments. For ALL patients with hypersensitivity to *E. coli*-derived asparaginase, Erwinaze can be a crucial component of their therapeutic regimen. Erwinaze was originally developed by Public Health England, or PHE, a U.K. national executive agency. First approved by the FDA under a biologics license application, or BLA, for administration via intramuscular injection in conjunction with chemotherapy, Erwinaze was launched in the United States in November 2011. In December 2014, the FDA approved a supplemental BLA for administration of Erwinaze via intravenous infusion in conjunction with chemotherapy. Outside of the United States, Erwinaze is sold under the name Erwinase pursuant to marketing authorizations, named patient programs, temporary use authorizations or similar authorizations in multiple countries in Europe and elsewhere.

ALL is the most common childhood cancer. Based on data from the U.S. National Cancer Institute, the U.S. Census Bureau and the American Cancer Society, we estimate that approximately 5,000 to 6,000 new cases of ALL were diagnosed in the United States in 2013. Approximately 50% of ALL patients were diagnosed under age 15 and approximately 20% were diagnosed between 15 and 39 years of age, which suggests that approximately 3,500 to 4,200 ALL patients were pediatric, adolescent or young adults. A study published by Dana Farber Cancer Institute, with median follow-up of 57 months, concluded that the intensive use of high-dose asparaginase has an important role in the treatment of children with ALL. Data reported in two separate papers published in *Pediatric Blood & Cancer* and *Journal of Clinical Oncology*, respectively suggest that up to 20% of ALL patients may develop hypersensitivity to *E. coli*-derived asparaginase. Current treatment guidelines and protocols recommend switching a patient receiving *E. coli*-derived asparaginase to treatment with Erwinaze if the patient's hypersensitivity reaction to the *E. coli*-derived asparaginase is Grade 2-4, indicating that the hypersensitivity reaction has resulted in an intervention or interruption in infusion occurring in the patient's treatment regimen. While pediatric treatment protocols commonly include asparaginase, adult protocols do not. A retrospective comparison to determine whether the outcome for ALL patients between 15 and 39 years of age differed depending on their enrollment in pediatric compared with adult cooperative group trials showed that the seven-year overall survival rate among the adolescent and young adult ALL patients treated on pediatric protocols was 67% compared to 46% for those patients treated on adult protocols. As more treatment protocols in adult centers incorporate the use of asparaginase-based regimens, we expect to see increased use of Erwinaze. In addition, we believe that Erwinaze has the potential for use in patients with silent hypersensitivity, a situation in which *E. coli*-derived asparaginase may induce antibodies that can neutralize the enzyme or increase its clearance, thereby depriving patients of its therapeutic benefits without manifesting the clinical symptoms of hypersensitivity. A third party has introduced an assay to determine the enzyme activity of asparaginase in patients who have been treated with any *E. coli*-derived asparaginase or Erwinaze. With this assay, physicians may be able to monitor asparaginase levels to identify patients with silent hypersensitivity and maintain asparaginase activity by switching asparaginase preparations. We expect adoption of this assay to be limited until its use is included in existing pediatric and adult treatment protocols.

In 2014, net product sales of Erwinaze/Erwinase were $199.7 million, which represented 17.2% of our total net product sales.

We promote Erwinaze in the United States through a specialty sales force of approximately 25 sales professionals. We provide reimbursement support through our JumpStart™ Access & Reimbursement Solutions program, a dedicated Erwinaze call center. Our field-based and office-based reimbursement team provides additional reimbursement support, dealing specifically with the more complex needs of physicians and payors.

In Europe and elsewhere around the world, Erwinase is sold pursuant to marketing authorizations, named patient programs, temporary use authorizations or similar authorizations. Our hematology and oncology sales force outside of the United States has approximately 25 hematology field specialists responsible for promoting Erwinase and Defitelio in approved markets where we commercialize these products. In those markets where Erwinase is not currently approved, approximately 15 medical science liaisons and medical directors are responsible for responding to medical information requests and for providing information consistent with local treatment protocols.

Erwinaze is exclusively licensed to us for worldwide marketing, sales and distribution by PHE, which also manufactures the product for us. PHE is our sole supplier for Erwinaze. We are obligated to make tiered royalty payments to PHE based on worldwide net sales of Erwinaze and Erwinase. See more details regarding the supply of Erwinaze under “Business—Manufacturing” in Part I, Item 1 of this Annual Report on Form 10-K.

Erwinaze has no patent protection, although it has orphan drug exclusivity for the treatment of ALL in the United States until November 2018, and it is expected to receive exclusivity that prevents approval of a biosimilar in the United States through late 2023 under the U.S. Biologics Price Competition and Innovation Act, or BPCIA.

Defitelio® (defibrotide) / defibrotide

Defibrotide, the active pharmaceutical ingredient in Defitelio, is the sodium salt of a complex mixture of single-stranded oligodeoxyribonucleotides derived from porcine DNA. In *in vitro* studies, defibrotide has shown a number of pharmacological effects that suggest it has a role in both protection of the endothelial cells that form the inner lining of blood vessels and the restoration of the balance between clot formation and breakdown in the blood.

Defibrotide has been developed for the treatment and prevention of VOD, a potentially life-threatening complication of HSCT. Stem cell transplantation is a frequently used treatment modality for hematologic cancers and other conditions in both adults and children. Certain conditioning regimens used as part of HSCT can damage the lining cells of hepatic vessels which is thought to lead to the development of VOD, a blockage of the small vessels in the liver, that leads to liver failure and can result in significant dysfunction in other organs such as the kidneys and lungs. The condition is also referred to as “sinusoidal obstruction syndrome.” Severe VOD is the most extreme form of VOD and is associated with multi-organ failure and high rates of morbidity and mortality. An analysis of retrospective data, prospective cohort studies and clinical trials published between 1979 and 2007 found that the 100-day mortality rate in severe VOD cases is greater than 80%. Based on data from published surveys and our market research, we calculated that: in Europe, of the estimated approximately 35,000 patients undergoing HSCT in 2014, approximately 6,300 were considered at high risk for the development of VOD and the incidence of VOD was approximately 3,600 patients; and, in the United States, of the estimated approximately 20,000 patients undergoing HSCT in 2014, approximately 3,000 were considered at high risk for the development of VOD and the incidence of VOD was approximately 1,000 to 2,000 patients. Our review of relevant literature and market research also suggests that about one-third to two-thirds of VOD patients may be eligible for treatment using defibrotide.

In October 2013, the European Commission, or EC, granted marketing authorization under exceptional circumstances for Defitelio for the treatment of severe VOD in adults and children undergoing HSCT therapy. Defitelio is the first approved treatment in the European Union, or EU, for this potentially life-threatening condition. Defitelio has generally been well-tolerated; the most frequent adverse reactions observed during pre-marketing use of the product are hemorrhage, hypotension and coagulopathy.

During 2014, Defitelio was launched in a number of European countries. We expect to continue to launch the product in additional European countries on a rolling basis in 2015 and are in the process of making pricing and reimbursement submissions with respect to Defitelio, and discussing them with regulatory authorities, in those European countries where Defitelio is not yet launched, including in countries where pricing and reimbursement approvals are required for launch. We promote Defitelio along with Erwinase to many of the same hematology and oncology specialists, and believe that we benefit from operational synergies in commercializing these products to the same targeted audience. In addition, in those European markets where Defitelio is approved but not yet launched, our medical science liaisons and medical directors respond to medical information requests regarding defibrotide and provide information consistent with local treatment protocols. We intend eventually to commercialize Defitelio in all European markets where it has marketing authorization. We also continue to provide patients access to defibrotide where it is not commercially available through an expanded access treatment protocol that is open under an investigational new drug application, or IND, in the United States and on a named patient basis elsewhere.

Defitelio/defibrotide product sales in 2014, beginning from the closing on January 23, 2014 of our acquisition of a controlling interest in Gentium S.p.A., or Gentium, which we refer to as the Gentium Acquisition, were $70.5 million, which represented 6.1% of our total net product sales. On a pro forma basis, assuming the Gentium Acquisition had closed on January 1, 2014, Defitelio/defibrotide product sales in 2014 were $73.4 million. For a detailed discussion of the Gentium Acquisition, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of this Annual Report on Form 10-K.

In August 2014, we acquired from Sigma-Tau Pharmaceuticals, Inc., or Sigma-Tau, the rights to defibrotide for the treatment and prevention of VOD in North America, Central America and South America. In exchange for the rights to defibrotide in the Americas, we made an upfront payment of $75.0 million to Sigma-Tau and are also obligated to make milestone payments of up to $175.0 million comprised of (i) $25.0 million upon the acceptance for filing by the FDA of the first NDA for defibrotide for VOD; and (ii) up to an additional $150.0 million based on the timing of potential FDA approval of defibrotide for VOD.

There are currently no approved treatments for VOD in the United States. Defibrotide has been granted orphan drug designation by the FDA to treat and prevent VOD and has also received Fast Track designation by the FDA to treat severe VOD. The Fast Track program is designed to enable more frequent interactions with the FDA during drug development and to expedite the FDA's review of a new drug candidate. In December 2014, we initiated a rolling submission of an NDA to the FDA for defibrotide for the treatment of severe VOD. We expect to complete the submission in mid-2015. See more details regarding the rolling submission under "Business—Government Regulation—Approval of Pharmaceutical Products" in Part I, Item 1 of this Annual Report on Form 10-K.

We are also assessing the potential for approval of defibrotide in other countries and for development of defibrotide in indications in addition to the treatment of severe VOD. For example, defibrotide has received orphan drug designation to treat and prevent VOD from the European Medicines Agency, or EMA, and the Korean Ministry of Food and Drug Safety. The Commonwealth of Australia-Department of Health has granted defibrotide orphan drug designation for the treatment of VOD. In addition, the EMA also granted orphan drug designation to defibrotide for the prevention of GvHD, another potentially fatal complication of HSCT that afflicts up to 50% of all donor transplant patients.

The drug substance defibrotide was developed and is manufactured in a facility in Italy that we acquired through the Gentium Acquisition. The finished product is manufactured for us by a single source contract manufacturer.

The unique process of deriving defibrotide from porcine DNA is extensive and uses both chemical and biological processes which rely on complex characterization methods. We have a portfolio of U.S. and non-U.S. patents and patent applications relating to various compositions, methods of use and methods of characterization, which will expire at various times between April 2017 and June 2032.

Prialt® (ziconotide) intrathecal infusion and other products

We also commercialize a portfolio of other products, including Prialt. Prialt is an intrathecally administered infusion of ziconotide, approved by the FDA in December 2004 for the management of severe chronic pain in patients for whom intrathecal therapy is warranted, and who are intolerant of or refractory to other treatment, such as systemic analgesics, adjunctive therapies or intrathecal morphine. Intrathecal therapy is the delivery of the drug into the intrathecal space in the spine through an infusion system comprised of a programmable infusion pump and catheter. For most patients who achieve good pain relief and tolerability with Prialt, pain relief can be maintained over time without cumulative toxicity. Prialt is the only FDA-approved non-opioid intrathecal analgesic. We have worldwide rights to Prialt, excluding 34 countries outside of the United States licensed by Eisai Co. Limited, or Eisai, from Elan Pharmaceuticals, Inc. (subsequently acquired by Perrigo Company plc) in May 2010. We supply Prialt to Eisai.

Other products we sell include a number of psychiatry products in the United States and products in the oncology, critical care and oncology supportive care therapeutic areas, primarily in markets outside of the United States.

Research and Development

Our development pipeline projects currently include clinical development of new product candidates, line extensions for existing products and the generation of additional clinical data for existing products. These projects are concentrated in our sleep and hematology/oncology therapeutic areas.

In the sleep area, we have ongoing and planned clinical trials for our product and product candidates.

- *JZP-110*. JZP-110 is a late-stage investigational compound being developed for potential treatment of EDS in patients with narcolepsy and EDS in patients with OSA. Based on feedback from the FDA on our development plans for JZP-110, we expect to commence our planned Phase 3 clinical program in the second quarter of 2015, subject to the availability of clinical trial materials. We plan to conduct one Phase 3 clinical trial in patients with EDS associated with narcolepsy and two Phase 3 clinical trials in patients with EDS associated with OSA. Approximately

900 patients are expected to be enrolled in these three trials in the aggregate. In addition, we plan to evaluate the long-term safety of JZP-110 in an open label extension trial and expect to enroll up to 450 patients from the three Phase 3 clinical trials in this extension trial. The co-primary endpoints for all three Phase 3 clinical trials are change in the scores from baseline on the Maintenance of Wakefulness Test and Epworth Sleepiness Scale, with a key secondary endpoint of patient global impression of change.

In January 2014, we entered into an asset purchase agreement with Aerial BioPharma LLC, or Aerial, to acquire the worldwide development, manufacturing and commercial rights to JZP-110, other than in certain jurisdictions in Asia where SK Biopharmaceuticals Co., Ltd, or SK, retains rights. Under the agreement, we made an upfront payment of $125.0 million to Aerial. We also paid a $2.0 million milestone to SK on assignment of the JZP-110 rights from Aerial to us. We are obligated to make milestone payments, in an aggregate amount of up to $270.0 million, based on development, regulatory and sales milestones and to pay tiered royalties from high single digits to mid-teens based on potential future sales of JZP-110.

- *JZP-386*. JZP-386 is a deuterium-modified analog of sodium oxybate, the active pharmaceutical ingredient in Xyrem, which we licensed from Concert Pharmaceuticals, Inc., or Concert, in February 2013. We have conducted preclinical research and development work on JZP-386 for potential use in patients with narcolepsy. We submitted an investigational medicinal product dossier, or IMPD, for JZP-386 in Europe at the end of 2013 and received approval of the IMPD in January 2014. The first study of JZP-386 in humans to evaluate the safety, pharmacokinetics and pharmacodynamics of the compound was conducted in 2014, and we initiated a second Phase 1 study in the first quarter of 2015, with data expected in the second quarter of 2015.
- *Xyrem*. While in many patients narcolepsy can begin during childhood and adolescence, there is limited information on the treatment of pediatric narcolepsy patients with Xyrem. We have worked with the FDA and several leading specialists to design a clinical trial to generate additional data on the treatment of pediatric narcolepsy patients with Xyrem. As a result, in the fourth quarter of 2014, we initiated a Phase 3 clinical trial to assess the safety and efficacy of Xyrem in children and adolescents aged seven to 17 who have narcolepsy with cataplexy.

In the hematology and oncology area, we also have a number of ongoing clinical trials.

- *Erwinaze*. In the second quarter of 2014, we initiated a pharmacokinetics study in Phase 2 to further evaluate the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase.
- *JZP-416 (formerly known as Asparec)*. We completed a Phase 1 clinical trial in Europe of JZP-416 (pegcrisantaspase), a PEGylated recombinant *Erwinia chrysanthemi* L-asparaginase, being developed for the treatment of patients with ALL who are hypersensitive to *E. coli*-derived asparaginase. In June 2013, the FDA granted Fast Track designation to the investigation of JZP-416 for the treatment of ALL. We initiated our first study of JZP-416 in children in a pivotal Phase 2 clinical trial in North America in late 2014. In February 2015, we voluntarily suspended patient enrollment in this trial. Our decision to suspend enrollment and to discontinue treatment with JZP-416 for enrolled patients is based on the occurrence of hypersensitivity-like reactions following the administration of JZP-416 in some treated patients. We are in the process of collecting and evaluating the available data and plan to conduct additional research and analysis prior to determining whether to resume the study and determining next steps regarding the development of JZP-416. We license worldwide rights to develop and commercialize JZP-416 from Alizé Pharma II, or Alizé. Under our license agreement with Alizé, we are subject to contractual obligations to meet certain development milestones within certain timeframes.
- *Leukotac*. We are conducting a Phase 3 clinical trial in Europe of Leukotac (inolimomab), an anti-CD25 monoclonal antibody for the treatment of steroid-refractory acute GvHD. We completed enrollment for this study in March 2014 and expect to receive preliminary data in mid-2015. We acquired the rights to Leukotac from Biotest AG.

We are also engaged in activities related to the potential approval of defibrotide in the United States. We initiated a rolling submission of an NDA to the FDA for defibrotide for the treatment of severe VOD in December 2014 and expect to complete the submission in mid-2015. We are also assessing the potential for approval of defibrotide in other countries and for development of defibrotide in indications in addition to the treatment of severe VOD. See more details regarding the rolling submission under “Business—Government Regulation—Approval of Pharmaceutical Products” in Part I, Item 1 of this Annual Report on Form 10-K.

For the years ended December 31, 2014, 2013 and 2012, we recorded $85.2 million, $41.6 million and $20.5 million, respectively, in research and development expenses. We also recorded charges of $202.6 million and $5.0 million, respectively, to in-process research and development in the years ended December 31, 2014 and 2013, and none in the year ended December 31, 2012.

Sales and Marketing

We have commercial operations primarily in the United States and Europe. In the United States, our products are marketed through our commercial teams, including approximately 150 trained, experienced sales professionals who promote Xyrem, Erwinaze and Prialt directly to physicians in specialties appropriate for each product. Outside of the United States, our hematology and oncology sales force has approximately 25 hematology field specialists responsible for promoting Erwinase and Defitelio in approved markets where we commercialize these products.

Our commercial activities include marketing-related services, distribution services and commercial support services. We employ third party vendors, such as advertising agencies, market research firms and suppliers of marketing and other sales support-related services, to assist with our commercial activities.

We currently have a relatively small number of sales representatives compared with the number of sales representatives of most other pharmaceutical companies with marketed products. Each of our sales representatives is responsible for a geographic territory of significant size. We believe that the size of our sales force is appropriate to effectively reach our target audience for our marketed products in the specialty markets in which we currently operate. Continued growth of our current marketed products and the launch of any future products may require expansion of our sales force and sales support organization in the United States and internationally, and we may need to commit significant additional funds, management and other resources to the growth of our sales organization.

Competition

The pharmaceutical industry is highly competitive and characterized by a number of established, large pharmaceutical companies, as well as specialty pharmaceutical companies that market products and develop product candidates in sleep, hematology/oncology, pain and other therapeutic areas. Many of these companies, particularly large pharmaceutical and life sciences companies, have substantially greater financial, operational and human resources than we do. They can spend more on, and have more expertise in, research and development, regulatory, manufacturing, distribution and sales activities. As a result, our competitors may obtain FDA, EC or other regulatory approvals for their product candidates more rapidly than we may and may market their products more effectively than we do. Smaller or earlier stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies.

Our ability to continue to grow requires that we compete successfully with other specialty pharmaceutical companies for product and product candidate acquisition and in-licensing opportunities. These competitors include established companies that may have a competitive advantage over us due to their size and financial resources.

We also face competition from manufacturers of generic drugs. Generic competition often results in decreases in the prices at which branded products can be sold, particularly when there is more than one generic available in the marketplace. In addition, legislation enacted in the United States allows for, and in a few instances in the absence of specific instructions from the prescribing physician mandates, the dispensing of generic products rather than branded products where a generic version is available.

Our products and product candidates may also compete in the future with new products currently under development by others. Any products that we develop are likely to be in a highly competitive market, and many of our competitors may succeed in developing products that may render our products obsolete or noncompetitive. In particular, our lead marketed products face competition as described below:

- *Xyrem*. Xyrem is the only product approved for the treatment of both cataplexy and EDS in patients with narcolepsy. No product other than Xyrem is approved for the treatment of cataplexy. The only other products approved by the FDA for the treatment of EDS in patients with narcolepsy are Provigil® (modafinil) and Nuvigil® (armodafinil), which are marketed by Teva Pharmaceutical Industries Limited, or Teva, and the generic versions of Provigil. Provigil, its generic equivalents and Nuvigil are also approved for improving wakefulness in patients with EDS associated with treated OSA or shift work disorder. Xyrem is often used in conjunction with stimulants and wake-promoting drugs, which are administered during the day.

  As alternatives to Xyrem, cataplexy is often treated with tricyclic antidepressants and selective serotonin reuptake inhibitors, or SSRIs, or selective norepinephrine reuptake inhibitors, or SNRIs, although these products are not approved by the FDA for the treatment of cataplexy. Tricyclic antidepressants are a class of antidepressant drugs first used in the 1950s. The use of these drugs can often result in somnolence, which exacerbates the EDS already experienced by all patients with narcolepsy. SSRIs and SNRIs are compounds typically used for the treatment of clinical depression. Somnolence and insomnia are commonly reported side effects with SSRIs, while loss of sleep is a commonly reported side effect with SNRIs. These side effects may be problematic for patients with narcolepsy.

  Five companies have notified us that they have filed ANDAs with the FDA seeking FDA approval to market a generic version of Xyrem. We initiated lawsuits against each of these companies, and the litigation proceedings are ongoing. If generic products that compete with Xyrem are approved and launched, sales of Xyrem would be

adversely affected. For a description of these matters, please see “Legal Proceedings” in Part I, Item 3 of this Annual Report on Form 10-K.

Other companies could also develop products that are similar, but not identical, to Xyrem, such as an alternative formulation or an alternative formulation combined with a different delivery technology, and seek approval in the United States by referencing Xyrem and relying, to some degree, on the FDA’s approval of Xyrem and related determinations of safety and efficacy. For example, in April 2014, we learned about the completion of a “first in man” clinical trial by a company using its proprietary technology for delivery of a sodium oxybate formulation to eliminate second nighttime dosing for narcolepsy patients. This company has stated its intent to submit an NDA, referencing Xyrem, to the FDA by the end of 2016. If this company is successful in developing a sodium oxybate formulation that could be effectively used with its delivery technology and is able to obtain FDA or other regulatory approval for its product to treat narcolepsy patients, we expect sales of Xyrem would be adversely affected.

- *Erwinaze / Erwinase*. Erwinaze is a biologic product used in conjunction with chemotherapy and is indicated for patients with ALL who have developed hypersensitivity to *E. coli*-derived asparaginase. While there is currently no direct competition to Erwinaze to treat ALL patients with hypersensitivity to *E. coli*-derived asparaginase, other companies have developed or are developing new treatments for ALL, including new asparaginase treatments that could reduce the rate of hypersensitivity in patients with ALL and new treatment protocols for ALL that may not include asparaginase-containing regimens. Any of these potential new treatments could reduce the market for Erwinaze. As a biologic product, Erwinaze also faces potential competition from biosimilar products.
- *Defitelio / defibrotide*. Defitelio is the first approved treatment in the EU for the treatment of severe VOD in adults and children undergoing HSCT. Various anti-clotting strategies have been tried by researchers in patients with VOD with mixed results, including Activase (Alteplase), a recombinant tissue plasminogen activator, marketed by Genentech, Inc., generic heparin sodium injection, and Thrombate III (antithrombin III (human)), marketed by Grifols Therapeutics, Inc. While there is currently no direct competition to Defitelio to treat severe VOD, changes in the types of conditioning regimens used as part of HSCT may affect the incidence rate of VOD and demand for Defitelio.

With respect to all of our products and product candidates, we believe that our ability to successfully compete will depend on, among other things:

- the existence of competing or alternative products in the marketplace, including generic competition, and the relative price of those products;
- the efficacy, safety and reliability of our products and product candidates compared to competing or alternative products;
- product acceptance by physicians, other health care providers and patients;
- our ability to comply with applicable laws, regulations and regulatory requirements with respect to the commercialization of our products, including any changes or increases to regulatory restrictions;
- protection of our proprietary rights;
- obtaining reimbursement for our products in approved indications;
- our ability to complete clinical development and obtain regulatory approvals for our product candidates, and the timing and scope of regulatory approvals;
- our ability to provide a reliable supply of commercial quantities of a product to the market; and
- our ability to recruit, retain and develop skilled employees, including sales and marketing and clinical development employees.

Customers and Information About Geographic Areas

In the United States, our lead marketed product Xyrem is sold to one specialty pharmacy, ESSDS, which ships Xyrem directly to patients. Erwinaze is sold through an exclusive wholesaler and distributor, Accredo Health Group, Inc., to hospitals. Among the other products we commercialize in the United States, Prialt is sold through an exclusive wholesale distributor and pharmacy to medical facilities, while the others are sold primarily to distributors who distribute the product to pharmacies and hospitals. We have standard distribution services agreements made in the ordinary course of business with these distributors, which include prompt payment discounts and various standard fee or rebate arrangements. Purchases are made on a purchase order basis.

Outside of the United States, we distribute Erwinase through Durbin PLC, a U.K.-based wholesaler and distributor, to hospitals and local wholesalers in Europe where we market Erwinase directly and, in markets where we do not market Erwinase directly, to local distributors and wholesalers in Europe and elsewhere in the world. We distribute Defitelio primarily

through IDIS Limited, or IDIS, a U.K. based distributor, to the European countries where the product has been launched commercially. We also work with IDIS and a number of local distributors in Europe and elsewhere in the world to distribute defibrotide on a named patient basis. Xyrem is currently sold in 19 countries by UCB (which has rights to market Xyrem in 54 countries) and in Canada by Valeant. Eisai has rights to market Prialt in 34 countries outside of the United States. While we retain the rights to Prialt in the rest of the non-U.S. territories, we are not currently selling the product outside of the United States.

Information on our total revenues attributed to United States and non-U.S. sources and customers who represented at least 10% of our total revenues in each of 2014, 2013 and 2012, as well as the location of our long-lived assets, is included in Note 15 to our consolidated financial statements in this Annual Report on Form 10-K.

We are headquartered in Dublin, Ireland, and have offices in Palo Alto, California and Philadelphia, Pennsylvania in the United States and offices in Oxford, United Kingdom, Lyon, France, Villa Guardia (Como), Italy and elsewhere in Europe. For a discussion of risks related to our non-U.S. operations, see “Risk Factors—Risks Related to Our Business,” “—Risks Related to Our Industry” and “—Risks Relating to Our Financial Condition” in Part I, Item 1A of this Annual Report on Form 10-K and “Quantitative and Qualitative Disclosure About Market Risk” in Part II, Item 7A of this Annual Report on Form 10-K.

Manufacturing

Other than the manufacturing plant in Italy where we produce some active pharmaceutical ingredients, including the defibrotide drug substance, discussed in more detail below, we do not currently have our own manufacturing capability for our products or product candidates, or their active pharmaceutical ingredients, or the capability to package our products. Currently, we have a single source of supply for each of our marketed products and our product candidates and for the active pharmaceutical ingredients used in these products and product candidates. Our ability to develop and deliver products in a timely and competitive manner depends on our third party suppliers and manufacturers being able to continue to meet our ongoing commercial and clinical trial needs (except with respect to the defibrotide drug substance, which we manufacture for ourselves). Manufacturers of pharmaceutical products often encounter difficulties in production, including difficulties with production yields, process controls, quality control and quality assurance, including testing of stability, impurities and impurity levels and other product specifications by validated test methods, and compliance with strictly enforced U.S., state and non-U.S. regulations. These difficulties can be heightened when a supplier or manufacturer is required to scale up to produce increased quantities to meet growing demand.

In April 2010, we entered into an agreement with Siegfried (USA) Inc., subsequently renamed Siegfried USA, LLC, or Siegfried, for the supply of sodium oxybate, the active pharmaceutical ingredient of Xyrem. Siegfried was approved by the FDA as our supplier in November 2011. Although Siegfried has been our only supplier of sodium oxybate since 2012, we have the right to purchase a portion of our worldwide requirements of sodium oxybate from other suppliers. Under our agreement, we provide periodic rolling forecasts to Siegfried, and a portion of each rolling forecast constitutes a firm purchase order. The agreement with Siegfried expires in April 2018, subject to automatic three-year extensions until either party provides notice to the other of its intent to terminate the agreement at least 18 months before the end of the then-current term. Either party has the right to terminate the agreement in the event of the other party’s uncured material breach or insolvency. During the term of the agreement and, under certain circumstances for 18 months after the agreement terminates, Siegfried is not permitted to manufacture sodium oxybate for any other company.

We have an exclusive agreement with Patheon Pharmaceuticals, Inc., or Patheon, which became effective in 2008, under which we have agreed to purchase exclusively from Patheon (except in very limited circumstances), and Patheon has agreed to manufacture, supply and package, our worldwide supply of Xyrem. The current term of the agreement with Patheon, which is our sole supplier of Xyrem, extends until July 2016 and may be extended, at our option, for additional two-year terms with written notice at least twelve months before the end of the then current term. Either party has the right to terminate the agreement in the event of the other party’s uncured material breach or insolvency.

Quotas from the DEA are required in order to manufacture and package sodium oxybate and Xyrem. DEA quotas are required for Siegfried to supply us with sodium oxybate and for Patheon to supply us with Xyrem. Since the DEA typically grants quota on an annual basis and requires a detailed submission and justification for a quota request, obtaining a sufficient DEA quota can be a difficult and time-consuming process. The need for quota has prevented us in the past, and may prevent us in the future, from building significant inventories. For information related to this quota requirement of the DEA, see “Business —Government Regulation—Other Regulatory Requirements—Controlled Substance Regulations” in Part I, Item 1 of this Annual Report on Form 10-K.

Erwinaze is exclusively licensed to us, and manufactured for us, by PHE, which is our sole supplier for Erwinaze. Our agreement with PHE expires in December 2020, subject to automatic extension for additional five-year periods unless terminated by either party in writing prior to a fixed date before the end of the then-current term. Either party has the right to terminate the agreement in the event of the other party’s uncured material breach or insolvency. We provide periodic rolling forecasts to PHE, and a portion of each rolling forecast constitutes a firm purchase order. We are obligated to make tiered

royalty payments to PHE based on worldwide net sales of Erwinaze and Erwinase. The BLA approving Erwinaze includes a number of post-marketing commitments related to the manufacture of Erwinaze by PHE.

We have limited inventory of Erwinaze. The current manufacturing capacity for Erwinaze is nearly completely absorbed by demand for the product. As a consequence of constrained manufacturing capacity, we have had an extremely limited ability to build an excess level of product inventory that could be used to absorb disruptions to supply resulting from quality or other issues. If we continue to be subject to capacity constraints or experience quality or other manufacturing challenges in the future, we may be unable to build a desired excess level of product inventory, and our ability to supply the market may be compromised. Although we are taking steps to improve the Erwinaze manufacturing process, if our ongoing efforts are not successful, we could experience additional Erwinaze supply interruptions in the future, which could have a material adverse effect on our sales of and revenues from Erwinaze and limit our potential future maintenance and growth of the market for this product. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We depend on single source suppliers and manufacturers for each of our products, product candidates and their active pharmaceutical ingredients. The loss of any of these suppliers or manufacturers, or delays or problems in the supply or manufacture of our products for commercial sale or our product candidates for use in our clinical trials, could materially and adversely affect our business, financial condition, results of operations and growth prospects"* for a discussion of the challenges we face with respect to Erwinaze supply.

We manufacture the defibrotide drug substance in a single facility located in Villa Guardia, near Como, Italy. We are our sole supplier of, and we believe that we are currently the sole worldwide producer of, the defibrotide drug compound. Patheon UK Limited, or Patheon UK, currently processes the defibrotide compound into its finished vial form, and is the sole provider of our commercial supply of the finished product in Europe and of our future clinical supply. We are in the process of evaluating an appropriate provider to process defibrotide into finished product for the U.S. market in preparation for the potential approval of the product by the FDA.

In order to commence any of our planned clinical programs for JZP-110 or JZP-386, we need to have sufficient quantities of clinical product manufactured. While we believe that we will be able to obtain sufficient supplies of JZP-110 or JZP-386 before the commencement of our planned clinical trials, there can be no assurance that our suppliers will be able to produce sufficient clinical supplies of JZP-110 or JZP-386 in a timely manner. Any delay in receiving adequate supplies of JZP-110 or JZP-386 for our planned studies could negatively impact our development programs.

Our active pharmaceutical ingredient and finished product manufacturers may not be able to continue to meet our requirements for quality, quantity and timeliness. In addition, our manufacturers and suppliers are subject to the FDA's current Good Manufacturing Practices, or cGMP, requirements, DEA regulations and other rules and regulations prescribed by non-U.S. regulatory authorities. We depend on our third party suppliers and manufacturers for compliance with these requirements, and they may not be able to continue to do so.

Patents and Proprietary Rights

We actively seek to patent, or to obtain licenses to or to acquire third party patents, to protect our products and related inventions and improvements that we consider important to our business. We own a portfolio of U.S and non-U.S. patents and patent applications and have licensed rights to a number of issued patents and patent applications. Our owned and licensed patents and patent applications cover or relate to our products and product candidates, including certain formulations, uses to treat particular conditions, distribution methods and methods of administration, drug delivery technologies and delivery profiles and methods of production. Patents extend for varying periods according to the date of the patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. The patent laws of non-U.S. countries differ from those in United States, and the degree of protection afforded by non-U.S. patents may be different from the protection offered by U.S. patents.

The patents and patent applications that relate to our lead marketed products include:

- *Xyrem.* Xyrem is covered by 19 U.S. patents that expire at various times from December 2019 to March 2033, of which 14 are listed in the FDA's publication "Approved Drug Products with Therapeutic Equivalence Evaluations," or Orange Book. These patents relate to Xyrem's stable and microbially resistant formulation, its manufacturing process, its method of use, including its restricted distribution system, and its method of administration. Of the patents listed in the Orange Book, four are formulation patents expiring between December 2019 and July 2020; seven are method of use patents covering the distribution of Xyrem expiring between December 2022 and June 2024; two are method of use patents covering Xyrem's use in narcolepsy, both of which expire in December 2019; and one is a method of administration patent expiring in March 2033. An additional method of use patent covering Xyrem's use in narcolepsy expiring December 2019 is expected to be listed in the Orange Book. Four patents are not listed in the Orange Book but also relate to Xyrem: two for methods for making the formulation expiring December 2019, one for a distribution system expiring June 2024 and one for method of administration expiring March 2033. A Xyrem

formulation patent has issued in multiple non-U.S. countries and will expire in December 2019. In addition to our issued patents, we have patent applications relating to Xyrem pending in the United States and other countries.

Five companies have notified us that they have filed ANDAs with the FDA seeking FDA approval to market a generic version of Xyrem. We initiated lawsuits against each of these companies, and the litigation proceedings are ongoing. In addition, certain of the ANDA filers have sought to challenge the validity of our patents covering the distribution system for Xyrem by filing petitions for CBM post-grant patent review and/or IPR by the PTAB. The PTAB has issued decisions denying institution of CBM review for all of the CBM petitions and has not yet determined whether to institute proceedings with respect to the petitions for IPR. For a description of these matters, see "Legal Proceedings" in Part I, Item 3 of this Annual Report on Form 10-K.

- *Defitelio*. The unique process of deriving defibrotide from porcine DNA is extensive and uses both chemical and biological processes that rely on complex characterization methods. We have a portfolio of U.S. and non-U.S. patents and patent applications relating to various compositions, methods of use and methods of characterization, which will expire at various times between April 2017 and June 2032.

Erwinaze has no patent protection, although it has orphan drug exclusivity for the treatment of ALL in the United States until November 2018, and it is expected to receive exclusivity that prevents approval of a biosimilar in the United States through late 2023 under the BPCIA. See "Business—Government Regulation—Orphan Drug and Other Exclusivities" in Part I, Item 1 of this Annual Report on Form 10-K for more details.

The patents and patent applications that relate to our product candidates include:

- *JZP-110*. JZP-110 and its associated uses are claimed in multiple U.S. and non-U.S. patents and applications. We acquired rights to JZP-110 from Aerial in January 2014, including Aerial's patent rights relating to JZP-110, other than in certain jurisdictions in Asia where SK retains rights. The U.S. composition of matter patents begin to expire in September 2015. Two U.S. method of use patents covering treatment of sleep related conditions will expire in June 2026 and August 2027, subject to any patent term extension.
- *JZP-386*. Two U.S. patents cover the composition of deuterated analogs of sodium oxybate, including JZP-386, and their methods for treating certain diseases and disorders, including narcolepsy. The first patent expires in July 2030 and the second patent expires in February 2032. A European patent that corresponds to the first U.S. patent expires in April 2030. Further, patent applications corresponding to the second U.S. patent were filed in the United States, Europe and Japan, and, if issued, would expire in February 2032. We were granted exclusive licenses to these patent rights by Concert.
- *JZP-416*. JZP-416 is not yet covered by any issued U.S. patents. We have rights to patent applications for JZP-416 pending in the United States and many other countries that, if issued, would expire in July 2030, subject to any patent term extension. In addition, JZP-416 was granted orphan drug designation for the treatment of ALL by the EMA and by the FDA subject to certain conditions. See "Business—Government Regulation—Orphan Drug and Other Exclusivities" in Part I, Item 1 of this Annual Report on Form 10-K for more details.

We cannot be certain that any of our patent applications, or those of our licensors, will result in issued patents, that the patents we own and license, or any additional patents we may own or license, will prevent other companies from developing similar or therapeutically equivalent products, or that others will not be issued patents that may prevent the sale of our products or require licensing and the payment of significant fees or royalties.

We also rely on our trade secrets and those of our licensors, as well as other unpatented proprietary information, to protect our products and commercial position, particularly with respect to our products with limited or no patent protection, such as Erwinaze and Defitelio. To the extent that our products have a competitive edge as a result of our reliance on trade secrets and unpatented know-how, our competitive position may be compromised if others independently develop products using the same or similar technologies or trade secrets.

We seek to protect our trade secrets and proprietary knowledge in part through confidentiality agreements with our employees, consultants, advisors and collaboration partners. Nevertheless, these agreements may not effectively prevent disclosure of our confidential information and may not provide us with an adequate remedy in the event of unauthorized disclosure of our confidential information. In addition, if our employees, consultants, advisors or collaboration partners develop inventions or processes independently or jointly with us that may be applicable to our products under development, disputes may arise about ownership or proprietary rights to those inventions and processes. Such inventions and processes will not necessarily become our property, but may remain the property of those third parties or their employers. Protracted and costly litigation could be necessary to enforce and determine the scope of our proprietary rights. In addition, courts outside of the United States are sometimes less willing to protect trade secrets.

Failure to obtain or maintain patent and trade secret protection, for any reason, could have a material adverse effect on our business. See the risk factors in Part I, Item 1A of this Annual Report on Form 10-K entitled "*It is difficult and costly to*

protect our proprietary rights, and we may not be able to ensure their protection" and "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

In addition, we have a number of trademarks and service marks to further protect the proprietary position of our products. We also have pending trademark and service mark applications in the United States and elsewhere in the world.

Government Regulation

The manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, sale, distribution, recordkeeping, importing and exporting of our products and our research and development activities are subject to extensive regulation by the FDA, the EC, the competent authorities of the EU member states and other regulatory authorities. Regulations differ from country to country. As a result of these regulations, product development, approval and commercialization processes are expensive and time-consuming.

Approval of Pharmaceutical Products

We are not permitted to market a pharmaceutical product in the United States or in the EU member states until we receive approval from the FDA, the EC or the competent authorities of the EU member states, as applicable. An application for marketing approval must contain information demonstrating the quality, safety and efficacy of the pharmaceutical product, including data from preclinical and clinical trials, information pertaining to the preparation and manufacture of the drug or biologic, analytical methods, product formulation, details on the manufacture and stability of the finished pharmaceutical product and proposed product packaging and labeling.

In the United States, the FDA, under the Federal Food, Drug and Cosmetic Act, or FDCA, and its implementing regulations, regulates the review, approval, manufacturing and marketing of our products. Our failure, or the failure of any of our third party partners, to comply with applicable requirements could subject us to administrative or judicial sanctions or other negative consequences, such as delays in approval or refusal to approve a product candidate, withdrawal of product approval, notices of violation, untitled letters, warning letters, fines and other monetary penalties, unanticipated expenditures, product recall or seizure, total or partial suspension of production or distribution, interruption of manufacturing or clinical trials, operating restrictions, injunctions, suspension of licenses, civil penalties and/or criminal prosecution.

To obtain FDA approval of a product candidate, an applicant, also called a sponsor, must, among other things, submit the data and information described above in the form of an NDA or BLA, as applicable, and include payment of a user fee. The testing and collection of data and the preparation of necessary applications are expensive and time-consuming, and the outcomes are uncertain. The steps required before a drug or biologic may be approved for marketing in the United States generally include: preclinical laboratory tests and animal tests; submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials commence; adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug or biologic for each indication; the submission to the FDA of the NDA or BLA; satisfactory completion of an FDA inspection of the manufacturing facilities at which the product is made, analyzed and stored to assess compliance with cGMP; potential FDA audit of the nonclinical and clinical trial sites that generated the data in support of the application; and FDA review and approval of the application.

Human clinical trials conducted before approval of a product for a specific indication generally proceed in three sequential phases, although the phases may overlap. In Phase 1, the initial introduction of the drug into human subjects, frequently healthy volunteers, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses and, if possible, early evidence of effectiveness. Phase 2 usually involves clinical trials in a limited patient population to determine the effectiveness of the drug for a particular indication or indications, dosage tolerance and optimum dosage and to identify common adverse effects and safety risks. If a drug demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2, Phase 3 clinical trials are undertaken to obtain additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites. In addition, Phase 4, or post-approval, clinical trials may be required by the FDA and are used to gain additional experience from the treatment of patients in the intended therapeutic indication and to document a clinical benefit in the case of products approved under accelerated approval regulations.

The FDA reviews an NDA or BLA submitted before it accepts them for filing and may request additional information rather than, or before, accepting an application for filing. For example, a prior NDA submission by Gentium seeking approval in the United States for defibrotide for the treatment of VOD was voluntarily withdrawn from consideration in 2011 in order to address issues raised by the FDA. We held pre-NDA meetings with the FDA relating to our plans for the submission of an NDA for defibrotide for the treatment of severe VOD. Based on these meetings and in light of the current status of our acquisition and remediation of key information to be included in the data package for the NDA, in December 2014, we initiated a rolling submission of an NDA to the FDA for defibrotide for the treatment of severe VOD and expect to complete the submission of the NDA in mid-2015. We do not expect to be required to complete any additional clinical trials prior to the

completion of the NDA submission. However, we may be unable to acquire and remediate key information in the data package in a timely manner, which would delay or preclude the completion of our NDA submission. Furthermore, if we fail to acquire and remediate key information or if analysis of this data does not support an NDA submission, we may be required to complete additional clinical trials in order to obtain appropriate data for an NDA submission. Even if we are able to complete the NDA submission as planned, we may be required to conduct time-consuming and costly clinical trials as a condition of any U.S. marketing approval for the product. In any event, we may be unable to obtain regulatory approval of defibrotide in the United States in a timely manner, if at all.

Once an NDA or BLA submission is accepted for filing, the FDA begins an in-depth review of the application. Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA, the FDA has twelve months from submission in which to complete its initial review of a standard application and respond to the applicant, and eight months for a priority application. The FDA does not always meet its PDUFA goal dates, and in certain circumstances the PDUFA goal date may be extended. The FDA may not act quickly or favorably in reviewing applications, and we may encounter significant difficulties or costs in any efforts to obtain FDA approvals, which could delay or preclude us from marketing our product candidates.

If the FDA determines that a REMS is necessary to ensure that the benefits of the drug outweigh the risks, a sponsor may be required to include, as part of the application or after approval, a proposed REMS, which may include a patient package insert or a medication guide to provide information to consumers about the product's risks and benefits, a plan for communication to healthcare providers, and restrictions on the product's distribution referred to as ETASU. For example, Xyrem is required to have a REMS. Elements of the Xyrem Risk Management Program, adopted in 2002 before the FDA had authority to require REMS, are deemed to be an approved REMS pursuant to the FDAAA. The Xyrem Risk Management Program, however, is not in the form that is now required for REMS documents. The FDAAA, which amended the FDCA, requires that deemed REMS and related documents be updated to comply with the current requirements for REMS documents.

We are engaged in ongoing communications with the FDA with respect to our REMS documents for Xyrem, but we have not reached agreement on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Among other things, we disagree with the FDA's position in the late 2013 notice that, as part of the current REMS process, the Xyrem deemed REMS should be modified to enable the distribution of Xyrem through more than one pharmacy, or potentially through retail pharmacies and wholesalers, as well as with certain modifications proposed by the FDA that would, in the FDA's view, be sufficient to ensure that the REMS includes only those elements necessary to ensure that the benefits of Xyrem outweigh its risks, and that would, in the FDA's view, reduce the burden on the healthcare system. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014. We received the FDA's denial of our initial dispute resolution submission in the second quarter of 2014, and our dispute is currently subject to further supervisory review at the next administrative level of the FDA. We have received interim responses from the FDA, but the FDA has not yet communicated a decision on our further appeal to us. We expect to receive the FDA's decision in the first quarter of 2015. We cannot predict whether, or on what terms, we will reach agreement with the FDA on final REMS documents for Xyrem, the outcome or timing of the current dispute resolution procedure, whether we will initiate additional dispute resolution proceedings with the FDA or other legal proceedings prior to finalizing the REMS documents, or the outcome or timing of any such proceedings. We expect that final REMS documents for Xyrem will include modifications to, and/or requirements that are not currently implemented in, the Xyrem Risk Management Program. Any such modifications or additional requirements could potentially make it more difficult or expensive for us to distribute Xyrem, make it easier for future generic competitors, and/or negatively affect sales of Xyrem. See the discussion regarding REMS in the context of potential generic competition under "Business—Government Regulations—The Hatch-Waxman Act" below and in the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem.*"

After the FDA evaluates a marketing application, including a REMS program when applicable, it also evaluates any manufacturing and nonclinical and clinical trial facilities for the proposed product. When the FDA's evaluation is complete, it issues an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the application, the FDA will issue an approval letter. The FDA may also refer an application to the appropriate advisory committee, typically a panel of clinicians, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendations of the advisory committee.

The FDA has and has used various programs, including fast track, priority review, breakthrough therapy and accelerated approval (Subpart H and E), that are intended to expedite or simplify the process for reviewing certain applications and/or provide for approval on the basis of surrogate endpoints or restricted distribution. Generally, drugs and biologics may be

eligible for one or more of these programs if they are intended for serious or life-threatening diseases or conditions, have potential to address unmet medical needs, or may provide meaningful benefit over existing treatments. For example, the FDA has granted Fast Track designation to the investigation of JZP-416 for ALL and to defibrotide to treat severe VOD. We cannot be sure that any of our other product candidates will qualify for any of these programs, or that, if a product candidate does qualify, such as JZP-416 and defibrotide, that the review time will be shorter than a standard review.

Outside of the United States, our ability to market a medicinal product generally depends upon receiving a marketing authorization from the appropriate regulatory authority. The requirements governing the conduct of clinical trials, obtaining marketing authorization, obtaining pricing and reimbursement and related matters vary widely from country to country. In any country, however, we will generally be permitted to commercialize our products if the appropriate regulatory authority is satisfied that we have presented adequate evidence of safety, quality and efficacy. The time needed to secure approval for medicinal products may be longer or shorter than that required for FDA approval. The regulatory approval and oversight process in other countries includes all of the risks associated with regulation by the FDA and certain state regulatory agencies as described below. In addition, many countries have adopted specific legal frameworks and procedures to enable the supply of unauthorized medicinal products in the context of named patient or compassionate use programs. These programs are subject to different requirements and subject to different rules in the countries where we operate.

In the EU, marketing authorization for medicinal products can be obtained through several different procedures. The centralized procedure allows a company to submit a single application to the EMA which will provide a positive opinion regarding the application if it meets certain quality, safety and efficacy requirements. The EC can, based on the opinion of the EMA, grant a centralized marketing authorization that is valid in all EU member states and three additional European countries. The centralized procedure is mandatory for certain medicinal products, including orphan medicinal products and biologic products, and optional for certain other products. Unlike the centralized authorization procedure, the national authorization procedure requires a separate application to, and leads to separate approval by, the competent authorities of each EU member state in which the product is to be marketed. There are two possible routes for companies to gain national authorization and both rely on the principal of mutual recognition. One is the decentralized procedure, which allows companies to file identical applications to several EU member states simultaneously for medicinal products that have not yet been authorized in any EU member state. The competent authority of one EU member state, selected by the applicant, assesses the application for marketing authorization. The competent authorities of the other EU member states are subsequently required to grant marketing authorization for their territories on the basis of this assessment except where grounds of potential serious risk to public health require this authorization to be refused. The other is the mutual recognition procedure which allows companies that have a medicinal product already authorized in one EU member state to apply for this authorization to be recognized in other EU member states.

The making available or placing on the EU market of unauthorized medicinal products is prohibited. However, the competent authorities of the EU member states may exceptionally and temporarily allow the making available of such products to individual patients or a group of patients with a chronically or seriously debilitating disease or whose disease is considered to be life-threatening, and who cannot be treated satisfactorily by an authorized medicinal product.

Clinical studies must be conducted in accordance with the requirements of the EU Clinical Trials Directive and applicable good clinical practice standards, as implemented into national legislation by EU member states. All marketing authorization holders will be required to comply with the requirements of a new EU Clinical Trials Regulation which will come into force no later than May 28, 2016. As a regulation, it will be directly binding in all EU member states without the need for any national implementing legislation. The new EU Clinical Trials Regulation, which will replace the EU Clinical Trials Directive, introduces a complete overhaul of the existing regulation of clinical trials for medicinal products in the EU, including a new coordinated procedure for authorization of clinical trials which is reminiscent of the mutual recognition procedure for marketing authorization of medicinal products.

The initial marketing authorization granted in the EU is valid for five years, but once renewed is usually valid for an unlimited period unless the national competent authority or the EMA, decides, on justified grounds relating to pharmacovigilance, including exposure of an insufficient number of patients to the medicinal product concerned, to proceed with one additional five-year renewal. The renewal of a marketing authorization is subject to a re-evaluation of the risk-benefit balance of the product by the national competent authorities or the EMA. In addition, products for which the applicant can demonstrate that comprehensive data on the efficacy and safety of the medicinal product under normal conditions of use cannot be provided as a result of certain specified objective and verifiable reasons may be eligible for marketing authorization under exceptional circumstances. A marketing authorization granted under exceptional circumstances is also valid for five years, but is subject to an annual reassessment of conditions imposed by the competent authorities, including conditions relating to the safety of the medicinal product, notification to the national competent authorities of any incident relating to its use, and action to be taken. In October 2013, the EC granted marketing authorization under exceptional circumstances for Defitelio for the treatment of severe VOD in adults and children undergoing HSCT therapy.

The Hatch-Waxman Act

The approval process described above for the United States is premised on the applicant being the owner of, or having obtained a right of reference to, all of the data required to prove the safety and effectiveness of a drug product. This type of marketing application, sometimes referred to as a "full" or "stand-alone" NDA, is governed by Section 505(b)(1) of the FDCA. A Section 505(b)(1) NDA contains full reports of investigations of safety and effectiveness, which includes the results of preclinical and clinical trials, together with detailed information on the manufacture and composition of the product, in addition to other information as described above.

Alternatively, the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, which updated certain sections of the FDCA, establishes two abbreviated approval pathways for drug products that are in some way follow-on versions of products already covered by an approved NDA. The first path, under Section 505(b)(2), is for the approval of a product that is similar, but not identical, to a previously-approved brand-name product, which is referred to as the "referenced drug." Under this path, the applicant is permitted to rely to some degree on the FDA's finding that the referenced drug is safe and effective, and must submit its own product-specific data of safety and effectiveness to an extent necessary because of the differences between the products. The FDA may then approve the new drug product for all or some of the label indications for which the referenced product has been approved, or for a new indication sought by the Section 505(b)(2) applicant.

The second path established under the Hatch-Waxman Act is for the approval of generic drugs. Section 505(j) of the FDCA permits the submission of an ANDA for a generic version of an approved, brand-name drug. Generally, an ANDA must contain data and information showing that the proposed generic product and the approved referenced drug (1) have the same active ingredient, in the same strength and dosage form, to be delivered via the same route of administration, (2) are intended for the same uses, and (3) are bioequivalent. This data and information are provided instead of independently demonstrating the proposed generic product's safety and effectiveness, which are inferred from the fact that the generic product is the same as the referenced drug, which the FDA previously found to be safe and effective. To date, five generic drug manufacturers have filed an ANDA with the FDA requesting approval to market a generic version of Xyrem. ANDAs have been filed in the past seeking approval to market generic versions of certain of our other products, and additional ANDAs may be filed in the future seeking approval to market generic forms of Xyrem and/or other products. For a description of these matters, see "Legal Proceedings" in Part I, Item 3 of this Annual Report on Form 10-K.

To the extent that an ANDA or a Section 505(b)(2) NDA applicant is relying on the FDA's findings for an already-approved product, the applicant is required to certify that there are no patents listed for that product in the Orange Book, or that for each Orange Book-listed patent the listed patent has expired, or will expire on a particular date and approval is sought after patent expiration, or the listed patent is invalid or will not be infringed by the manufacture, use or sale of the new product. A certification that the new product will not infringe the referenced product's Orange Book-listed patents or that such patents are invalid is called a "Paragraph IV Patent Certification." If the patent is for an approved method of use, an ANDA or Section 505(b)(2) applicant can also file a statement, called a "section viii statement," that the application does not seek approval of the use covered by the listed patent. If the applicant does not challenge the listed patents, the ANDA or the Section 505(b)(2) NDA will not be approved until all the listed patents claiming the referenced product have expired, as well as any additional period of exclusivity that might be obtained for completing pediatric studies pursuant to the FDA's written request. The ANDA or the Section 505(b)(2) NDA may also be subject to delay in review or approval based on applicable non-patent exclusivities, such as exclusivity that results from obtaining approval of a new chemical entity or of a new use of a previously approved active ingredient.

If the applicant has provided a Paragraph IV Patent Certification, or Paragraph IV Certification, to the FDA, the applicant must also send a notice of such certification to the holder of the NDA and the relevant patent holders once the ANDA or the Section 505(b)(2) NDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a legal challenge to the proposed generic product for infringing the patent. The filing of a patent infringement lawsuit within 45 days of receipt of a notice of Paragraph IV Certification automatically prevents the FDA from approving the ANDA or the Section 505(b)(2) NDA until the earliest of 30 months after the NDA holder's receipt of the notice of Paragraph IV Certification, expiration of the patent, settlement of the lawsuit or a decision in the infringement case that is favorable to the ANDA applicant. The 30-month stay period may also be shortened or lengthened upon order of the court in the infringement lawsuit. For drugs with five-year exclusivity, if an action for patent infringement is initiated after year four of that exclusivity period, then the 30-month stay period is extended by such amount of time so that 7.5 years has elapsed since the approval of the NDA for the referenced drug. This period could be extended by six months if the NDA sponsor obtains pediatric exclusivity. Alternatively, if the listed patent holder does not file a patent infringement lawsuit within the required 45-day period, the applicant will not be subject to the 30-month stay. The FDA may issue tentative approval of an ANDA if the generic applicant meets all conditions for approval but cannot receive effective approval because the 30-month stay or a period of statutory exclusivity has not expired.

We intend to submit for Orange Book listing all relevant patents for our products and product candidates, and to vigorously defend any patents for our approved products, including Orange Book-listed patents. We have received notices of Paragraph IV Certification from five generic drug manufacturers notifying us that each had filed an ANDA with the FDA requesting approval to market a generic version of Xyrem before the expiration of the Orange Book-listed patents relating to Xyrem. We have sued each of these ANDA filers seeking to prevent them from introducing a generic version of Xyrem that would infringe our patents. For a description of these matters, see "Legal Proceedings" in Part I, Item 3 of this Annual Report on Form 10-K. If an ANDA is approved after the 30-month stay and before conclusion of any relevant patent litigation at the district, and potentially appellate, court, a generic manufacturer could nonetheless choose to commercialize the generic product, also known as a "launch at risk." In the event of such commercialization, the generic manufacturer generally would be liable to us for damages if we ultimately prevail in the patent litigation.

Section 505-1(i)(1) of the FDCA generally provides that (i) an ANDA with a referenced drug subject to the REMS requirements is required to have a REMS with the same elements as the referenced drug, such as a medication guide, a patient package insert and other ETASU, and (ii) the ANDA drug and the referenced drug shall use a single shared system to assure safe use. However, the FDA may waive this requirement for a single shared system and permit the ANDA holder to submit separate but comparable REMS documents if the FDA either determines that the burden of creating a single shared system outweighs its benefit, or if the ANDA applicant certifies that it has been unable to obtain a license to any aspects of the REMS for the referenced drug product that are covered by a patent or a trade secret. The FDCA provides that the FDA may seek to negotiate a license between the ANDA sponsor and the sponsor of the listed product before granting a waiver of the single shared system requirement. The FDCA further states that a REMS shall not be used by an NDA holder to block or delay generic drugs from entering the market. Accordingly, we expect to face pressure to license or share our Xyrem Risk Management Program, which is the subject of multiple issued patents, or elements of it, with generic competitors. We cannot predict the outcome or impact on our business of any future action that we may take with respect to licensing or sharing our REMS, or the FDA's response to a certification that a third party has been unable to obtain a license.

In the FDA's December 2012 response denying a Citizen Petition that we filed in July 2012, the FDA stated that when an NDA holder has a deemed REMS, the FDA directs the ANDA applicant(s) to work with the NDA holder to create a single shared system to implement the ETASU that will be approved as a final REMS. More broadly, the FDA has stated that it expects the negotiation of a single shared REMS between an NDA holder and ANDA applicants to proceed concurrently with the FDA's review of ANDA applications. The FDA has further stated that it typically monitors the progress of industry working groups attempting to develop shared REMS systems, and that it has acted to help ensure that sponsors were cooperating and that there were no obstacles to developing a single shared system. In January 2014, the FDA held an initial meeting with us and the then-current Xyrem ANDA applicants to facilitate the development of a single shared system REMS for Xyrem (sodium oxybate). The parties have had numerous interactions with respect to a single shared system REMS since the initial meeting, and we expect the interactions to continue. We cannot predict the timing, outcome or impact on our business of discussions with the FDA and/or any ANDA applicant with respect to the potential creation of a single shared system REMS for Xyrem (sodium oxybate), including the impact of the ongoing process with respect to potential modifications to the Xyrem deemed REMS as discussed above, or the impact of any single shared system REMS on our ongoing litigation with each of the ANDA applicants. See the risk factor in Part I, Item 1A entitled "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

If we do not develop a single shared system REMS or license or share our REMS with a generic competitor within a time frame or on terms that the FDA considers acceptable, the FDA may assert that its waiver authority permits it to allow the generic competitor to market a generic drug with a REMS that does not include the same elements that are in our deemed REMS or, when Xyrem REMS documents are approved, with a separate REMS that includes different, but comparable, ETASU.

It is also possible that the FDA may take the position that a potential generic competitor does not need a REMS that has the same ETASU as our Xyrem deemed REMS in order to obtain approval of its ANDA. In the denial of our Citizen Petition described above, the FDA stated that if the FDA determines that an ANDA may be ready for approval before final approval of the REMS of a sponsor holding a deemed REMS, the FDA will direct the ANDA applicant to submit a proposed risk management plan with ETASU that are comparable to the ETASU that are approved for the referenced drug in order to have adequate risk management elements in place for the ANDA until the final REMS is approved. The legal basis for this position is uncertain. However, it is possible that the FDA may rely on this position as a basis to grant approval of an ANDA with a risk management plan rather than a final REMS. The 30-month stay of FDA approval of the ANDA filed by Roxane Laboratories, Inc., or Roxane, the first ANDA filer, expired on April 18, 2013, and we have not yet received approval of final REMS documents for Xyrem. Accordingly, it is possible that, consistent with the position that the FDA articulated in its denial of our Citizen Petition, the FDA could approve an ANDA with a risk management plan that is separate from our Xyrem deemed REMS, rather than with a final REMS or a shared REMS for both the generic and Xyrem. We expect that the approval of an ANDA that results in the launch of a generic version of Xyrem would have a material adverse effect on our business, financial

condition, results of operations and growth prospects. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

Under the Hatch-Waxman Act, newly-approved drugs and indications may benefit from a statutory period of non-patent marketing exclusivity. The Hatch-Waxman Act provides five-year marketing exclusivity to the first applicant to gain approval of an NDA for a new chemical entity, meaning that the FDA has not previously approved any other new drug containing the same active moiety. The Hatch-Waxman Act prohibits the FDA accepting for review an ANDA or a Section 505(b)(2) NDA for another version of such drug during the five-year exclusive period; however, as explained above, submission of an ANDA or Section 505(b)(2) NDA containing a Paragraph IV Certification is permitted after four years, which may trigger litigation leading to a 30-month stay of approval of the ANDA or Section 505(b)(2) NDA that could extend to 7.5 years after approval of the referenced drug. Protection under the Hatch-Waxman Act will not prevent the submission or approval of another "full" NDA; however, the applicant would be required to conduct its own preclinical and adequate and well-controlled clinical trials to demonstrate safety and effectiveness. The Hatch-Waxman Act also provides three years of marketing exclusivity for the approval of new and supplemental NDAs, including Section 505(b)(2) NDAs, for, among other things, new indications, dosages, or strengths of an existing drug, if new clinical investigations that were conducted or sponsored by the applicant are determined by the FDA to be essential to the approval of the application.

The Hatch-Waxman Act also permits a patent term extension of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, a patent term extension cannot extend the remaining term of a patent beyond a total of 14 years after the FDA approves a marketing application. The patent term extension period is generally equal to the sum of one-half the time between the effective date of an IND and the submission date of an NDA, and all of the time between the submission date of an NDA and the approval of that application, up to a total of five years. Only one patent applicable to a product or its use may be extended, and only if the regulatory review leads to the first commercial marketing of that drug, and the extension must be applied for prior to expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for patent term extension. We will consider applying for a patent term extension for some of our patents to add patent life beyond the expiration date, if we meet the legal requirements permitting an extension and depending on the expected length of clinical trials and other factors involved in the submission of an NDA.

Orphan Drug and Other Exclusivities

Some jurisdictions, including the United States, may designate drugs or biologics for relatively small patient populations as orphan drugs. The FDA grants orphan drug designation to drugs or biologics intended to treat a rare disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States if there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that product. In the United States, in order to obtain orphan drug designation, the designation must be requested before submitting an application for marketing approval. An orphan drug designation does not shorten the duration of the regulatory review and approval process. However, if a product that has orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same product for the same indication for a period of seven years from the time of FDA approval, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Competitors may receive approval of different drugs or biologics for the indications for which the orphan product has exclusivity.

The FDA approved Xyrem as an orphan drug for the treatment of EDS and cataplexy in patients with narcolepsy, but those periods of orphan drug exclusivity have expired. Erwinaze has orphan drug exclusivity for the treatment of ALL until November 2018, seven years from its FDA approval. JZP-416 was granted orphan drug designation for the treatment of ALL by the FDA subject to certain conditions. Defibrotide has been granted orphan drug designation to treat and prevent VOD by the FDA.

Separately, Erwinaze, as a biologic product approved under a BLA, is subject to the BPCIA. The BPCIA authorizes the FDA to license a biological product that is biosimilar to an FDA-licensed biologic through an abbreviated pathway. The BPCIA establishes criteria for determining whether a product is biosimilar to an already-licensed biologic, or reference product, and establishes a process for an abbreviated BLA for a biosimilar product to be submitted, reviewed and approved. The BPCIA provides periods of exclusivity that protect a reference product from competition by biosimilars. Under the BPCIA, the FDA may not accept a biosimilar application for review until four years after the date of first licensure of the reference product, and the biosimilar cannot be licensed until 12 years after the reference product was first licensed. Because the BPCIA is a relatively new law, we anticipate that its impact on both reference product sponsors and biosimilar applicants will evolve over a period of years. Its implementation likely will be shaped by a variety of factors, including FDA issuance of guidance documents,

proposed regulations, and decisions in the course of considering specific applications. Erwinaze is expected to receive exclusivity that prevents approval of a biosimilar in the United States through late 2023 under the BPCIA.

Products also may be eligible for six months of additional exclusivity and patent protection if the sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted. If reports of requested pediatric studies are submitted to and accepted by the FDA within statutory time limits, whatever statutory or regulatory periods of exclusivity or listed patent protection cover the drug are extended by six months. This is not a patent term extension, but it effectively extends the period during which, because of regulatory exclusivity or listed patents, the FDA cannot approve an ANDA or 505(b)(2) NDA. We will consider seeking pediatric exclusivity if we meet the legal requirements and believe it will be commercially beneficial. For example, in the fourth quarter of 2014, in response to a written request from the FDA to generate additional data, we initiated a Phase 3 clinical trial to assess the safety and efficacy of Xyrem in children and adolescents aged seven to 17 who have narcolepsy with cataplexy.

In the EU, orphan drug designation may be granted to products that can be used to treat life-threatening diseases or chronically debilitating conditions with an incidence of no more than five in 10,000 people and that, for economic reasons, would be unlikely to be developed without incentives. In order to receive orphan designation, there must also be no satisfactory method of diagnosis, prevention or treatment of the condition, or if such a method exists, the medicine must potentially be of a significant benefit to those affected by the condition. Once authorized, orphan medicinal products are entitled to ten years of market exclusivity in all EU member states and a range of other benefits during the development and regulatory review process, including scientific assistance for study protocols, access to the centralized marketing authorization procedure 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 the similar product is deemed 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 it can be demonstrated on the basis of available evidence that the original orphan medicinal product is sufficiently profitable not to justify maintenance of market exclusivity. JZP-416 has received orphan drug designation for the treatment of ALL from the EMA subject to certain conditions. Defibrotide has received orphan drug designation to treat and prevent VOD from the EMA and the Korean Ministry of Food and Drug Safety. The Commonwealth of Australia-Department of Health has granted defibrotide orphan drug designation for the treatment of VOD. In addition, the EMA also granted orphan drug designation to defibrotide for the prevention of GvHD, another potentially fatal complication of HSCT.

Post-Approval Regulation

After approval, certain changes to the approved product, such as adding new indications, making certain manufacturing changes, modifying a REMS or making certain additional labeling claims, are subject to further regulatory review and approval. Obtaining approval for a new indication generally requires that additional clinical studies be conducted.

Often, even after a drug or biologic has been approved by the FDA for sale, the FDA may require that certain post-approval requirements be satisfied, including the conduct of additional clinical studies and trials. If such post-approval conditions are not satisfied, the FDA may impose civil money penalties, declare the product misbranded or prohibit the introduction of the drug in interstate commerce. Holders of an approved NDA or BLA are required to: report certain adverse reactions to the FDA; comply with certain requirements concerning advertising and promotional labeling for their products; submit drug safety or adverse event reports; and continue to have quality control and manufacturing procedures conform to cGMP after approval. For example, the FDA's approval of the BLA for Erwinaze includes a number of post-marketing commitments related to the manufacture of Erwinaze by us and the PHE.

Similarly, outside of the United States, we are subject to a variety of post-authorization regulations, including with respect to clinical studies, product manufacturing, advertising and promotion, distribution, and safety reporting. For example, the marketing authorization in the EU for Defitelio was granted under exceptional circumstances and requires us to comply with a number of post-marketing obligations, including obligations relating to the manufacturing of the drug substance and finished product, the submission of data concerning patients treated with the product collected through a third-party patient registry and the establishment of a multi-center, multinational and prospective observational patient registry.

We monitor adverse events resulting from the use of our commercial products, as do the regulatory authorities, and we file periodic reports with the authorities concerning adverse events. The FDA also periodically inspects the sponsor's records related to safety reporting. Following such inspections, the FDA may issue notices on Form FDA 483 and warning letters that could cause us to modify certain activities. A Form FDA 483 notice, if issued at the conclusion of an FDA inspection, can list conditions the FDA investigators believe may have violated relevant FDA regulations or guidance. Failure to adequately and

promptly correct the observation(s) can result in further regulatory enforcement action. For example, in April 2014, we received a Form FDA 483 at the conclusion of a pharmacovigilance inspection conducted by the FDA. The Form FDA 483 included observations relating to certain aspects of our adverse drug experience, or ADE, reporting system for all of our products, including Xyrem. We responded to the Form FDA 483 with a description of the corrective actions and improvements we had implemented before or shortly following the inspection and additional improvements that we planned to implement, and have now implemented, to address the observations in the Form FDA 483. In August 2014, the FDA issued an Establishment Inspection Report to us, which indicates that the inspection is closed.

The authorities review these events and reports, and if they determine that any events and/or reports indicate a trend or signal, they can require a change in a product label, restrict sales and marketing and/or require or conduct other actions, potentially including withdrawal or suspension of the product from the market. From time to time, the FDA issues drug safety communications on its adverse event reporting system based on its review of reported adverse events. In December 2012, the FDA issued a drug safety communication reminding physicians and patients that the use of Xyrem with alcohol or central nervous system depressants can impair consciousness and lead to severe breathing problems. At that time, we agreed with the FDA on a change to our label that included a new contraindication for the use of alcohol with Xyrem. See also the risk factor in Part 1, Item 1A of this Annual Report on Form 10-K entitled "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem.*"

The holder of an EU marketing authorization for a medicinal product must also comply with the EU's new pharmacovigilance legislation which entails many new and revised requirements for conducting pharmacovigilance, or the assessment and monitoring of the safety of medicinal products. This new legislation enhanced the authority of the EMA and the competent authorities of the EU member states to require companies to conduct additional post-approval clinical efficacy and safety studies and increased the burden on companies with respect to additional monitoring, adverse event management and reporting. As part of the legislation and its related regulations and guidelines, marketing authorization holders may be required to conduct a labor intensive collection of data regarding the risks and benefits of marketed products and may be required to engage in ongoing assessments of those risks and benefits, including the possible requirement to conduct additional clinical studies, which may be time consuming and expensive and could impact profitability. The EMA reviews periodic safety update reports submitted by marketing authorization holders. If the EMA has concerns that the risk benefit profile of a product has varied, it can adopt an opinion advising that the existing marketing authorization for the product be varied and requiring the marketing authorization holder to conduct post-authorization safety studies. The opinion is then submitted for approval by the EC. Non-compliance with such obligations can lead to the variation, suspension or withdrawal of marketing authorization or imposition of financial penalties or other enforcement measures.

The manufacturing process for pharmaceutical products is highly regulated and regulators may shut down manufacturing facilities that they believe do not comply with regulations. We and our third party manufacturers are subject to cGMP, which are extensive regulations governing manufacturing processes, stability testing, record keeping and quality standards as defined by the FDA, the EMA, the competent authorities of EU member states and other regulatory authorities. The FDA also periodically inspects the sponsor's records related to manufacturing facilities, which effort includes assessment of compliance with cGMP. Following such inspections, the FDA may also issue notices on Form FDA 483 and warning letters. For example, the FDA inspected the PHE facility where Erwinaze is manufactured in January 2015 and issued a Form FDA 483 with observations relating to the manufacturing process. We and our third party manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. In addition to Form FDA 483 notices and warning letters, failure to comply with the statutory and regulatory requirements may result in suspension of manufacturing, product seizure, withdrawal of the product from the market, criminal penalties, and withdrawal of approved products, among other enforcement remedies. Marketing authorization holders may also be subject to civil, criminal or administrative sanctions in case of non-compliance with the EU or EU member states' requirements applicable to the manufacturing and marketing of medicinal products.

Irrespective of the different marketing authorization procedures, various additional requirements apply to the manufacturing and placing on the EU market of medicinal products. The manufacturing of medicinal products in the EU requires a manufacturing authorization, and the manufacturing authorization holder must comply with various requirements set out in the applicable EU laws, regulations and guidance. These requirements include compliance with EU equivalent cGMP standards when manufacturing medicinal products and active pharmaceutical ingredients, including the manufacture of active pharmaceutical ingredients outside of the EU with the intention to import the active pharmaceutical ingredients into the EU. Similarly, the distribution of medicinal products into and within the EU is subject to compliance with the applicable EU laws, regulations and guidelines, including the requirement to hold appropriate authorizations for distribution granted by the competent authorities of the EU member states.

United States Healthcare Reform

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, together the Healthcare Reform Act, is a sweeping measure intended to expand healthcare coverage within the United States, primarily through the imposition of health insurance mandates on employers and individuals and expansion of the Medicaid program. This law substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. The Healthcare Reform Act contains a number of provisions that may impact our business and operations, in some cases in ways we cannot currently predict. Changes that may affect our business include those governing enrollment in federal healthcare programs, reimbursement changes, benefits for patients within a coverage gap in the Medicare Part D prescription drug program (commonly known as the "donut hole"), rules regarding prescription drug benefits under the health insurance exchanges, changes to the Medicare Drug Rebate program, expansion of the Public Health Service's 340B drug pricing discount program, or 340B program, fraud and abuse and enforcement. These changes impact existing government healthcare programs and are resulting in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program. Details of the changes to the Medicaid Drug Rebate program and the 340B program are discussed under "Business—Pharmaceutical Pricing and Reimbursement" in Part I, Item 1 of this Annual Report on Form 10-K.

Some states have elected not to expand their Medicaid programs by raising the income limit to 133% of the federal poverty level, as is permitted under the Healthcare Reform Act. For each state that does not choose to expand its Medicaid program, there may be fewer insured patients overall, which could impact our sales, business and financial condition. Where Medicaid patients receive insurance coverage under any of the new options made available through the Healthcare Reform Act, the possibility exists that manufacturers may be required to pay Medicaid rebates on drugs used under these circumstances, a decision that could impact manufacturer revenues. In addition, the federal government has also announced delays in the implementation of key provisions of the Healthcare Reform Act, including the employer mandate. The implications of these delays for our sales, business and financial condition, if any, are not yet clear.

Moreover, legislative changes to the Healthcare Reform Act remain possible. We expect that the Healthcare Reform Act, as currently enacted or as it may be amended in the future, and other healthcare reform measures that may be adopted in the future, could have a material adverse effect on our industry generally and on our ability to maintain or increase sales of our existing products or to successfully commercialize our product candidates, if approved.

Other Regulatory Requirements

We are also subject to regulation by other regional, national, state and local agencies, including the DEA, the U.S. Department of Justice, or DOJ, the Federal Trade Commission, or FTC, the U.S. Department of Commerce, or DOC, the Office of Inspector General, or OIG, of the U.S. Department of Health and Human Services, or HHS, and other regulatory bodies. In addition to the FDCA, other statutes and regulations govern to varying degrees the research, development, manufacturing and commercial activities relating to prescription pharmaceutical products, including preclinical testing, approval, production, labeling, sale, distribution, import, export, post-market surveillance, advertising, dissemination of information, promotion, marketing, and pricing to government purchasers and government healthcare programs. Our partners, including our suppliers, manufacturers and distributors and the central pharmacy for Xyrem, are subject to many of the same requirements.

Controlled Substance Regulations

The DEA imposes various quota, registration, recordkeeping and reporting requirements, labeling and packaging requirements, importing, exporting, security controls and a restriction on prescription refills on certain pharmaceutical products under the CSA. The states also impose similar requirements for handling controlled substances. A principal factor in determining the particular requirements, if any, applicable to a product is the actual or potential abuse profile. Sodium oxybate, in the form of an active pharmaceutical ingredient, is regulated by the DEA as a Schedule I controlled substance, a category reserved for products believed to present the highest risk of substance abuse and with no approved medicinal use. When contained in Xyrem, sodium oxybate is regulated as a Schedule III controlled substance.

The DEA limits the quantity of certain Schedule I controlled substances that may be produced in the United States in any given calendar year through a quota system. Our supplier of sodium oxybate, as well as our finished product manufacturer, must each obtain separate DEA quotas in order to supply us with sodium oxybate and Xyrem. Since the DEA typically grants quotas on an annual basis, our sodium oxybate supplier and Xyrem manufacturer are required to request and justify allocation of sufficient annual DEA quotas as well as additional DEA quotas if our commercial or clinical requirements exceed the allocated quotas throughout the year. In the past, we have had to engage in lengthy efforts to obtain the needed quotas after the original annual quotas had first been allocated. For 2015, both our active pharmaceutical ingredient supplier and finished product manufacturer have been allocated most, but not all, of their respective requested quotas. If, in the future, we and our supplier and manufacturer cannot obtain the quotas that are needed on a timely basis, or at all, our business, financial condition, results of operations and growth prospects could be materially and adversely affected.

As a Schedule III drug, Xyrem is also subject to DEA and state regulations relating to manufacturing, storage, distribution and physician prescription procedures, including limitations on prescription refills.

The third parties who perform our clinical and commercial manufacturing, distribution, dispensing and clinical studies for Xyrem are required to maintain necessary DEA registrations and state licenses. The DEA periodically inspects facilities for compliance with its rules and regulations. Failure to comply with current and future regulations of the DEA or relevant state authorities could lead to a variety of sanctions, including revocation or denial of renewal of DEA registrations, fines, injunctions, or civil or criminal penalties, and could have an adverse effect on our business and financial condition.

The United States and the EU member states are parties to the Convention on Psychotropic Substances (1971), or the 1971 Convention. In October 2012, the World Health Organization, or the WHO, sent a recommendation to the United Nations Commission on Narcotic Drugs, or the CND, to reschedule gamma-hydroxybutyrate, or GHB, under the 1971 Convention from its current Schedule IV status to Schedule II status. In March 2013, the CND voted to reschedule GHB from Schedule IV to Schedule II under the 1971 Convention. While the DEA imposes its own scheduling requirements in the United States under the CSA, the United States is obligated as a signatory to the 1971 Convention to ensure that drug scheduling in the United States is consistent with its obligations under the international treaties. Because sodium oxybate, the active pharmaceutical ingredient in Xyrem, is a derivative of GHB, the international rescheduling of GHB means that Xyrem and/or sodium oxybate may be subject to more restrictive registration, recordkeeping, reporting, importing, exporting and other requirements in the EU and certain other countries than the restrictions currently in place. In the United States, under DEA regulations, the Xyrem finished product is currently classified as a Schedule III controlled substance, with sodium oxybate, classified as a Schedule I controlled substance. Although the HHS has taken the position in the past that the United States would not be required to alter the domestic control of GHB should it be rescheduled to Schedule II under the 1971 Convention, we cannot guarantee that international rescheduling of GHB from Schedule IV to Schedule II will not impact restrictions on Xyrem in the United States. Failure by us or any of our partners, including suppliers, manufacturers and distributors, to comply with such requirements could result in, among other things, additional operating costs to us, delays in shipments outside or into the United States and adverse regulatory actions.

Sales and Marketing Regulations

We are also subject to various U.S. federal and state laws restricting certain marketing practices in the pharmaceutical industry, including anti-kickback laws and false claims laws. The U.S. federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. Liability under the federal anti-kickback statute may be established without a person or entity having actual knowledge of the statute or specific intent to violate it. Violations of the federal anti-kickback statute may be punished by civil and criminal fines, imprisonment, and/or exclusion from participation in federal healthcare programs. The U.S. federal False Claims Act, or the False Claims Act, prohibits, among other things, any person from knowingly presenting, or causing to be presented, a false claim for payment of federal funds, or knowingly making, or causing to be made, a false statement to get a false claim paid. Violations of the False Claims Act may be punished by significant financial penalties. In addition, the Physician Payment Sunshine provisions of the Healthcare Reform Act require extensive tracking of payments and transfers of value to physicians and teaching hospitals and public reporting of the data collected.

The majority of states also have statutes or regulations similar to the federal anti-kickback law and the False Claims Act, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. A number of states now require pharmaceutical companies to report expenses relating to the marketing and promotion of pharmaceutical products and to report gifts and payments to individual physicians in the states. Other states restrict when pharmaceutical companies may provide meals to prescribers or engage in other marketing related activities. Some states require the posting of information relating to clinical studies and their outcomes. In addition, California, Connecticut, Massachusetts and Nevada require pharmaceutical companies to implement compliance programs or marketing codes of conduct. Other states have considered similar proposals in recent years and may adopt them in the future. Non-U.S. governments often have similar regulations which we are also subject to in those countries where we market and sell products.

The number and complexity of both U.S. federal and state laws continue to increase, and additional governmental resources are being added to enforce these laws and to prosecute companies and individuals who are believed to be violating them. See more discussions regarding these laws and regulations under the risk factor in Part 1, Item 1A of this Annual Report on Form 10-K entitled "*We are subject to significant ongoing regulatory obligations and oversight, which may result in significant additional expense and limit our ability to commercialize our products—Other Regulatory Authorities*."

The FDA, the competent authorities of the EU member states and other governmental authorities require advertising and promotional labeling to be truthful and not misleading, and products to be marketed only for their approved indications and in accordance with the provisions of the approved label. The FDA routinely provides its interpretations of that authority in informal communications and also in more formal communications such as untitled letters or warning letters, and although

such communications may not be considered final agency decisions, companies may decide not to contest the agency's interpretations so as to avoid disputes with the FDA, even if they believe the claims to be truthful, not misleading and otherwise lawful.

The FDA, the competent authorities of the EU member states and other governmental authorities also actively investigate allegations of off-label promotion activities in order to enforce regulations prohibiting these types of activities. A company that is found to have promoted an approved product for off-label uses may be subject to significant liability, including civil and administrative financial penalties and other remedies as well as criminal financial penalties and other sanctions. Even when a company is not determined to have engaged in off-label promotion, the allegation from government authorities or market participants that a company has engaged in such activities could have a significant impact on the company's sales, business and financial condition. The U.S. government has also required companies that have engaged in such activities to enter into complex corporate integrity agreements and/or non-prosecution agreements that impose significant reporting and other burdens on the affected companies. For example, a predecessor company to Jazz Pharmaceuticals, Inc. was investigated for off-label promotion of Xyrem, and, while Jazz Pharmaceuticals, Inc. was not prosecuted, as part of the settlement Jazz Pharmaceuticals, Inc. entered into a corporate integrity agreement with the OIG which extended through mid-2012. The investigation resulted in significant fines and penalties, which Jazz Pharmaceuticals, Inc. has paid, and the corporate integrity agreement required us to maintain a comprehensive compliance program. For all of our products, it is important that we maintain a comprehensive compliance program. Failure to maintain a comprehensive and effective compliance program, and to integrate the operations of acquired businesses into a combined comprehensive and effective compliance program on a timely basis, could subject us to a range of regulatory actions that could affect our ability to commercialize our products and could harm or prevent sales of the affected products, or could substantially increase the costs and expenses of commercializing and marketing our products.

In the EU, the advertising and promotion of our products are subject to EU member states' laws governing promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices. In addition, other legislation adopted by individual EU member states may apply to the advertising and promotion of medicinal products. These laws require that promotional materials and advertising in relation to medicinal products comply with the product's Summary of Product Characteristics, or SmPC, as approved by the competent authorities. The SmPC is the document that provides information to physicians concerning the safe and effective use of the medicinal product. It forms an intrinsic and integral part of the marketing authorization granted for the medicinal product. Promotion of a medicinal product that does not comply with the SmPC is considered to constitute off-label promotion. The off-label promotion of medicinal products is prohibited in the EU. The applicable laws at EU level and in the individual EU member states also prohibit the direct-to-consumer advertising of prescription-only medicinal products. Violations of the rules governing the promotion of medicinal products in the EU could be penalized by administrative measures, fines and imprisonment. These laws may further limit or restrict the advertising and promotion of our products to the general public and may also impose limitations on our promotional activities with health care professionals.

To help patients afford our products, we have various programs to assist them, including patient assistance programs, a Xyrem free product voucher program and co-pay coupon programs for certain products. These programs and related risks are discussed in greater detail under the risk factor in Part 1, Item 1A of this Annual Report on Form 10-K entitled "*Changes in healthcare law and implementing regulations, including those based on recently enacted legislation, as well as changes in healthcare policy, may impact our business in ways that we cannot currently predict and these changes could have a material adverse effect on our business and financial condition*."

Anti-Corruption Legislation

Our business activities outside of the United States are subject to the U.S. Foreign Corrupt Practices Act, or FCPA, and similar anti-bribery or anti-corruption laws, regulations, industry self-regulation codes of conduct and physicians' codes of professional conduct or rules of other countries in which we operate, including the U.K. Bribery Act of 2010, or the UK Bribery Act. The FCPA and similar anti-corruption laws generally prohibit the 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 an improper advantage, or obtain or retain business. Excepted from the FCPA are payments to facilitate or expedite routine government action and bona fide, reasonable reimbursement of expenses. 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 UK Bribery Act prohibits giving, offering, or promising bribes to any person, including non-UK government officials and private persons, as well as requesting, agreeing to receive, or accepting bribes from any person. In addition, under the UK Bribery Act, companies which carry on a business or part of a business in the UK may be held liable for bribes given, offered or promised to any person, including non-UK 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 UK 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, our dealings with these prescribers and purchasers may be subject to the FCPA. Recently the Securities and Exchange Commission, or SEC, and the DOJ have increased their FCPA enforcement activities with respect to pharmaceutical companies. In addition, under the Dodd-Frank Wall Street Reform and Consumer Protection Act, or Dodd-Frank 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.

Data Privacy and Protection

We are also subject to laws and regulations covering data privacy and the protection of health-related and other personal information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which may affect our business, including recently enacted laws in all jurisdictions where we operate. Numerous U.S. federal and state laws, including state security breach notification laws, state health information privacy laws and federal and state consumer protection laws, govern the collection, use and disclosure of personal information. In addition, we obtain patient health information from most healthcare providers who prescribe our products and research institutions we collaborate with, and they are subject to privacy and security requirements under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, or HIPAA. Although we are not directly subject to HIPAA other than with respect to providing certain employee benefits, we could potentially be subject to criminal penalties if we knowingly obtain or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

EU member states and other jurisdictions have adopted data protection laws and regulations, which impose significant compliance obligations. For example, the EU Data Protection Directive, as implemented into national laws by the EU member states, imposes strict obligations and restrictions on the ability to collect, analyze and transfer personal data, including health data from clinical trials and adverse event reporting. Furthermore, there is a development toward the public disclosure of clinical trial data in the EU which also adds to the complexity of processing health data from clinical trials. Such public disclosure obligations are provided in the new EU Clinical Trials Regulation, EMA disclosure initiatives and voluntary commitments by industry. Data protection authorities from the different EU member states may interpret the EU Data Protection Directive and national laws differently, which adds to the complexity of processing personal data in the EU, and guidance on implementation and compliance practices are often updated or otherwise revised. Failing to comply with these laws could lead to government enforcement actions and significant penalties against us, and adversely impact our operating results. The EU Data Protection Directive prohibits the transfer of personal data to countries outside of the European Economic Area, or EEA, that are not considered by the EC to provide an adequate level of data protection, including the United States. There are also similar data transfer restrictions in Switzerland. However, there are a number of legal mechanisms to allow for the transfer of personal data from the EEA and Switzerland to the United States, including, among others, a voluntary U.S. - EU Safe Harbor Framework, a voluntary U.S. - Switzerland Safe Harbor Framework and the EU's set of standard form contractual clauses for the transfer of personal data outside of the EEA. Our United States subsidiary, Jazz Pharmaceuticals, Inc., has certified compliance with the U.S. - EU Safe Harbor Framework and the U.S. - Switzerland Safe Harbor Framework through the DOC. A proposal for an EU Data Protection Regulation, intended to replace the current EU Data Protection Directive, is currently under consideration and, if adopted, could lead to additional and stricter requirements and penalties in the event of non-compliance.

Additional requirements and restrictions regarding, among other things, the export and importation of products, intellectual property rights, the environment, taxation and work safety apply in individual countries, and non-compliance with such requirements may result in civil, criminal or administrative sanctions.

Pharmaceutical Pricing and Reimbursement

Our ability to commercialize our products successfully, and to attract commercialization partners for our products, depends in significant part on the availability of adequate financial coverage and reimbursement from third party payors, including, in the United States, governmental payors such as the Medicare and Medicaid programs, managed care organizations, and private health insurers. Both Medicare and Medicaid are administered by the Centers for Medicare and Medicaid Services, or CMS. In 2012, the CMS issued proposed regulations to implement the changes to the Medicaid Drug Rebate program under the Healthcare Reform Act but has not yet issued final regulations. The CMS is currently scheduled to issue final regulations in April 2015.

Political, economic and regulatory influences are subjecting the healthcare industry in the United States to fundamental changes. There have been, and we expect there will continue to be, legislative and regulatory proposals to change the healthcare system in ways that could impact our ability to sell our products profitably. We expect to experience pricing pressure in the United States in connection with the sale of our products due to managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals. We anticipate that the U.S. Congress, state legislatures and the private sector will continue to consider and may adopt healthcare policies intended to curb rising healthcare costs. These cost containment measures include: controls on government-funded reimbursement for drugs; new or increased requirements to pay prescription drug rebates to government health care programs, controls on healthcare providers; challenges to the pricing of drugs or limits or prohibitions on reimbursement for specific products through other means; requirements to try less expensive products or generics before a more expensive branded product; changes in drug importation laws; expansion of use of managed care systems in which healthcare providers contract to provide comprehensive healthcare for a fixed cost per person; and public funding for cost effectiveness research, which may be used by government and private third party payors to make coverage and payment decisions. For example, much attention has been paid to legislation proposing federal rebates on Medicare Part D and Medicare Advantage utilization for drugs issued to certain groups of lower income beneficiaries and the desire to change the provisions that treat these dual-eligible patients differently from traditional Medicare patients. Any such changes could have a negative impact on revenues from sales of our products.

In addition, beginning April 1, 2013, Medicare payments for all items and services, including drugs and biologics, were reduced by 2% under the sequestration (i.e., automatic spending reductions) required by the Budget Control Act of 2011, as amended by the American Taxpayer Relief Act of 2012. The Bipartisan Budget Act of 2013 extended the 2% reduction to 2023, and the Protecting Access to Medicare Act of 2014 extended the 2% reduction, on average, to 2024. These cuts reduce reimbursement payments related to our products, which could potentially negatively impact our revenue.

Third party payors decide which drugs they will pay for and establish reimbursement and co-pay levels. Third party payors are increasingly challenging the prices charged for medical products and services and examining their cost effectiveness, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost effectiveness of our products. Even with studies, our products may be considered less safe, less effective or less cost-effective than other products, and third party payors may not provide coverage and reimbursement for our products or any of our product candidates that we commercialize, in whole or in part. The process for determining whether a payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Third-party payors may limit coverage to specific products on an approved list, or formulary, which might not include all of the approved products for a particular indication. For example, third party payors have started to require discounts and/or exclusivity arrangements with some drug manufacturers in exchange for including a specific product on their formularies. Any such requirements could have a negative impact on revenues from sales of our products.

Payors also are increasingly considering new metrics as the basis for reimbursement rates, such as average sales price, average manufacturer price and actual acquisition cost. The existing data for reimbursement based on these metrics is relatively limited, although certain states have begun to survey acquisition cost data for the purpose of setting Medicaid reimbursement rates and, since November 2013, CMS has been publishing final National Average Drug Acquisition Cost, or NADAC, data, which reflect retail community pharmacy invoice costs, on a weekly basis. Therefore, it may be difficult to project the impact of these evolving reimbursement mechanics on the willingness of payors to cover our products.

We participate in and have certain price reporting obligations to the Medicaid Drug Rebate program, several state Medicaid supplemental rebate programs and other governmental pricing programs, and we have obligations to report the average sales price for the Medicare program. Under the Medicaid Drug Rebate program, we are required to pay a rebate to each state Medicaid program for our covered outpatient drugs that are dispensed to Medicaid beneficiaries and paid for by a state Medicaid program as a condition of having federal funds being made available to the states for our drugs under Medicaid and Part B of the Medicare program. Those rebates are based on pricing data reported by us on a monthly and quarterly basis to the CMS. These data include the average manufacturer price and, in the case of innovator products, the best price for each drug which, in general, represents the lowest price available from the manufacturer to any entity in the United States in any pricing structure, calculated to include all sales and associated rebates, discounts and other price concessions. The status of price reporting submissions for two radiopharmaceutical products is discussed under the risk factor in Part 1, Item 1A of this Annual Report on Form 10-K entitled "*If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.*" In addition, a significant portion of our revenue from sales of Erwinaze is obtained through government payors, including Medicaid, and any failure to qualify for reimbursement for Erwinaze under those programs would have a material adverse effect on revenues from sales of Erwinaze.

Federal law also requires that a company that participates in the Medicaid rebate program report the average sales price information each quarter to CMS for certain categories of drugs that are paid under Part B of the Medicare program.

Manufacturers calculate the average sales price based on a statutorily defined formula and interpretations of the statute by CMS. CMS uses these submissions to determine payment rates for drugs under Medicare Part B for our products and the resulting Medicare payment rate, and could negatively impact our results of operations.

Federal law requires that any company that participates in the Medicaid rebate program also participate in the Public Health Service's 340B drug pricing discount program in order for federal funds to be available for the manufacturer's drugs under Medicaid and Medicare Part B. The 340B pricing program requires participating manufacturers to agree to charge statutorily-defined covered entities no more than the 340B "ceiling price" for the manufacturer's covered outpatient drugs. These 340B covered entities include a variety of community health clinics and other entities that receive health services grants from the Public Health Service, as well as hospitals that serve a disproportionate share of low-income patients. The 340B ceiling price is calculated using a statutory formula, which is based on the average manufacturer price and rebate amount for the covered outpatient drug as calculated under the Medicaid rebate program. Changes to the definition of average manufacturer price and the Medicaid rebate amount under the Healthcare Reform Act and CMS's issuance of final regulations implementing those changes also could affect our 340B ceiling price calculations and negatively impact our results of operations.

In order to be eligible to have our products paid for with federal funds under the Medicaid and Medicare Part B programs and purchased by certain federal agencies, we participate in the Department of Veterans Affairs, or VA, Federal Supply Schedule, or FSS, pricing program. Under this program, we are obligated to make our product available for procurement on an FSS contract and charge a price to four federal agencies - the VA, U.S. Department of Defense, or DoD, Public Health Service and Coast Guard - that is no higher than the statutory Federal Ceiling Price, or FCP. The FCP is based on the non-federal average manufacturer price, or Non-FAMP, which we calculate and report to the VA on a quarterly and annual basis. We also participate in the Tricare Retail Pharmacy program, under which we pay quarterly rebates on utilization of innovator products that are dispensed through the Tricare Retail Pharmacy network to Tricare beneficiaries. The rebates are calculated as the difference between the annual Non-FAMP and FCP.

Outside of the United States, political, economic and regulatory developments are also subjecting the healthcare industry to fundamental changes and challenges. Pressure by governments and other stakeholders on prices and reimbursement levels continue to exist. In various EU member states we expect to be subject to continuous cost-cutting measures, such as lower maximum prices, lower or lack of reimbursement coverage and incentives to use cheaper, usually generic, products as an alternative. Health Technology Assessment, or HTA, of medicinal products is becoming an increasingly common part of the pricing and reimbursement procedures in some EU member states. These EU member states include the United Kingdom, France, Germany and Sweden. The HTA process, which is governed by the national laws of these countries, is the procedure according to which the assessment of the public health impact, therapeutic impact and the economic and societal impact of use of a given medicinal product in the national healthcare systems of the individual country is conducted. HTA generally focuses on the clinical efficacy and effectiveness, safety, cost, and cost-effectiveness of individual medicinal products, as well as their potential implications for the healthcare system. Those elements of medicinal products are compared with other treatment options available on the market. The outcome of HTA regarding specific medicinal products will often influence the pricing and reimbursement status granted to these medicinal products by the competent authorities of individual EU member states. For example, France requires the evaluation of the medical benefits of a new product as well as the added clinical value of a new product in comparison with existing therapies, and we are evaluating the impact of this evaluation on our ability to obtain favorable pricing and reimbursement for Defitelio in France. If we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, including France, especially where a country's reimbursed price influences other countries, our growth prospects in Europe could be negatively affected.

In the EU, our products are marketed through various channels and within different legal frameworks. In certain EU member states, reimbursement for unauthorized products is provided through national named patient or compassionate use programs. Such reimbursement may no longer be available if authorization for named patient or compassionate use programs expire or are terminated. In other EU member states, authorization and reimbursement policies may also delay commercialization of our products, or may adversely affect our ability to sell our products on a profitable basis. After initial price and reimbursement approvals, reductions in prices and changes in reimbursement levels can be triggered by multiple factors, including reference pricing systems and publication of discounts by third party payors or authorities in other countries. In the EU, prices can be reduced further by parallel distribution and parallel trade, or arbitrage between low-priced and high-priced member states.

We are unable to predict what additional legislation, regulations or policies, if any, relating to the healthcare industry or third party coverage and reimbursement may be enacted in the future or what effect such legislation, regulations or policies would have on our business. Any cost containment measures, including those listed above, or other healthcare system reforms that are adopted, could have a material adverse effect on our ability to operate profitably in the EU.

Employees

As of February 18, 2015, we had approximately 870 employees worldwide. We consider our employee relations to be good.

Environment, Health and Safety

Our operations are subject to complex and increasingly stringent environmental, health and safety laws and regulations in the countries where we operate and, in particular, in Italy where we have, and in Ireland where we are building, manufacturing facilities. Environmental and health and safety authorities in the relevant jurisdictions administer laws, which implement EU directives and regulations governing, among other matters, the emission of pollutants into the air (including the workplace), the discharge of pollutants into bodies of water, the storage, use, handling and disposal of hazardous substances, the exposure of persons to hazardous substances, and the general health, safety and welfare of employees and members of the public. In certain cases, such laws, directives and regulations may impose strict liability for pollution of the environment and contamination resulting from spills, disposals or other releases of hazardous substances or waste and/or any migration of such hazardous substances or waste. Costs, damages and/or fines may result from the presence, investigation and remediation of such contamination at properties currently or formerly owned, leased or operated by us and/or off-site locations, including where we have arranged for the disposal of hazardous substances or waste. In addition, we may be subject to third party claims, including for natural resource damages, personal injury and property damage, in connection with such contamination.

For our facility in Italy, we have obtained certification under the UNI EN ISO 14001 Standard for our environmental management system and have an Eco-management and Audit Scheme (EMAS). Our environmental policy for our Italian facility is designed to comply with current EU laws and regulations on environmental protection, to provide for continuous improvement of our manufacturing performance, to protect our employees' health, to protect the safety of people working at the location and to respect the safety of people living close to our facility and in the surrounding community.

About Jazz Pharmaceuticals plc

Jazz Pharmaceuticals plc was originally formed under the laws of Ireland (registered number 399192) as a private limited liability company in March 2005 under the name Azur Pharma Limited, and was subsequently re-registered as a public limited company under the name Azur Pharma Public Limited Company, or Azur Pharma, in October 2011. On January 18, 2012, the business of Jazz Pharmaceuticals, Inc. and Azur Pharma were combined in a merger transaction, in connection with which Azur Pharma was re-named Jazz Pharmaceuticals plc and we became the parent company of and successor to Jazz Pharmaceuticals, Inc. We refer to this transaction as the Azur Merger.

Our predecessor, Jazz Pharmaceuticals, Inc., was originally incorporated in California in March 2003 and was reincorporated in Delaware in January 2004. In the Azur Merger, all outstanding shares of Jazz Pharmaceuticals, Inc.'s common stock were canceled and converted into the right to receive, on a one-for-one basis, our ordinary shares.

On June 12, 2012, we completed the acquisition of EUSA Pharma Inc., or EUSA Pharma, which we refer to as the EUSA Acquisition. In January 2014, we completed the Gentium Acquisition.

Available Information

We file or furnish pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or Exchange Act, as applicable, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports, proxy statements and other information electronically with the SEC. Further copies of these reports are located at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding our filings, at www.sec.gov.

The mailing address of our headquarters is Fourth Floor, One Burlington Road, Dublin 4, Ireland, and our telephone number at that location is 353-1-634-7800. Our website is www.jazzpharmaceuticals.com. Through a link entitled "SEC Filings" under the "Investors & Media" section of our website, we make copies of our periodic and current reports, proxy statements and other information available, free of charge, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. 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.

Item 1A. Risk Factors

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition or results of operations. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. Our business could be harmed by any of these risks. The trading price of our ordinary shares could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should also refer to the other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and accompanying notes.

Risks Relating to Xyrem and the Significant Impact of Xyrem Sales

Xyrem is our largest selling product, and our inability to maintain or increase sales of Xyrem would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Xyrem is our largest selling product and our financial results are significantly influenced by sales of Xyrem, which accounted for 67.0% of our net product sales for the year ended December 31, 2014 and 65.8% of our net product sales for the year ended December 31, 2013. Our future plans assume that sales of Xyrem will increase. While Xyrem product sales grew from 2012 to 2013 and from 2013 to 2014, we cannot assure you that we can maintain sales of Xyrem at or near current levels, or that Xyrem sales will continue to grow. We have periodically increased the price of Xyrem, most recently in February 2015, and we cannot assure you that price adjustments we have taken or may take in the future will not negatively affect Xyrem sales volumes.

In addition to other risks described herein, our ability to maintain or increase Xyrem product sales is subject to a number of risks and uncertainties, the most important of which are discussed below, including those related to:

- the potential introduction of a generic version of Xyrem or an alternative sodium oxybate product for treating cataplexy and/or EDS in narcolepsy;
- changed or increased regulatory restrictions, including changes to our risk management program and the terms of the final REMS documents for Xyrem, and the pressure to develop a single shared system REMS with potential generic competitors, or regulatory actions by the FDA, as discussed in more detail in the risk factors below;
- our manufacturing partners' ability to obtain sufficient quota from the DEA to satisfy our needs for Xyrem;
- any supply, manufacturing or distribution problems arising with any of our manufacturing and distribution partners, all of whom are sole source providers for us;
- any increase in restrictive conditions for reimbursement required by, and the availability of reimbursement from, third party payors, as discussed in more detail in the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled *"Price approvals and reimbursement may not be available for our products, which could diminish our sales or affect our ability to sell our products profitably*;"
- changes in healthcare laws and policy, including changes in requirements for rebates, reimbursement and coverage by federal healthcare programs;
- continued acceptance of Xyrem as safe and effective by physicians and patients, even in the face of negative publicity that surfaces from time to time; and
- changes to our label, including new safety warnings or changes to our boxed warning, that further restrict how we market and sell Xyrem.

These and the other risks described below related to Xyrem product sales and protection of our proprietary rights could have a material adverse effect on our ability to maintain or increase sales of Xyrem.

If sales of Xyrem were to decline significantly, we might need to reduce our operating expenses or to seek to raise additional funds, which would have a material adverse effect on our business, financial condition, results of operations and growth prospects, or we might not be able to acquire, in-license or develop new products in the future to grow our business.

If generic versions of Xyrem or other sodium oxybate products that compete with Xyrem are approved and launched, sales of Xyrem would be adversely affected.

Although Xyrem is covered by patents covering its manufacture, formulation, distribution system and method of use, five third parties have filed ANDAs seeking FDA approval of generic versions of Xyrem, and additional third parties may also seek to introduce generic versions of Xyrem or other sodium oxybate products for treatment of cataplexy and/or EDS in narcolepsy. If one or more companies receive FDA approval of an ANDA for generic versions of Xyrem or an NDA for other sodium oxybate products, it is possible that such company or companies could introduce generic versions of Xyrem or other sodium oxybate products before our patents expire if they do not infringe our patents, if it is determined that our patents are invalid or

unenforceable, or if such company or companies decide, before applicable ongoing patent litigation is concluded, to launch competition to Xyrem at risk of potentially being held liable for damages for patent infringement.

Five companies have sent us notices of Paragraph IV Certification that each has filed an ANDA with the FDA seeking approval to market a generic version of Xyrem before the expiration of the Orange Book-listed patents relating to Xyrem. We have sued all five ANDA filers seeking to prevent them from introducing a generic version of Xyrem that would infringe our patents, but we cannot assure you that any of the lawsuits will prevent the introduction of a generic version of Xyrem for any particular length of time, or at all. Additional ANDAs could also be filed requesting approval to market generic versions of Xyrem. If any of these applications is approved, and a generic version of Xyrem is introduced, our sales of Xyrem would be adversely affected. Although no trial date has been set in any of the ANDA suits, we anticipate that trial on some of the patents in the Roxane case could occur as early as the third quarter of 2015. However, the actual timing of events may be significantly earlier or later than we currently anticipate, and we cannot predict the timing or outcome of events in this or the other ANDA litigation.

In addition, between June and October 2014, petitions seeking CBM post-grant patent review by the PTAB were filed by certain of the ANDA filers with respect to the validity of six of our patents covering the distribution system for Xyrem. In early 2015, the PTAB issued decisions denying institution of CBM review for all of these petitions. In January 2015, petitions for IPR were filed by certain of the ANDA filers with respect to the validity of six of our patents covering the distribution system for Xyrem. The PTAB has not yet determined whether to institute proceedings with respect to the petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings.

In accordance with the Hatch-Waxman Act, as a result of our having filed a timely lawsuit against Roxane, FDA approval of Roxane's ANDA was stayed until April 18, 2013, but that stay has expired. We do not know the status of Roxane's ANDA and cannot predict what actions the FDA or Roxane may take with respect to Roxane's ANDA. If Roxane's ANDA is approved by the FDA, Roxane may seek to launch a generic version of Xyrem prior to a District Court, or potential appellate court, decision in our ongoing patent litigation. While, in the event of such commercialization, Roxane would be liable to us for damages in the event we ultimately prevail in the patent litigation, we expect that the introduction of generic competition for Xyrem would have a material adverse effect on our business, financial condition, results of operations and growth prospects. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem.*"

Other companies could also develop products that are similar, but not identical, to Xyrem, such as an alternative formulation or an alternative formulation combined with a different delivery technology, and seek approval in the United States by referencing Xyrem and relying, to some degree, on the FDA's approval of Xyrem and related determinations of safety and efficacy. For example, in April 2014, we learned about the completion of a "first in man" clinical trial by a company using its proprietary technology for delivery of a sodium oxybate formulation to eliminate second nighttime dosing for narcolepsy patients. This company has stated its intent to submit an NDA, referencing Xyrem, to the FDA by the end of 2016. If this company is successful in developing a sodium oxybate formulation that could be effectively used with its delivery technology and is able to obtain FDA or other regulatory approval for its product to treat narcolepsy patients, we expect the launch of such a product would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

A generic manufacturer or manufacturer of an alternative sodium oxybate product would need to obtain quota from the DEA in order to manufacture both the active pharmaceutical ingredient and the finished product to compete with Xyrem. The DEA publishes an annual aggregate quota for the active pharmaceutical ingredient of Xyrem, and our supplier is required to request and justify allocation of sufficient annual manufacturing quota as well as additional manufacturing quota if needed throughout the year. Through 2011, our active pharmaceutical ingredient supplier obtained substantially all of the published annual aggregate quota for use in the manufacture of Xyrem. However, for the last few years, our supplier was allocated only a portion of the published annual aggregate quota for the active pharmaceutical ingredient. Consequently, a generic manufacturer or manufacturer of an alternative sodium oxybate product may be able to obtain a portion of the annual aggregate active pharmaceutical ingredient quota. In the past, we have also had to engage in lengthy efforts to obtain the needed quotas after the original annual quotas had first been allocated. For 2015, both our active pharmaceutical ingredient supplier and finished product manufacturer have been allocated most, but not all, of their respective requested quotas. If, in the future, we and our supplier and manufacturer cannot obtain the quotas that are needed on a timely basis, or at all, our business, financial condition, results of operations and growth prospects could be materially and adversely affected.

After any introduction of a generic competitor, a significant percentage of the prescriptions written for Xyrem may be filled with the generic version, resulting in a loss in sales of Xyrem. Generic competition often results in decreases in the prices at which branded products can be sold, particularly when there is more than one generic available in the marketplace. In

addition, legislation enacted in the United States allows for, and in a few instances in the absence of specific instructions from the prescribing physician mandates, the dispensing of generic products rather than branded products where a generic version is available. We expect that generic competition for Xyrem would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem.

As a condition of approval of Xyrem, the FDA mandated that we maintain the Xyrem Risk Management Program, which includes parts of the Xyrem Success Program and was required in conjunction with Xyrem's approval by the FDA to ensure the safe distribution of Xyrem and minimize the risk of misuse, abuse and diversion of sodium oxybate. The Xyrem Risk Management Program includes a number of elements including patient and physician education, a database of information so that we may track and report certain information, and the use of a single central pharmacy to distribute Xyrem. Elements of the Xyrem Risk Management Program, adopted in 2002 before the FDA had authority to require REMS, are deemed to be an approved REMS pursuant to the FDAAA. The Xyrem Risk Management Program, however, is not in the form that is now required for REMS documents. The FDAAA, which amends the FDCA, requires that deemed REMS and related documents be updated to comply with the current requirements for REMS documents. We are engaged in ongoing communications with respect to ours REMS documents for Xyrem, but have not reached agreement with the FDA on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Among other things, we disagree with the FDA's position in the late 2013 notice that, as part of the current REMS process, the Xyrem deemed REMS should be modified to enable the distribution of Xyrem through more than one pharmacy, or potentially through retail pharmacies and wholesalers, as well as with certain modifications proposed by the FDA that would, in the FDA's view, be sufficient to ensure that the REMS includes only those elements necessary to ensure that the benefits of Xyrem outweigh its risks, and that would, in the FDA's view, reduce the burden on the healthcare system. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014. We received the FDA's denial of our initial dispute resolution submission in the second quarter of 2014, and our dispute is currently subject to further supervisory review at the next administrative level of the FDA. We have received interim responses from the FDA, but the FDA has not yet communicated a decision on our further appeal to us. We expect to receive the FDA's decision in the first quarter of 2015. We cannot predict whether, or on what terms, we will reach agreement with the FDA on final REMS documents for Xyrem, the outcome or timing of the current dispute resolution procedure, whether we will initiate additional dispute resolution proceedings with the FDA or other legal proceedings prior to finalizing the REMS documents, or the outcome or timing of any such proceedings. We expect that final REMS documents for Xyrem will include modifications to, and/or requirements that are not currently implemented in, the Xyrem Risk Management Program. Any such modifications or additional requirements could potentially make it more difficult or expensive for us to distribute Xyrem, make it easier for future generic competitors, and/or negatively affect sales of Xyrem.

Section 505-1(i)(1) of the FDCA generally provides that (i) an ANDA with a referenced drug subject to the REMS requirements is required to have a REMS with the same elements as the referenced drug, such as a medication guide, a patient package insert and other ETASU, and (ii) the ANDA drug and the referenced drug shall use a single shared system to assure safe use. However, the FDA may waive this requirement for a single shared system and permit the ANDA holder to submit separate but comparable REMS documents if the FDA either determines that the burden of creating a single shared system outweighs its benefit, or if the ANDA applicant certifies that it has been unable to obtain a license to any aspects of the REMS for the referenced drug product that are covered by a patent or a trade secret. The FDCA provides that the FDA may seek to negotiate a license between the ANDA sponsor and the sponsor of the listed product before granting a waiver of the single shared system requirement. Accordingly, we expect to face pressure to license or share our Xyrem Risk Management Program, which is the subject of multiple issued patents, or elements of it, with generic competitors. We cannot predict the outcome or impact on our business of any future action that we may take with respect to licensing or sharing our REMS, or the FDA's response to a certification that a third party has been unable to obtain a license.

In the FDA's December 2012 response denying a Citizen Petition that we filed in July 2012, the FDA stated that when an NDA holder has a deemed REMS, the FDA directs the ANDA applicant(s) to work with the NDA holder to create a single shared system to implement the ETASU that will be approved as a final REMS. More broadly, the FDA has stated that it expects the negotiation of a single shared REMS between an NDA holder and ANDA applicants to proceed concurrently with the FDA's review of ANDA applications. The FDA has further stated that it typically monitors the progress of industry working groups attempting to develop shared REMS systems, and that it has acted to help ensure that sponsors were cooperating and that there were no obstacles to developing a single shared system. In January 2014, the FDA held an initial meeting with us and the then-current Xyrem ANDA applicants to facilitate the development of a single shared system REMS for Xyrem (sodium oxybate). The parties have had numerous interactions with respect to a single shared system REMS since

the initial meeting, and we expect the interactions to continue. We cannot predict the timing, outcome or impact on our business of discussions with the FDA and/or any ANDA applicant with respect to the potential creation of a single shared system REMS for Xyrem (sodium oxybate), including the impact of the ongoing process with respect to potential modifications to the Xyrem deemed REMS as discussed above, or the impact of any single shared system REMS on our ongoing litigation with each of the ANDA applicants. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

If we do not develop a single shared system REMS or license or share our REMS with a generic competitor within a time frame or on terms that the FDA considers acceptable, the FDA may assert that its waiver authority permits it to allow the generic competitor to market a generic drug with a REMS that does not include the same elements that are in our deemed REMS or, when Xyrem REMS documents are approved, with a separate REMS that includes different, but comparable, ETASU.

The FTC has been paying increasing attention to the use of REMS by companies selling branded products, in particular to whether REMS may be deliberately being used to reduce the risk of competition from generic drugs in a way that may be deemed to be anticompetitive. It is possible that the FTC or others could claim that our REMS or other practices are being used in an anticompetitive manner. The FDCA further states that a REMS shall not be used by an NDA holder to block or delay generic drugs from entering the market. Three of the ANDA applicants have asserted that our patents covering the distribution system for Xyrem should not have been listed in the Orange Book, and that the Xyrem REMS is blocking competition. We cannot predict the outcome of these claims in the ongoing litigation, or the impact of any similar claims that may be made in the future.

It is also possible that the FDA may take the position that a potential generic competitor does not need a REMS that has the same ETASU as our Xyrem deemed REMS in order to obtain approval of its ANDA. In the denial of our Citizen Petition described above, the FDA stated that if the FDA determines that an ANDA may be ready for approval before final approval of the REMS of a sponsor holding a deemed REMS, the FDA will direct the ANDA applicant to submit a proposed risk management plan with ETASU that are comparable to the ETASU that are approved for the referenced drug in order to have adequate risk management elements in place for the ANDA until the final REMS is approved. The legal basis for this position is uncertain. However, it is possible that the FDA may rely on this position as a basis to grant approval of an ANDA with a risk management plan rather than a final REMS. The 30-month stay of FDA approval of the ANDA filed by Roxane, the first ANDA filer, expired on April 18, 2013, and we have not yet received approval of final REMS documents for Xyrem. Accordingly, it is possible that, consistent with the position that the FDA articulated in its denial of our Citizen Petition, the FDA could approve an ANDA with a risk management plan that is separate from our Xyrem deemed REMS, rather than with a final REMS or a shared REMS for both the generic and Xyrem. We expect that the approval of an ANDA that results in the launch of a generic version of Xyrem would have a material adverse effect on our business, financial condition, results of operations and growth prospects. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.*"

Currently, our Xyrem deemed REMS requires that all of the Xyrem sold in the United States must be dispensed and shipped directly to patients through a single central pharmacy. The process under which patients receive Xyrem under our program is complex and includes multiple mandatory steps, such as the enrollment of the patient in the Xyrem Success Program and calls between the central pharmacy and the patient before each prescription of Xyrem is filled and sent to the patient. While we have an exclusive agreement with the central pharmacy for Xyrem, ESSDS, through June 2015, if the central pharmacy does not fulfill its contractual obligations to us, provides timely notice that it wants to terminate our agreement, refuses or fails to adequately serve patients, or fails to promptly and adequately address operational challenges, whether expected or unexpected, the fulfillment of Xyrem prescriptions and our sales would be adversely affected. If we change our central pharmacy, new contracts might be required with government and other insurers who pay for Xyrem, and the terms of any new contracts could be less favorable to us than current agreements. In addition, any new central pharmacy would need to be registered with the DEA and would also need to implement the particular processes, procedures and activities necessary to distribute Xyrem under our Xyrem Risk Management Program or any REMS that we are subject to in the future. Transitioning to a new pharmacy could result in product shortages, which would adversely affect sales of Xyrem in the United States, result in additional costs and expenses for us, and/or take a significant amount of time, any of which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

As required by the FDA and other regulatory agencies, the adverse event information that we collect for Xyrem is regularly reported to the FDA and could result in the FDA requiring changes to the Xyrem label or taking or requiring us to take other actions that could have an adverse effect on Xyrem's commercial success. Our Xyrem deemed REMS includes unique features that provide more extensive information about adverse events, including deaths, than is generally available for other products that are not subject to similar risk management programs. For example, in April 2011, we learned that deaths of

patients who had been prescribed Xyrem between 2003 and 2010 had not always been reported to us by ESSDS and therefore to the FDA by us, as required. We reported these cases to the FDA when we discovered them, investigated the related data from ESSDS as well as additional data we gathered, and submitted an analysis of the data to the FDA. In October 2011, we received a warning letter from the FDA regarding certain aspects of our adverse event reporting system for Xyrem and drug safety procedures related to the deaths that we discovered in April 2011 which had not been reported. We completed the actions and submitted the data required to address the observations in the 2011 warning letter and arising from a subsequent inspection. In August 2013, we received a close-out letter from the FDA.

In April 2014, we received a Form FDA 483 at the conclusion of a pharmacovigilance inspection conducted by the FDA. The Form FDA 483 included observations relating to certain aspects of our adverse drug experience, or ADE, reporting system for all of our products, including Xyrem. We responded to the Form FDA 483 with a description of the corrective actions and improvements we had implemented before or shortly following the inspection and additional improvements that we planned to implement, and have now implemented, to address the observations in the Form FDA 483. In August 2014, the FDA issued an Establishment Inspection Report to us, which indicates that the inspection is closed. Although we have implemented improvements to our ADE reporting system, there can be no assurance that the FDA or other regulatory agencies will not identify additional matters in future pharmacovigilance inspections or that we will be able to adequately address any matters identified by the FDA or other regulatory agencies in the future, and the failure to do so could have a material adverse effect on our business, financial condition and results of operations.

Any failure to demonstrate our substantial compliance with applicable regulatory requirements to the satisfaction of the FDA or any other regulatory authority could result in such regulatory authorities taking actions in the future, which could have a material adverse effect on Xyrem sales and therefore on our business, financial condition, results of operations and growth prospects. See also the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We are subject to significant ongoing regulatory obligations and oversight, which may result in significant additional expense and limit our ability to commercialize our products.*"

The FDA has required that Xyrem's label include a boxed warning regarding the risk of abuse. A boxed warning is the strongest type of warning that the FDA can require for a drug product and warns prescribers that the drug carries a significant risk of serious or even life-threatening adverse effects. A boxed warning also means, among other things, that the product cannot be advertised through reminder ads, or ads that mention the pharmaceutical brand name but not the indication or medical condition it treats. We cannot predict whether the FDA will require additional warnings, including boxed warnings, to be included on Xyrem's label. Moreover, Xyrem's FDA approval under the FDA's Subpart H regulations requires that all of the promotional materials for Xyrem be provided to the FDA for review at least 30 days prior to the intended time of first use. Warnings in the Xyrem label and any limitations on our ability to advertise and promote Xyrem may have affected, and could in the future negatively affect, Xyrem sales and therefore our business, financial condition, results of operations and growth prospects.

Risks Relating to Our Business

While Xyrem remains our largest product, our success also depends on our ability to effectively commercialize our other products. Our inability to do so could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In addition to Xyrem, we are commercializing a portfolio of products, including our other lead marketed products Erwinaze (called Erwinase in markets outside the United States) and Defitelio.

Erwinaze, a biologic product, is used in conjunction with chemotherapy to treat patients with ALL with hypersensitivity to *E. coli*-derived asparaginase. Erwinaze is exclusively licensed to us, and manufactured for us, by PHE, was approved by the FDA under a BLA and was launched in the U.S. market in November 2011. It is also being sold under marketing authorizations, named patient programs, temporary use authorizations or similar authorizations in multiple countries in Europe and elsewhere.

Erwinaze represents an important part of our strategy to grow sales of our existing products. However, our ability to successfully and sustainably maintain or grow sales of Erwinaze is subject to a number of challenges, including the limited population of patients with ALL and the incidence of hypersensitivity reactions to *E. coli*-derived asparaginase within that population, our ability to obtain clinical data on the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase, as well as our need to apply for and receive marketing authorizations, through the EU's, mutual recognition procedure or otherwise, in certain additional countries so we can launch promotional efforts in those countries. Another significant challenge to our ability to maintain the current sales level and to increase sales is our limited inventory of Erwinaze and our need to avoid supply interruptions of Erwinaze due to capacity constraints, production delays, quality challenges or other manufacturing difficulties. See the discussion regarding Erwinaze supply issues in the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We depend on single source suppliers and manufacturers for each of our products, product candidates and their active pharmaceutical ingredients. The loss of any of these suppliers or*

manufacturers, or delays or problems in the supply or manufacture of our products for commercial sale or our product candidates for use in our clinical trials, could materially and adversely affect our business, financial condition, results of operations and growth prospects."

We also face numerous other risks that may impact Erwinaze sales, including regulatory risks, the development of new asparaginase treatments that could reduce the rate of hypersensitivity in patients with ALL, the development of new treatment protocols for ALL that may not include asparaginase-containing regimens, difficulties with obtaining and maintaining favorable pricing and reimbursement arrangements and potential competition from future biosimilar products. In addition, if we fail to comply with our obligations under our agreement with PHE or lose exclusive rights to Erwinaze, or otherwise fail to maintain or grow sales of Erwinaze, our growth prospects could be negatively affected.

We made a significant investment in Defitelio/defibrotide in 2014, adding the product to our portfolio as a result of the Gentium Acquisition and then securing worldwide rights to the product by acquiring rights to defibrotide in the Americas in August 2014. Our ability to realize the anticipated benefits from this investment is subject to a number of risks and uncertainties, including our ability to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval of defibrotide in other countries, including the United States, so that we can commercialize the product in those countries. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We may not be able to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval of defibrotide in other countries, including the United States, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.*"

We also face other challenges that could impact the anticipated value of Defitelio/defibrotide, including the limited size of the population of patients who undergo HSCT therapy and develop severe VOD, the need to establish U.S. pricing and reimbursement support for the product in the event we are able to obtain U.S. marketing approval for defibrotide, the possibility that we may be required to conduct time-consuming and costly clinical trials as a condition of any U.S. marketing approval for the product, the lack of experience of U.S. physicians in diagnosing and treating VOD, and challenges to our ability to develop the product for indications in addition to the treatment of severe VOD. If sales of Defitelio/defibrotide do not reach the levels we expect, our anticipated revenue from the product would be negatively affected, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Failure to maintain or increase prescriptions and revenue from sales of our products, including Erwinaze and Defitelio, could have a material adverse effect on our business, financial condition, results of operations and growth prospects. We may choose to increase the price of our products, and we cannot assure you that price adjustments will not negatively affect our sales volumes. In addition, sales of Erwinaze may fluctuate significantly from quarter to quarter, depending on the number of patients receiving treatment, the availability of supply to meet the demand for the product, the dosing requirements of treated patients and other factors. The market price of our ordinary shares may decline if the sales of our products do not continue or grow at the rates anticipated by financial analysts or investors.

In addition, if we fail to obtain approvals for certain of our products in new indications or formulations, we will be unable to commercialize our products in new indications or formulations, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We may not be able to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval of defibrotide in other countries, including the United States, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We expect to continue to launch Defitelio in additional European countries on a rolling basis in 2015 and are in the process of making pricing and reimbursement submissions with respect to Defitelio, and discussing them with regulatory authorities, in those European countries where Defitelio is not yet launched, including in countries where pricing and reimbursement approvals are required for launch. We cannot predict the timing of Defitelio's launch in countries where we are engaged in pricing and reimbursement submissions. If we experience delays and unforeseen difficulties in obtaining favorable pricing and reimbursement approvals, planned launches in the affected countries would be delayed, which could negatively impact anticipated revenue from Defitelio. Similarly, the process for obtaining pricing and reimbursement approvals is complex and can vary from country-to-country. For example, France requires the evaluation of the medical benefits of a new product as well as the added clinical value of a new product in comparison with existing therapies, and we are evaluating the impact of this evaluation on our ability to obtain favorable pricing and reimbursement in France. If we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, including France, especially where a country's reimbursed price influences other countries, our growth prospects in Europe could be negatively affected.

We have developed estimates of anticipated pricing, which are based on our research and understanding of the product and target market. However, due to efforts to provide for containment of health care costs, one or more countries may not support our estimated level of governmental pricing and reimbursement for Defitelio, particularly in light of the budget crises faced by a number of countries in Europe, which would negatively impact anticipated revenue from Defitelio. Furthermore,

after initial price and reimbursement approvals, reductions in prices and changes in reimbursement levels can be triggered by multiple factors, including reference pricing systems and publication of discounts by third party payors or authorities in other countries. In the EU, prices can be reduced further by parallel distribution and parallel trade, or arbitrage between low-priced and high-priced countries. If any of these events occurs, our anticipated revenue from Defitelio would be negatively affected.

Due to the recent commercialization of Defitelio in Europe and the limited amount of historical sales data, our Defitelio sales will be difficult to predict from period to period, particularly since we may experience delays and unforeseen difficulties in obtaining favorable pricing and reimbursement approvals in additional countries. As a result, you should not rely on Defitelio sales results in any period as being indicative of future performance. In addition, if sales of Defitelio do not reach the levels we expect, our anticipated revenue from Defitelio would be negatively affected which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Defitelio was authorized under “exceptional circumstances” because it was not possible to obtain complete information about the product due to the rarity of the disease and because ethical considerations prevented conducting a study directly comparing Defitelio with best supportive care or a placebo. A marketing authorization granted under exceptional circumstances is subject to approval conditions and an annual reassessment of the risk-benefit balance by the EMA. As a result, if we fail to meet the approval condition for Defitelio, which requires that we set up a patient registry to investigate the long-term safety, health outcomes and patterns of utilization of Defitelio during normal use, or if it is determined that the balance of risks and benefits of using Defitelio changes materially, the EMA could vary, suspend or withdraw the marketing authorization for Defitelio. This could negatively impact our anticipated revenue from Defitelio and could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

At the time of the Gentium Acquisition, Gentium had licensed to Sigma-Tau the rights to defibrotide for the treatment and prevention of VOD in North America, Central America and South America. We acquired these rights from Sigma-Tau in August 2014. Defibrotide has been, and continues to be, made available as an investigational drug to patients diagnosed with VOD in the United States through an expanded access treatment protocol open under an IND. We are engaged in activities related to the potential approval of defibrotide in the United States. A prior NDA submission by Gentium seeking approval in the United States for defibrotide for the treatment of VOD was voluntarily withdrawn from consideration in 2011 in order to address issues raised by the FDA. We held pre-NDA meetings with the FDA relating to our plans for the submission of an NDA for defibrotide for the treatment of severe VOD. Based on these meetings and in light of the current status of our acquisition and remediation of key information to be included in the data package for the NDA, in December 2014, we initiated a rolling submission of an NDA to the FDA and expect to complete the submission in mid-2015. We do not expect to be required to complete any additional clinical trials prior to the completion of the NDA submission. However, we may be unable to acquire and remediate key information in the data package in a timely manner, which would delay or preclude the completion of our NDA submission. Furthermore, if we fail to acquire and remediate key information or if analysis of this data does not support an NDA submission, we may be required to complete additional clinical trials in order to obtain appropriate data for an NDA submission. Even if we are able to complete the NDA submission as planned, we may be required to conduct time-consuming and costly clinical trials as a condition of any U.S. marketing approval for the product. In any event, we may be unable to obtain regulatory approval of defibrotide in the United States in a timely manner, if at all.

We are also assessing the potential for approval of defibrotide in other countries and for development of defibrotide in indications in addition to the treatment of severe VOD. We cannot know when, if ever, defibrotide will be approved in any other country or under what circumstances, and what, if any, additional clinical or other development activities will be required in order to potentially obtain such regulatory approval and the cost associated with such required activities, if any. If we fail to obtain approval for defibrotide in other countries or for new indications, our anticipated revenue from defibrotide and our growth prospects would be negatively affected.

The Marketing Authorization Application, or MAA, Gentium initially filed with the EMA in 2011 sought approval for defibrotide for the treatment and prevention of VOD in adults and children. The approval Gentium received from the EC in October 2013 was for the narrower indication of treatment of severe VOD in adults and children undergoing HSCT therapy. The scope of any future approvals we receive may negatively affect defibrotide’s growth prospects.

We cannot predict whether historical revenues from named patient programs for our hematology/oncology products will continue or whether we will be able to continue to distribute those products on a named patient basis.

In certain European countries, reimbursement for products that have not yet received marketing authorization may be provided through national named patient programs. Erwinase and defibrotide are available on a named patient basis in many countries where they are not commercially available. Such reimbursement may cease to be available if authorization for a named patient program expires or is terminated. While we generate revenue from the distribution of these products through named patient programs, we cannot predict whether historical revenues from these programs will continue, whether we will be able to continue to distribute our products on a named patient basis in these countries, whether we will be able to commercialize our products in countries where the products have historically been available on a named patient basis, or

whether commercial revenues will exceed revenues historically generated from sales on a named patient basis. Any failure to maintain revenues from sales of Erwinase and/or defibrotide on a named patient basis and/or to generate revenues from commercial sales of these products exceeding historical sales on a named patient basis could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We depend on single source suppliers and manufacturers for each of our products, product candidates and their active pharmaceutical ingredients. The loss of any of these suppliers or manufacturers, or delays or problems in the supply or manufacture of our products for commercial sale or our product candidates for use in our clinical trials, could materially and adversely affect our business, financial condition, results of operations and growth prospects.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of process controls required to consistently produce the active pharmaceutical ingredient and the finished product in sufficient quantities while meeting detailed product specifications on a repeated basis. Manufacturers of pharmaceutical products often encounter difficulties in production, including difficulties with production costs and yields, process controls, quality control and quality assurance, including testing of stability, impurities and impurity levels and other product specifications by validated test methods, and compliance with strictly enforced U.S., state and non-U.S. regulations. If we or any of our third party suppliers or manufacturers encounter these or any other manufacturing, quality or compliance difficulties with respect to any of our products, particularly Xyrem and Erwinaze since we maintain limited inventories for these products, we may be unable to meet commercial demand for such products, which could adversely affect our business, financial condition, results of operations and growth prospects.

Other than the manufacturing plant in Italy where we produce some active pharmaceutical ingredients, including the defibrotide drug substance, we do not currently have our own manufacturing capability for our products or product candidates, or their active pharmaceutical ingredients, or the capability to package our products. The availability of our products for commercial sale depends upon our ability to procure the ingredients, raw materials, packaging materials and finished products we need from third parties. In part due to the limited market size for our products and product candidates, we have entered into supply and manufacturing agreements with suppliers and manufacturers, each of which is currently our single source for each of our marketed products and for the active pharmaceutical ingredients used in some of these products.

We maintain limited inventories of Xyrem and Erwinaze, as well as the ingredients or raw materials used to make them. Our limited inventory puts us at significant risk of not being able to meet product demand. The current manufacturing capacity for Erwinaze is nearly completely absorbed by demand for the product. As a consequence of constrained manufacturing capacity, we have had extremely limited ability to build an excess level of product inventory that could be used to absorb disruptions to supply resulting from quality or other issues. If we continue to be subject to capacity constraints or experience quality or other manufacturing challenges in the future, we may be unable to build a desired excess level of product inventory, and our ability to supply the market may be compromised.

Although we are taking steps to improve the Erwinaze manufacturing process, if our ongoing efforts are not successful, or we are subject to other challenges described elsewhere in this risk factor, we could experience additional Erwinaze supply interruptions in the future, which could have a material adverse effect on our sales of and revenues from Erwinaze and limit our potential maintenance and growth of the market for this product. If, for any reason, our suppliers and manufacturers, including any new suppliers, do not continue to supply us with our products or product candidates in a timely fashion and in compliance with applicable quality and regulatory requirements, or otherwise fail or refuse to comply with their obligations to us under our supply and manufacturing arrangements, we may not have adequate remedies for any breach, and their failure to supply us could result in a shortage of our products or product candidates, which could adversely affect our business, financial condition, results of operations and growth prospects.

In addition, if one of our suppliers or manufacturers fails or refuses to supply us for any reason, it would take a significant amount of time and expense to qualify a new supplier or manufacturer. The loss of one of our suppliers or manufacturers could require us to obtain regulatory clearance in the form of a “prior approval supplement” and to incur validation and other costs associated with the transfer of the active pharmaceutical ingredient or product manufacturing process. We believe that it could take up to two years, or longer in certain cases, to qualify a new supplier or manufacturer, and we may not be able to obtain active pharmaceutical ingredients or finished products from new suppliers or manufacturers on acceptable terms and at reasonable prices, or at all. Should we lose either an active pharmaceutical ingredient supplier or a finished product manufacturer, we may not, as applicable, have sufficient salable product to meet market demands or a sufficient quantity of a product candidate for use in clinical trials while we wait for FDA or similar international regulatory body approval of a new supplier or manufacturer.

Siegfried has been our sole supplier of sodium oxybate since 2012. We expect that Siegfried will continue to be our sole supplier of sodium oxybate for the foreseeable future, and we cannot assure you that Siegfried can or will continue to supply on a timely basis, or at all, sufficient quantities of active pharmaceutical ingredient to enable the manufacture of the quantities of Xyrem that we need.

Erwinaze is licensed to us, and manufactured for us, by PHE, which is our sole supplier for Erwinaze. The FDA's approval of the BLA for Erwinaze includes a number of post-marketing commitments related to the manufacture of Erwinaze. Inability to comply with regulatory requirements, including compliance with manufacturing-related post-marketing commitments that are part of the BLA approval, as well as other requirements monitored by the FDA, could adversely affect Erwinaze supply and could result in FDA approval being revoked or product recalls, either of which could have a material adverse effect on our sales of and revenues from Erwinaze and limit our potential future maintenance and growth of the market for this product. In addition, if the FDA or any non-U.S. regulatory authority mandates any changes to the specifications for Erwinaze, we may face challenges having product produced to meet such specifications, and PHE may increase its price to supply Erwinaze meeting such specifications, which may result in additional costs to us and may decrease any profit we would otherwise achieve with Erwinaze.

Although there are long-term plans to expand production capacity of Erwinaze, we cannot assure you that our supplier will be able to continue to supply our ongoing commercial needs for the product in a timely manner, or at all, especially if our demand for product increases. If production difficulties occur as described elsewhere in this risk factor and result in a disruption to supply or capacity constraints, we do not have the right to engage a backup supplier for Erwinaze except in very limited circumstances, such as following the termination of the agreement by us due to the uncured material breach or the cessation of manufacturing by our supplier. If we are required to engage a backup or alternative supplier, the transfer of technical expertise and manufacturing process to the backup or alternative supplier would be difficult, costly and time-consuming, might not be successful and would increase the likelihood of a delay or interruption in manufacturing or a shortage of supply of Erwinaze. While we continue to work with our supplier to evaluate potential steps to increase the supply of Erwinaze over the longer term to address worldwide demand, our ability to maintain or increase sales of Erwinaze may be limited by our ability to obtain a sufficient supply of the product. Failure to obtain a sufficient supply of Erwinaze could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We are our sole supplier of, and we believe that we are currently the sole worldwide producer of, the defibrotide drug compound. We manufacture the defibrotide drug compound in a single facility located in Villa Guardia, near Como, Italy. This facility could be damaged by fire, flood, earthquake, power loss, telecommunication and information system failure, terrorism or similar events. Any of these events could cause a delay or interruption in manufacturing and potentially a supply shortage of defibrotide, which could negatively impact our anticipated revenues. Patheon UK currently processes the defibrotide compound into its finished vial form, and is the sole provider of our commercial supply of the finished product in the EU and of our future clinical supply. If Patheon UK does not or is not able to perform these services for any reason, it may take time and resources to implement and execute the necessary technology transfer to another processor, and such delay could negatively impact our product launch and anticipated revenues and potentially cause us to breach contractual obligations with customers or to violate local laws requiring us to deliver the product to those in need.

We are also in the process of evaluating an appropriate provider to process defibrotide into finished product for the U.S. market in preparation for the potential approval of the product by the FDA. Part of the process to obtain FDA approval for defibrotide is to obtain certification from the FDA that the facilities we and our third party provider operate are in compliance with cGMP. The FDA may deny approval to manufacture defibrotide if the FDA determines that either our facility or our third party processor's facility does not meet applicable manufacturing and quality requirements. Following initial approval, if any, the FDA will continue to inspect and evaluate these facilities for ongoing compliance with applicable requirements. In addition, defibrotide is derived from porcine DNA. Our supplier of porcine materials may also be evaluated and inspected by the FDA in connection with our application for approval of defibrotide in the United States. If our supplier experiences safety or other issues that impact its ability to supply porcine materials to us as needed, we may not be able to find alternative suppliers in a timely fashion, which could negatively impact our supply of defibrotide.

In order to commence any of our planned clinical programs for JZP-110 or JZP-386, we need to have sufficient quantities of clinical product manufactured. While we believe that we will be able to obtain sufficient supplies of JZP-110 or JZP-386 before the commencement of our planned clinical trials, there can be no assurance that our suppliers will be able to produce sufficient clinical supplies of JZP-110 or JZP-386 in a timely manner. Any delay in receiving adequate supplies of JZP-110 or JZP-386 for our planned studies could negatively impact our development programs.

The DEA limits the quantity of certain Schedule I controlled substances that may be produced in the United States in any given calendar year through a quota system. Because the active pharmaceutical ingredient of Xyrem, sodium oxybate, is a Schedule I controlled substance, our supplier of sodium oxybate, as well as our finished product manufacturer, must each obtain separate DEA quotas in order to supply us with sodium oxybate and Xyrem. Since the DEA typically grants quotas on an annual basis, our sodium oxybate supplier and Xyrem manufacturer are required to request and justify allocation of sufficient annual DEA quotas as well as additional DEA quotas if our commercial or clinical requirements exceed the allocated quotas throughout the year. In the past, we have had to engage in lengthy efforts to obtain the needed quotas after the original annual quotas had first been allocated. For 2015, both our active pharmaceutical ingredient supplier and finished product manufacturer were allocated most, but not all, of their respective requested quotas. If, in the future, we and our supplier and

manufacturer cannot obtain the quotas that are needed on a timely basis, or at all, our business, financial condition, results of operations and growth prospects could be materially and adversely affected.

In addition, the FDA and similar international regulatory bodies must approve manufacturers of the active and inactive pharmaceutical ingredients and certain packaging materials used in our products. If there are delays in qualifying new manufacturers or facilities or a new manufacturer is unable to obtain a sufficient quota from the DEA, if required, or to otherwise meet FDA or similar international regulatory body's requirements for approval, there could be a shortage of the affected products for the marketplace or for use in clinical studies, or both, particularly since we do not have secondary sources for supply and manufacture of the active pharmaceutical ingredients for our products or backup manufacturers for our finished products.

Failure by our third party manufacturers to comply with regulatory requirements could adversely affect their ability to supply products or ingredients to us. All facilities and manufacturing techniques used for the manufacture of pharmaceutical products must be operated in conformity with the FDA's current cGMP requirements. DEA regulations also govern facilities where controlled substances such as Xyrem's active pharmaceutical ingredient are manufactured. Manufacturing facilities of our suppliers have been and are subject to periodic unannounced inspection by the FDA, the DEA and other regulatory authorities, including state authorities and similar authorities in non-U.S. jurisdictions. For example, the FDA inspected the PHE facility where Erwinaze is manufactured in January 2015 and issued a Form FDA 483 with observations relating to the manufacturing process. We and our third party manufacturers must continually expend time, money and effort in production, record-keeping and quality assurance and control to ensure that our products and product candidates meet applicable specifications and other requirements for product safety, efficacy and quality. Failure to comply with applicable legal and regulatory requirements subjects our suppliers to possible legal or regulatory action, including shutdown, which may adversely affect a supplier's ability to supply us with the ingredients or finished products we need.

Our ability to develop and deliver products in a timely and competitive manner depends on our third party suppliers and manufacturers being able to continue to meet our ongoing commercial needs. Any delay in supplying, or failure to supply, products by any of our suppliers could result in our inability to meet the commercial demand for our products, or our needs for use in clinical trials, and could adversely affect our business, financial condition, results of operations and growth prospects.

We have substantially expanded our international footprint and operations, and we may expand further in the future, but we do not yet have substantial historical experience in international markets and may not achieve the results that we or our shareholders expect.

We are headquartered in Dublin, Ireland and have multiple offices in the United States, the United Kingdom, Italy and other countries in Europe. Our headcount has grown from approximately 260 employees at the end of 2011 to approximately 870 in February 2015. This includes employees in fourteen countries in North America and Europe, a European commercial presence, a complex distribution network for products in Europe and additional territories, a manufacturing facility in Italy and a manufacturing facility under construction in Ireland. In addition, we may expand our international operations into other countries in the future, either organically or by acquisition. While we have acquired significant management and other personnel with substantial international experience, conducting our business in multiple countries subjects us to a variety of risks and complexities that may materially and adversely affect our business, results of operations and financial condition, including, among other things:

- the increased complexity and costs inherent in managing international operations;
- diverse regulatory, financial and legal requirements, and any future changes to such requirements, in one or more countries where we are located or do business;
- country-specific tax, labor and employment laws and regulations;
- applicable trade laws, tariffs, export quotas, custom duties or other trade restrictions and any changes to them;
- challenges inherent in efficiently managing employees in diverse geographies, including the need to adapt systems, policies, benefits and compliance programs to differing labor and other regulations, as well as maintaining positive interactions with unionized employees in one of our international locations;
- liabilities for activities of, or related to, our international operations, products or product candidates;
- changes in currency rates; and
- regulations relating to data security and the unauthorized use of, or access to, commercial and personal information.

Failure to effectively manage these risks could have a material adverse effect on our business.

As a result of our rapid growth, our business and corporate structure has become substantially more complex. There can be no assurance that we will effectively manage the increased complexity without experiencing operating inefficiencies or control deficiencies. Significant management time and effort is required to effectively manage the increased complexity of our

company, and our failure to successfully do so could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In recent years, the global economy has been impacted by the effects of an ongoing global financial crisis, including the European sovereign debt crisis, which has caused extreme disruption in the financial markets, including severely diminished liquidity and credit availability. In addition, we expect to continue to grow our product sales in Europe. Continuing worldwide economic instability, including challenges faced by the Eurozone and certain of the countries in Europe and the ongoing budgetary difficulties faced by a number of EU member states, including Greece and Spain, has led and may continue to lead to substantial delays in payment and payment partially with government bonds rather than cash for medicinal drug products, which could negatively impact our revenues and profitability.

The commercial success of our products depends upon their market acceptance by physicians, patients, third party payors and the medical community.

Physicians may not prescribe our products, in which case we would not generate the revenues we anticipate from product sales. Market acceptance of any of our products by physicians, patients, third party payors and the medical community depends on:

- the clinical indications for which a product is approved, including any restrictions placed upon the product in connection with its approval, such as a REMS, patient registry or labeling restrictions;
- the prevalence of the disease or condition for which the product is approved and the severity of side effects;
- acceptance by physicians and patients of each product as a safe and effective treatment;
- perceived advantages over alternative treatments;
- relative convenience and ease of administration;
- the cost of treatment in relation to alternative treatments, including generic products;
- the extent to which the product is approved for inclusion on formularies of hospitals and managed care organizations; and
- the conditions for reimbursement required by, and the availability of reimbursement from, third party payors.

Because of our dependence upon market acceptance of our products, any adverse publicity associated with harm to patients or other adverse events resulting from the use or misuse of our products or any similar products distributed by other companies, including generic versions of our products, could materially and adversely affect our business, financial condition, results of operations and growth prospects. For example, from time to time, there is negative publicity about illicit GHB and its effects, including with respect to illegal use, overdoses, serious injury and death. Because sodium oxybate, the active pharmaceutical ingredient in Xyrem, is a derivative of GHB, Xyrem sometimes also receives negative mention in publicity relating to GHB. Patients, physicians and regulators may therefore view Xyrem as the same as or similar to illicit GHB. In addition, there are regulators and some law enforcement agencies that oppose the prescription and use of Xyrem generally because of its connection to GHB. Xyrem's label includes information about adverse events from GHB. Similarly, negative publicity resulting from our receipt of a Form FDA 483 in April 2014 or other related regulatory actions could adversely affect sales of our products.

In addition, we have periodically increased the price of Xyrem and may do so again in the future. We also have made and may in the future make similar price increases on our other products. Price increases of our products and publicity regarding price increases of any products distributed by other pharmaceutical companies could negatively affect market acceptance of our products.

For additional discussion about payor acceptance, see the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*Price approvals and reimbursement may not be available for our products, which could diminish our sales or affect our ability to sell our products profitably.*"

We may not be able to successfully identify and acquire, in-license or develop additional products or product candidates to grow our business, and, even if we are able to do so, we may not be able to successfully manage the risks associated with integrating any products or product candidates we may acquire in the future into our product portfolio or we may otherwise fail to realize the anticipated benefits of these acquisitions.

We intend to grow our business over the long term by acquiring or in-licensing and developing additional products and product candidates that we believe have significant commercial potential. Future growth through acquisition or in-licensing will depend upon the availability of suitable products and product candidates for acquisition or in-licensing on acceptable prices, terms and conditions. Any growth through development will depend upon our identifying and obtaining product candidates, our ability to develop those product candidates and the availability of funding to complete the development of,

obtain regulatory approval for and commercialize these product candidates. Even if appropriate opportunities are available, we may not be able to successfully identify them, or we may not have the financial resources necessary to pursue them. Other companies, many of which may have substantially greater financial, marketing and sales resources, compete with us for these opportunities. In order to compete successfully to acquire attractive products or product candidates in the current business climate, we may have to pay higher prices for assets than may have been paid historically, which may make it more difficult for us to realize an adequate return on any acquisition.

We cannot assure you that we will be able to successfully manage these risks or other anticipated and unanticipated problems in connection with an acquisition or in-licensing. We may not be able to realize the anticipated benefits of any acquisition or in-licensing for a variety of reasons, including the possibility that a product candidate proves not to be safe or effective in later clinical trials, a product fails to reach its forecasted commercial potential or the integration of a product or product candidate gives rise to unforeseen difficulties and expenditures. Any failure in identifying and managing these risks and uncertainties effectively would have a material adverse effect on our business.

In addition, product and product candidate acquisitions create other uncertainties and risks, particularly when the acquisition takes the form of a merger or other business consolidation. Our business acquisitions have required, and any similar future transactions will also require, significant efforts and expenditures, including with respect to integrating the acquired business with our historical business. We may encounter unexpected difficulties, or incur unexpected costs, in connection with transition activities and integration efforts, which include:

- high acquisition costs;
- the need to incur substantial debt or engage in dilutive issuances of equity securities to pay for acquisitions;
- the potential disruption of our historical core business;
- the strain on, and need to continue to expand, our existing operational, technical, financial and administrative infrastructure;
- the difficulties in assimilating employees and corporate cultures;
- the failure to retain key managers and other personnel;
- the challenges in controlling additional costs and expenses in connection with and as a result of the acquisition;
- the need to write down assets or recognize impairment charges;
- the diversion of our management’s attention to integration of operations and corporate and administrative infrastructures; and
- any unanticipated liabilities for activities of or related to the acquired business or its operations, products or product candidates.

If any of these or other factors impair our ability to integrate any acquired business efficiently and successfully, we may be required to spend time or money on integration activities that otherwise would be spent on the development and expansion of our business. If we fail to integrate or otherwise manage an acquired business successfully and in a timely manner, resulting operating inefficiencies could increase costs and expenses more than we planned, could negatively impact the market price of our ordinary shares and could otherwise distract us from execution of our strategy. Failure to maintain effective financial controls and reporting systems and procedures could also impact our ability to produce timely and accurate financial statements.

Conducting clinical trials is costly and time-consuming, and the outcomes are uncertain. A failure to prove that our product candidates are safe and effective in clinical trials, or to generate data in clinical trials to support expansion of the therapeutic uses for our existing products, could materially and adversely affect our business, financial condition, results of operations and growth prospects.

Since 2014, we have made significant investments into expanding our product development pipeline and expect to continue to increase our research and development organization to pursue targeted development activities. Significant clinical, development and financial resources will be required to progress product candidates through clinical trials and the regulatory approval process to develop them into commercially viable products. We have a number of product candidates under development, including JZP-110 and JZP-386 in the sleep area and JZP-416 and Leukotac in the hematology/oncology area. We also intend to pursue clinical development of other product candidates that we may acquire or in-license in the future. Any failure or delay in completing clinical trials for our product candidates would prevent or delay the commercialization of our product candidates, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

As a condition to regulatory approval, each drug product candidate must undergo extensive and expensive preclinical studies and clinical trials to demonstrate to a statistically significant degree that the product candidate is safe and effective. The

results at any stage of the development process may lack the desired safety, efficacy or pharmacokinetic characteristics. Results of limited preclinical studies, including studies of our product candidates in animal models, may not predict the results of human clinical trials of those product candidates. Similarly, results from early clinical trials may not be predictive of results obtained in later and larger clinical trials, and product candidates in later clinical trials may fail to show the desired safety and efficacy despite having progressed successfully through initial clinical testing. In that case, the FDA or any equivalent non-U.S. regulatory agency may determine our data is not sufficiently compelling to warrant marketing approval and may require us to engage in additional clinical trials or provide further analysis which may be costly and time-consuming. A number of companies in the pharmaceutical industry, including us, have suffered significant setbacks in clinical trials, even in advanced clinical trials after showing positive results in preclinical studies or earlier clinical trials. If a product candidate fails at any stage of development, it will not receive regulatory approval, we will not be able to commercialize it, and we will not receive any return on our investment from that product candidate.

Our development pipeline projects may not be successful, and any adverse events or other information generated during the course of our studies related to existing products could result in action by the FDA or any non-U.S. regulatory agency, which may restrict our ability to sell, or sales of, currently marketed products, or such events or other information could otherwise have a material adverse effect on a related commercial product. Any failure or delay in completing clinical trials for line extensions or the generation of additional clinical data could materially and adversely affect the maintenance and growth of the markets for the related marketed products, which could adversely affect our business, financial condition, results of operations and overall growth prospects.

In addition to issues relating to the results generated in clinical trials, clinical trials can be delayed or halted for a variety of reasons, including:

- delays or failures in obtaining regulatory authorization to commence a trial because of safety concerns of regulators relating to our product candidates or similar product candidates of our competitors or failure to follow regulatory guidelines;
- delays or failures in obtaining clinical materials and manufacturing sufficient quantities of the product candidate for use in trials;
- delays or failures in reaching agreement on acceptable terms with prospective study sites;
- delays or failures in obtaining approval of our clinical trial protocol from an institutional review board, also known as Ethics Committees in Europe, to conduct a clinical trial at a prospective study site;
- delays or failures in recruiting patients to participate in a clinical trial;
- failure of our clinical trials and clinical investigators to be in compliance with the FDA and other regulatory agencies' good clinical practice guidelines;
- unforeseen safety issues, including negative results from ongoing preclinical studies and clinical trials and adverse events associated with product candidates;
- inability to monitor patients adequately during or after treatment;
- difficulty monitoring multiple study sites;
- failure of our third party clinical trial managers to satisfactorily perform their contractual duties, comply with regulations or meet expected deadlines; or
- insufficient funds to complete the trials.

For example, we initiated our first study of JZP-416 in children in a pivotal Phase 2 trial in North America in late 2014. In February 2015, we voluntarily suspended patient enrollment in this trial. Our decision to suspend enrollment and to discontinue treatment with JZP-416 for enrolled patients is based on the occurrence of hypersensitivity-like reactions following the administration of JZP-416 in some treated patients. We are in the process of collecting and evaluating the available data and plan to conduct additional research and analysis prior to determining whether to resume the study and determining next steps regarding the development of JZP-416. We cannot predict whether we will continue development of JZP-416 or resume enrollment in the pivotal Phase 2 clinical trial in a timely fashion, if at all. Under our license agreement with Alizé, under which we obtained rights to develop and commercialize JZP-416, we are subject to contractual obligations to meet certain development milestones within the applicable timeframes provided under the license agreement. Our ability to meet some of these milestones is uncertain, and depends upon a number of factors, including our ability to obtain clinical material, to recruit study centers with appropriate expertise and patient populations and to develop a clinical program meeting the development requirements of both the FDA and European regulatory authorities in a timely fashion. If our development activities are delayed for reasons that are not excused under our license agreement, we may have to pay Alizé for extensions to meet our licensing obligations or we may lose our rights to develop and commercialize JZP-416.

The FDA has granted Fast Track designation to the investigation of JZP-416 for ALL. Defibrotide has also been granted Fast Track designation by the FDA to treat severe VOD. The Fast Track program is designed to enable more frequent interactions with the FDA during drug development and to expedite new drug candidate review. Although we have obtained Fast Track designation from the FDA for JZP-416 and defibrotide, receipt of Fast Track designation may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures, and Fast Track designation may be withdrawn by the FDA at any time. In addition, Fast Track designation does not guarantee that we will be able to take advantage of the expedited review procedures and does not increase the likelihood that either JZP-416 or defibrotide will receive any regulatory approvals.

The clinical trial we initiated in the second quarter of 2014 to further evaluate the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase has not yet enrolled a patient, which has delayed our ability to generate additional clinical data necessary to support the expansion of Erwinaze's therapeutic uses and could materially and adversely affect the maintenance and growth of the market for Erwinaze.

We rely on third parties to conduct our clinical trials, and if they do not properly and successfully perform their legal and regulatory obligations, as well as their contractual obligations to us, we may not be able to obtain regulatory approvals for our product candidates.

We rely on contract research organizations and other third parties to assist us in designing, managing, monitoring and otherwise carrying out our clinical trials, including with respect to site selection, contract negotiation and data management. We do not control these third parties and, as a result, they may not treat our clinical studies as a high priority, or in the manner in which we would prefer, which could result in delays. We are responsible for confirming that each of our clinical trials is conducted in accordance with its general investigational plan and protocol, as well as the FDA's and non-U.S. regulatory agencies' requirements, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical trials to ensure that the data and results are credible and accurate and that the trial participants are adequately protected. The FDA and non-U.S. regulatory agencies enforce good clinical practices through periodic inspections of trial sponsors, principal investigators and trial sites. If we, contract research organizations or other third parties assisting us or our study sites fail to comply with applicable good clinical practices, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or its non-U.S. counterparts may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA or non-U.S. regulatory agencies will determine that any of our clinical trials comply with good clinical practices. In addition, our clinical trials must be conducted with product produced under the FDA's cGMP regulations and similar regulations outside of the United States. Our failure, or the failure of our product manufacturers, to comply with these regulations may require us to repeat or redesign clinical trials, which would delay the regulatory approval process.

If third parties do not successfully carry out their duties under their agreements with us, if the quality or accuracy of the data they obtain is compromised due to failure to adhere to our clinical protocols, including dosing requirements, or regulatory requirements, or if they otherwise fail to comply with clinical trial protocols or meet expected deadlines, our clinical trials may not meet regulatory requirements. If our clinical trials do not meet regulatory requirements or if these third parties need to be replaced, our clinical trials may be extended, delayed, suspended or terminated. If any of these events occur, we may not be able to obtain regulatory approval of our product candidates or succeed in our efforts to create approved line extensions for certain of our existing products or generate additional useful clinical data in support of these products.

We face substantial competition from other companies, including companies with greater resources, including larger sales organizations and more experience working with large and diverse product portfolios, than we have.

The commercial potential of our current products and any future products may be reduced or eliminated if our competitors develop or acquire and commercialize generic or branded products that are safer or more effective, have fewer side effects, are easier to administer or are less expensive than our products. Many of our competitors, particularly large pharmaceutical and life sciences companies, have substantially greater financial, operational and human resources than we do. They can spend more on, and have more expertise in, research and development, regulatory, manufacturing, distribution and sales activities. As a result, our competitors may obtain FDA or other regulatory approvals for their product candidates more rapidly than we may and may market their products more effectively than we do. Smaller or earlier stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies.

In addition, many of our competitors are able to deploy more personnel to market and sell their products than we do. We currently have a relatively small number of sales representatives compared with the number of sales representatives of most other pharmaceutical companies with marketed products. Each of our sales representatives is responsible for a territory of significant size. The continued growth of our current products and the launch of any future products may require expansion of our sales force and sales support organization internationally, and we may need to commit significant additional funds, management and other resources to the growth of our sales organization. We may not be able to achieve any necessary growth in a timely or cost-effective manner or realize a positive return on our investment, and we may not have the financial resources

to achieve the necessary growth in a timely manner or at all. We also have to compete with other pharmaceutical and life sciences companies to recruit, hire, train and retain sales and marketing personnel, and turnover in our sales force and marketing personnel could negatively affect sales of our products. If our specialty sales force and sales organization are not appropriately sized to adequately promote any current or potential future products, the commercial potential of our current products and any future products may be diminished.

We compete with a significant number of pharmaceutical and life sciences companies with extensive sales, marketing and promotional experience in hematology/oncology markets, and our failure to compete effectively in this area could negatively affect our sales of Erwinaze, Defitelio and other products.

We also face competition, and may in the future face additional competition, from manufacturers of generic drugs. Generic competition often results in decreases in the prices at which branded products can be sold, particularly when there is more than one generic available in the marketplace. In addition, legislation enacted in the United States allows for, and in a few instances in the absence of specific instructions from the prescribing physician mandates, the dispensing of generic products rather than branded products where a generic version is available. Other companies could also develop products that are similar, but not identical, to our marketed products, such as an alternative formulation of our product or an alternative formulation combined with a different delivery technology, and seek approval in the United States by referencing our products and relying, to some degree, on the FDA's finding that our products are safe and effective. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled *"If generic versions of Xyrem or other sodium oxybate products that compete with Xyrem are approved and launched, sales of Xyrem would be adversely affected."*

Our products and product candidates may also compete in the future with new products currently under development by others. Any products that we develop are likely to be in a highly competitive market, and many of our competitors may succeed in developing products that may render our products obsolete or noncompetitive.

If we fail to attract, retain and motivate key personnel or to retain the members of our executive management team, our operations and our future growth may be adversely affected.

Our success and our ability to grow depend in part on our continued ability to attract, retain and motivate highly qualified personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. We are highly dependent upon our executive management team and other critical personnel, all of whom work on many complex matters that are essential to our success. We do not carry "key person" insurance. The loss of services of one or more members of our executive management team or other key personnel could delay or prevent the successful completion of some of our vital activities. Any employee may terminate his or her employment at any time without notice or with only short notice and without cause or good reason. The resulting loss of institutional knowledge may negatively impact our operations and future growth.

In addition, to grow our company we will need additional personnel. Competition for qualified personnel in the pharmaceutical industry is very intense. If we are unable to attract, retain and motivate quality individuals, including in our research and development operations, which are continuing to expand, our business, financial condition, results of operations and growth prospects could be adversely affected.

We also depend on the unique abilities, industry experience and institutional knowledge of the members of our board of directors to efficiently set company strategy and effectively guide our executive management team. We cannot be certain that future board turnover will not negatively affect our business.

Significant disruptions of information technology systems or breaches of data security could adversely affect our business.

We are increasingly dependent on information technology systems and infrastructure, including mobile technologies, to operate our business. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personally identifiable information. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We have also outsourced elements of our information technology infrastructure, and as a result we manage a number of third party vendors who may or could have access to our confidential information. The size and complexity of our information technology systems, and those of third party vendors with whom we contract, and the volume of data we retain, make such systems potentially vulnerable to breakdown, malicious intrusion, security breaches and other cyber-attacks. From time to time, our systems have been subject to cyber-attacks. 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 liability under laws and regulations that protect personal data, resulting in increased costs or loss of revenue. If we are unable to prevent such security breaches or privacy violations or implement satisfactory remedial measures, our operations could be disrupted, and we may suffer loss of reputation, financial loss and other regulatory penalties because of lost or misappropriated

information, including sensitive patient data. In addition, these breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above. 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 implemented security measures to protect our data security and information technology systems, such measures may not prevent such events. Significant disruptions of our information technology systems or breaches of data security could adversely affect our business.

Risks Related to Our Intellectual Property

It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection.

Our commercial success depends in part on obtaining and maintaining patent protection of our products and product candidates and their use and the methods used to manufacture and distribute them, as well as successfully defending these patents against third party challenges, and successfully protecting our trade secrets. Our ability to protect our products and product candidates from unauthorized making, using, selling, offering to sell or importation by third parties depends on the extent to which we have rights under valid and enforceable patents or have trade secrets that cover these activities.

The patent position of pharmaceutical companies can be highly uncertain and involve complex legal, regulatory and factual questions. We own a portfolio of United States and non-U.S. patents and patent applications and have licensed rights to a number of issued patents and patent applications that cover or relate to our products and product candidates, including Xyrem and Defitelio. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. Even if we are able to obtain patents covering our products and product candidates, any patent may be challenged, invalidated, held unenforceable or circumvented, potentially including by FDA approval of an ANDA that avoids infringement of our intellectual property.

On September 16, 2011, the Leahy-Smith America Invents Act, or the America Invents Act, was signed into law. The final substantive provisions of the America Invents Act, including the first to file system, became effective on March 16, 2013. The America Invents Act includes a number of significant changes to U.S. patent law. These changes include provisions that affect the way patent applications are being filed, prosecuted and litigated. For example, the America Invents Act enacted proceedings involving post-issuance patent review procedures, such as IPR, CBM reviews and other post grant reviews. These proceedings are conducted before the PTAB. Each proceeding has different eligibility criteria and different patentability challenges that can be raised. The IPR process permits any person (except a party who has been litigating the patent for more than a year) to challenge the validity of the patent on the grounds that it was anticipated or made obvious by prior art. The America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Although Xyrem is covered by patents covering its formulation, distribution system and method of use, third parties are seeking to introduce generic versions of Xyrem, and additional third parties may also attempt to invalidate or design around the patents, or assert that they are invalid or otherwise unenforceable, and seek to introduce generic versions of Xyrem or other sodium oxybate products for treatment of cataplexy and/or EDS in narcolepsy. If one or more companies receive FDA approval of an ANDA for generic versions of Xyrem or an NDA for other sodium oxybate products, it is possible that such company or companies could introduce generic versions of Xyrem or other sodium oxybate products before our patents expire, if it is determined that our patents are invalid, unenforceable or non-infringed, or if such company or companies decide, before applicable ongoing patent litigation is concluded, to launch competition to Xyrem at risk of potentially being held liable for damages for patent infringement.

Five companies have sent us notices of Paragraph IV Certification that each has filed an ANDA with the FDA seeking approval to market a generic version of Xyrem before the expiration of the Orange Book-listed patents relating to Xyrem. We have sued all five ANDA filers seeking to prevent them from introducing a generic version of Xyrem that would infringe our patents, but we cannot assure you that any of the lawsuits will prevent the introduction of a generic version of Xyrem for any particular length of time, or at all. Additional ANDAs could also be filed requesting approval to market generic versions of Xyrem. If any of these applications is approved, and a generic version of Xyrem is introduced, our sales of Xyrem would be adversely affected. Although no trial date has been set in any of the ANDA suits, we anticipate that trial on some of the patents in the Roxane case could occur as early as the third quarter of 2015. However, the actual timing of events may be significantly earlier or later than we currently anticipate, and we cannot predict the timing or outcome of events in this or the other ANDA litigation.

In addition, certain of the ANDA filers have also sought to challenge the validity of our patents covering the distribution system for Xyrem in the PTAB. Between June and October 2014, petitions seeking CBM post-grant patent review by the PTAB were filed by certain of the ANDA filers with respect to the validity of six of our patents covering the distribution system for Xyrem. In early 2015, the PTAB issued decisions denying institution of CBM review for all of these petitions. In January 2015, petitions for IPR were filed by certain of the ANDA filers with respect to the validity of six of our patents covering the

distribution system for Xyrem. The PTAB has not yet determined whether to institute proceedings with respect to the petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings.

In April 2014, we became aware of the completion of a "first in man" clinical trial by a company using its proprietary technology for delivery of a sodium oxybate formulation to eliminate second nighttime dosing for narcolepsy patients. This company has stated its intent to submit an NDA referencing Xyrem to the FDA by the end of 2016. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*If generic versions of Xyrem or other sodium oxybate products that compete with Xyrem are approved and launched, sales of Xyrem would be adversely affected.*"

The existence of a patent will not necessarily prevent other companies from developing similar or therapeutically equivalent products or protect us from claims of third parties that our products infringe their issued patents, which may require licensing and the payment of significant fees or royalties. Competitors may successfully challenge our patents, produce similar products that do not infringe our patents, or manufacture products in countries where we have not applied for patent protection or that do not respect our patents. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents, our licensed patents or in third party patents.

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

- others may be able to make products that are similar to our product candidates but that are not covered by the claims of our patents, or for which we are not licensed under our license agreements;
- we or our licensors or partners might not have been the first to invent or file, as appropriate, subject matters covered by our issued patents or pending patent applications or the pending patent applications or issued patents of our licensors or partners;
- others may independently develop similar or alternative products without infringing our intellectual property rights;
- our pending patent applications may not result in issued patents;
- our issued patents and the issued patents of our licensors or partners may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges by third parties;
- our issued patents may not cover our competitors' products;
- our issued patents and the issued patents of our licensors or partners may be vulnerable to legal challenges as a result of changes in applicable law;
- we may not develop additional proprietary products that are patentable; or
- the patents of others may have an adverse effect on our business.

We also may rely on trade secrets and other unpatented proprietary information to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets and other unpatented proprietary information, our employees, consultants, advisors and partners may unintentionally or willfully disclose our proprietary information to competitors, and we may not have adequate remedies for such disclosures.

If our employees, consultants, advisors and partners develop inventions or processes independently, or jointly with us, that may be applicable to our products under development, disputes may arise about ownership or proprietary rights to those inventions and processes. Enforcing a claim that a third party illegally obtained and is using any of our inventions or trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside of the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

Certain of the products we sell have no patent protection and, as a result, potential competitors face fewer barriers in introducing competing products. We rely on trade secrets and other unpatented proprietary information to protect our commercial position with respect to such products, which we may be unable to do. In some instances, we also rely on regulatory exclusivity. For example, Erwinaze has no patent protection. In addition to protection using trade secrets, Erwinaze has orphan drug exclusivity in the United States for a seven-year period from its FDA approval, which precludes approval of another product with the same principal molecular structure for the same indication until November 2018. Erwinaze, as a biologic product approved under a BLA, is also subject to the BPCIA. Under the BPCIA, Erwinaze is expected to receive exclusivity that prevents approval of a biosimilar in the United States through late 2023. Because the BPCIA is a relatively new law, we anticipate that its impact on both reference product sponsors and biosimilar applicants will evolve over a period of

years. Its implementation likely will be shaped by a variety of factors, including FDA issuance of guidance documents, proposed regulations, and decisions in the course of considering specific applications. As a result, it is possible that a potential competing drug product might obtain FDA approval before the orphan drug and expected BCPIA exclusivity periods have expired, which would adversely affect sales of Erwinaze. In the EU, the regulatory data protection and thus regulatory exclusivity period for Erwinase has lapsed. This also means that any new marketing authorizations for Erwinase in other EU member states will not receive any regulatory data protection. If a biosimilar product to Erwinaze is approved in the United States as interchangeable to Erwinaze or in other countries where Erwinaze is sold, a significant percentage of the prescriptions that would have been written for Erwinaze may be filled with the biosimilar version, resulting in a loss in sales of Erwinaze, and there may be a decrease in the price at which Erwinaze can be sold. Competition from a biosimilar product to Erwinaze could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Similarly, although there are patent applications for JZP-416 pending in the United States and the product is covered by some patents outside of the United States, it is not yet covered by any U.S. patents. JZP-416 was granted orphan drug designation for the treatment of ALL by the EMA and by the FDA subject to certain conditions. JZP-416 is still in the early stage of clinical development and in February 2015, we voluntarily suspended enrollment in our first study of JZP-416 in children in a pivotal Phase 2 trial in North America. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*Conducting clinical trials is costly and time-consuming, and the outcomes are uncertain. A failure to prove that our product candidates are safe and effective in clinical trials, or to generate data in clinical trials to support expansion of the therapeutic uses for our existing products, could materially and adversely affect our business, financial condition, results of operations and growth prospects.*" There is no guarantee that we will continue development of JZP-416 or resume enrollment in the pivotal Phase 2 clinical trial or that JZP-416 will succeed in clinical trials, that we will be able to file marketing applications for it, that it will receive marketing approval, or that JZP-416 will meet the conditions for orphan drug exclusivity. If we continue development, but fail to obtain orphan drug exclusivity and/or exclusivity under the BCPIA, and if we also fail to successfully execute on other strategies to protect our intellectual property with respect to JZP-416, including protection by one or more issued patents, JZP-416 would be subject to competition, which could have a material adverse effect on our ability to recognize any return on our investment in the development of this product as well as on our future growth prospects.

Our research and development collaborators may have rights to publish data and other information to which we have rights. In addition, we sometimes engage individuals or entities to conduct research that may be relevant to our business. While the ability of these individuals or entities to publish or otherwise publicly disclose data and other information generated during the course of their research is subject to contractual limitations, these contractual provisions may be insufficient or inadequate to protect our trade secrets and may impair our patent rights. If we do not apply for patent protection prior to such publication, or if we cannot otherwise maintain the confidentiality of our innovations and other confidential information, then our ability to obtain patent protection or protect our proprietary information may be jeopardized. Moreover, a dispute may arise with our research and development collaborators over the ownership of rights to jointly developed intellectual property. Such disputes, if not successfully resolved, could lead to a loss of rights and possibly prevent us from pursuing certain new products or product candidates.

We have incurred and expect to continue to incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.

Our ability, and that of our partners, to commercialize any approved products will depend, in part, on our ability to obtain patents, enforce those patents and operate without infringing the proprietary rights of third parties. The patent positions of pharmaceutical companies can be highly uncertain and involve complex legal and factual questions. We have filed multiple U.S. patent applications and non-U.S. counterparts, and may file additional U.S. and non-U.S. patent applications. There can be no assurance that any issued patents we own or control will provide sufficient protection to conduct our business as presently conducted or as proposed to be conducted. Moreover, for a variety of reasons, including the existence of relevant prior research performed and the existence of conflicting patent applications submitted in the same manner or similar fields, there can be no assurance that any patents will issue from the patent applications owned by us, or that we will remain free from infringement claims by third parties.

If we choose to go to court to stop a third party from infringing our patents, our licensed patents or our partners' patents, that third party has the right to ask the court to rule that these patents are invalid and/or should not be enforced. Under the America Invents Act, a third party may also have the option to challenge the validity of certain patents with the PTAB, whether they are accused of infringing our patents or not, and certain hedge funds have announced their intention of challenging valuable pharmaceutical patents through the IPR process. These lawsuits and administrative proceedings are expensive and consume time and other resources, and we may not be successful in these proceedings or in stopping infringement. In addition, there is a risk that a court will decide that these patents are not valid or infringed, or that the PTAB will decide that certain patents are not valid, and that we do not have the right to stop a third party from using the patented subject matter.

For example, five companies have notified us that they have filed ANDAs with the FDA seeking FDA approval to market a generic version of Xyrem. We initiated lawsuits against each of these companies, and the litigation proceedings are ongoing. In addition, certain of the ANDA filers have sought to challenge the validity of our patents covering the distribution system for Xyrem by filing CBM post-grant patent review and/or IPR by the PTAB. The PTAB has issued decisions denying institution of CBM review for all of the CBM petitions and has not yet determined whether to institute proceedings with respect to the petitions for IPR. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection.*" We cannot assure you that our pending lawsuits, other lawsuits or proceedings we may file in the future, or our defense against any lawsuits or other proceeding that have been or will be brought against us will be successful in stopping the infringement of our patents, that any such litigation or other proceedings will be cost-effective, or that any of them will have a satisfactory result for us.

A third party may claim that we or our manufacturing or commercialization partners are using inventions covered by the third party's patent rights, or that we or such partners are infringing, misappropriating or otherwise violating other intellectual property rights, and may go to court to stop us from engaging in our normal operations and activities, including making or selling our products. Such lawsuits are costly and could affect our results of operations and divert the attention of management and development personnel. There is a risk that a court could decide that we or our partners are infringing, misappropriating or otherwise violating third party patent or other intellectual property rights, which could be very costly to us and have a material adverse effect on our business.

In the pharmaceutical and life sciences industry, like other industries, it is not always clear to industry participants, including us, which patents cover various types of products or methods. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid or unenforceable, which we may not be able to do.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many non-U.S. jurisdictions are typically not published until 18 months after their priority date, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for inventions covered by our or our licensors' issued patents or pending applications, or that we or our licensors were the first inventors. Our competitors may have filed, and may in the future file, patent applications covering subject matter similar to ours. Any such patent application may have priority over our or our licensors' patents or applications and could further require us to obtain rights to issued patents covering such subject matter. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the USPTO to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our U.S. patent position with respect to such inventions. Patent interferences are limited or unavailable for patent applications filed after March 16, 2013.

Some of our competitors may be able to sustain the costs of complex patent and other intellectual property litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

We own patents that cover, among other things, the formulation and method of use covering the administration for Xyrem. In July 2014, the USPTO issued us a new method of use patent relating to the safe and effective use of Xyrem by decreasing the dose of Xyrem when used concomitantly with divalproex sodium, which information was added to the Xyrem label in April 2014. We have listed this new patent in the Orange Book. While we believe the additional safety information is critical for the safe use of Xyrem and should be required to be included in the label for any proposed generic form of Xyrem, we do not know whether the FDA will require any proposed generic form of Xyrem to include this information in its product label or whether we will be successful in maintaining the validity of the applicable patent and protecting the patent from infringement.

We also own method of use patents and trade secrets that cover elements of the Xyrem deemed REMS, including patents that cover the use of a single central pharmacy to distribute Xyrem. We are engaged in ongoing communications with respect to ours REMS documents for Xyrem, but have not reached agreement with the FDA on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Among other things, we disagree with the FDA's position in the late 2013 notice that, as part of the current REMS process, the Xyrem deemed REMS should be modified to enable the distribution of Xyrem through more than one pharmacy, or potentially through retail pharmacies and wholesalers, as well as with certain modifications proposed by the FDA that would, in the FDA's view, be sufficient to ensure that the REMS includes only those elements necessary to ensure that the benefits of Xyrem outweigh its risks, and that would, in the FDA's view, reduce the burden on the healthcare system. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014. We received the FDA's

denial of our initial dispute resolution submission in the second quarter of 2014, and our dispute is currently subject to further supervisory review at the next administrative level of the FDA. We have received interim responses from the FDA, but the FDA has not yet communicated a decision on our further appeal to us. We expect to receive the FDA's decision in the first quarter of 2015. We cannot predict whether, or on what terms, we will reach agreement with the FDA on final REMS documents for Xyrem, the outcome or timing of the current dispute resolution procedure, whether we will initiate additional dispute resolution proceedings with the FDA or other legal proceedings prior to finalizing the REMS documents, or the outcome or timing of any such proceedings. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem.*"

We expect that final REMS documents for Xyrem will include modifications to, and/or requirements that are not currently implemented in, the Xyrem Risk Management Program. Any such modifications or additional requirements could potentially make it more difficult or expensive for us to distribute Xyrem, make it easier for future generic competitors, and/or negatively affect sales of Xyrem. In particular, depending on the extent to which certain provisions of our Xyrem deemed REMS which are currently protected by our method of use patents covering the distribution of Xyrem are changed, the ability of our existing patents to protect our Xyrem distribution system from generic competitors may be reduced. Certain claims of our patents may not provide as much protection in the context of a modified REMS structure. In addition, the extent of protection provided by our method of use patents covering the distribution of Xyrem depends on the nature of the distribution system that may be used by any generic competitor, including whether the distribution system is as restricted as the distribution system set forth in our current Xyrem deemed REMS. If a generic competitor is able to obtain ANDA approval for a generic version of Xyrem based on a risk management plan or REMS that does not fall within the scope of any of the claims of our distribution patents, those patents will not be a barrier to the generic version's entry into the market. We cannot be certain whether our existing distribution patents or patents that may be granted in the future will be construed to cover any generic REMS or risk management plan that might be approved by the FDA. The interpretation of intellectual property protections and the effect of these protections are extremely complex, and we cannot predict the impact of any of these matters on our business.

Risks Related to Our Industry

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

The manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, sale, distribution, recordkeeping, importing and exporting of our products and our research and development activities are subject to extensive regulation by the FDA, the EC and other regulatory authorities. Regulations differ from country to country. As a result of these regulations, product development, approval and commercialization processes are expensive and time-consuming. For example, we are not permitted to market a pharmaceutical product in the United States or in the EU member states until we receive approval from the FDA, the EC or the competent authorities of the EU member states, as applicable. An application for marketing approval must contain information demonstrating the quality, safety and efficacy of the pharmaceutical product, including data from preclinical and clinical trials, information pertaining to the preparation and manufacture of the active pharmaceutical ingredient, analytical methods, product formulation, details on the manufacture and stability of the finished pharmaceutical product and proposed product packaging and labeling. Submission of an application for marketing authorization does not assure approval for marketing in any jurisdiction, and we may encounter significant difficulties or costs in our efforts to obtain approval to market products. If we are unable to obtain regulatory approval of our product candidates, we will not be able to commercialize them and recoup our research and development costs. Any delay or failure in obtaining approval of a drug candidate, or receiving approval for narrower indications than sought, can have a negative impact on our financial performance.

If the FDA, the EC or the competent authorities of the EU member states determine that a REMS or the imposition of post-marketing obligations is necessary to ensure that the benefits of the drug outweigh the risks, we may be required to include a proposed REMS as part of an NDA or BLA or to propose post-marketing obligations to be included in the marketing authorization for our products in the EU. We may also be required to include a patient package insert or a medication guide to provide information to consumers about the product's risks and benefits, a plan for communication to healthcare providers, and restrictions on the product's distribution. For example, the FDA requires a REMS for Xyrem, discussed in detail under the risk factor "*The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem*" above, and other products that we sell are or may become subject to a REMS specific to our product or shared with other products in the same class of drug. We cannot predict the impact that any new REMS requirements applicable to any of our products would have on our business.

As another example, the marketing authorization in the EU for Defitelio requires us to comply with a number of post-marketing obligations, including obligations relating to the establishment of a patient registry to investigate the long-term safety, health outcomes and patterns of utilization of Defitelio during normal use. If we fail to meet the post-marketing obligations imposed as part of the marketing authorization for Defitelio or if it is determined that the balance of risks and benefits of using Defitelio changes materially, the EMA could vary, suspend or withdraw the marketing authorization for Defitelio.

Changes in healthcare law and implementing regulations, including those based on recently enacted legislation, as well as changes in healthcare policy, may impact our business in ways that we cannot currently predict and these changes could have a material adverse effect on our business and financial condition.

The Healthcare Reform Act is a sweeping measure intended to expand healthcare coverage within the United States, primarily through the imposition of health insurance mandates on employers and individuals and expansion of the Medicaid program. This law substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. The Healthcare Reform Act contains a number of provisions that are expected to impact our business and operations, in some cases in ways we cannot currently predict. Changes that may affect our business include those governing enrollment in federal healthcare programs, reimbursement changes, benefits for patients within a coverage gap in the Medicare Part D prescription drug program (commonly known as the "donut hole"), rules regarding prescription drug benefits under the health insurance exchanges, changes to the Medicare Drug Rebate program, expansion of the Public Health Service's 340B drug pricing discount program, fraud and abuse and enforcement. These changes will impact existing government healthcare programs and will result in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program.

Details of the changes to the Medicaid Drug Rebate program and the 340B program are are discussed under the risk factor "*If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.*"

Some states have elected not to expand their Medicaid programs by raising the income limit to 133% of the federal poverty level, as is permitted under the Healthcare Reform Act. For each state that does not choose to expand its Medicaid program, there may be fewer insured patients overall, which could impact our sales, business and financial condition. Where Medicaid patients receive insurance coverage under any of the new options made available through the Healthcare Reform Act, the possibility exists that manufacturers may be required to pay Medicaid rebates on drugs used under these circumstances, a decision that could impact manufacturer revenues. In addition, the federal government has also announced delays in the implementation of key provisions of the Healthcare Reform Act, including the employer mandate. The implications of these delays for our sales, business and financial condition, if any, are not yet clear.

Moreover, legislative changes to the Healthcare Reform Act remain possible. We expect that the Healthcare Reform Act, as currently enacted or as it may be amended in the future, and other healthcare reform measures that may be adopted in the future, could have a material adverse effect on our industry generally and on our ability to maintain or increase sales of our existing products or to successfully commercialize our product candidates, if approved.

In addition to the Healthcare Reform Act, there will continue to be proposals by legislators at both the federal and state levels, regulators and third party payors to keep healthcare costs down while expanding individual healthcare benefits. Likewise, in the countries in the EU, legislators, policymakers and healthcare insurance funds continue to propose and implement cost-containing measures to keep healthcare costs down, due in part to the attention being paid to healthcare cost containment and other austerity measures in the EU. Certain of these changes could impose limitations on the prices we will be able to charge for our products and any approved product candidates or the amounts of reimbursement available for these products from governmental agencies or third party payors, may increase the tax obligations on pharmaceutical companies such as ours, or may facilitate the introduction of generic competition with respect to our products. Further, an increasing number of EU member states and other foreign countries use prices for medicinal products established in other countries as "reference prices" to help determine the price of the product in their own territory. Consequently, a downward trend in prices of medicinal products in some countries could contribute to similar downward trends elsewhere. In addition, the ongoing budgetary difficulties faced by a number of EU member states, including Greece and Spain, have led and may continue to lead to substantial delays in payment and payment partially with government bonds rather than cash for medicinal drug products, which could negatively impact our revenues and profitability. Moreover, in order to obtain reimbursement for our products in some countries, including some EU member states, we may be required to conduct clinical trials that compare the cost-effectiveness of our products to other available therapies. There can be no assurance that our products will obtain favorable reimbursement status in any country.

To help patients afford our products, we have various programs to assist them, including patient assistance programs, a Xyrem free product voucher program and co-pay coupon programs for certain products. Co-pay coupon programs, including

our program for Xyrem, have received some negative publicity related to their use to promote branded pharmaceutical products over other less costly alternatives. In recent years, other pharmaceutical manufacturers have been named in class action lawsuits challenging the legality of their co-pay programs under a variety of federal and state laws. In addition, at least one insurer has directed its network pharmacies to no longer accept co-pay coupons for certain specialty drugs the insurer identified. Our co-pay coupon programs could become the target of similar lawsuits or insurer actions. In addition, in November 2013, CMS issued guidance to the issuers of qualified health plans sold through the Healthcare Reform Act's marketplaces encouraging such plans to reject patient cost-sharing support from third parties and indicating that CMS intends to monitor the provision of such support and may take regulatory action to limit it in the future. In September 2014, the OIG issued a Special Advisory Bulletin warning manufacturers that they may be subject to sanctions under the federal anti-kickback statute and/or civil monetary penalty laws if they do not take appropriate steps to exclude Medicare Part D beneficiaries from using co-pay coupons. It is possible that the outcome of litigation against other manufacturers, changes in insurer policies regarding co-pay coupons, and/or the introduction and enactment of new legislation or regulatory action could restrict or otherwise negatively affect these programs, which could result in fewer patients using affected products, which could include Xyrem, and therefore could have a material adverse effect on our sales, business and financial condition.

We are subject to significant ongoing regulatory obligations and oversight, which may result in significant additional expense and limit our ability to commercialize our products.

Oversight by FDA and Equivalent Non-U.S. Regulatory Authorities

We are subject to significant ongoing regulatory obligations with respect to our marketed products, such as safety reporting requirements and additional post-marketing obligations, including regulatory oversight of the promotion and marketing of our products. In addition, research, testing, manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, sale, distribution, recordkeeping, importing and exporting of our products are, and any of our product candidates that may be approved by the FDA, the EC, the competent authorities of the EU member states and other non-U.S. regulatory authorities will be, subject to extensive and ongoing regulatory requirements. These requirements apply both to us and to third parties we contract with to perform services and supply us with products. Failure by us or any of our third party partners, including suppliers, manufacturers, distributors and our respective central pharmacies for Xyrem and for Prialt, to comply with applicable requirements could subject us to administrative or judicial sanctions or other negative consequences, such as delays in approval or refusal to approve a product candidate, withdrawal, suspension or variation of product approval, untitled letters, warning letters, fines and other monetary penalties, unanticipated expenditures, product recall, withdrawal or seizure, total or partial suspension of production or distribution, interruption of manufacturing or clinical trials, operating restrictions, injunctions; suspension of licenses, civil penalties and/or criminal prosecution, any of which could have a significant impact on our sales, business and financial condition.

We monitor adverse events resulting from the use of our commercial products, as do the regulatory authorities, and we file periodic reports with the authorities concerning adverse events. The authorities review these events and reports, and if they determine that any events and/or reports indicate a trend or signal, they can require a change in a product label, restrict sales and marketing and/or require or conduct other actions, potentially including withdrawal or suspension of the product from the market, any of which could result in reduced market acceptance and demand for our products, could harm our reputation and our ability to market our products in the future, and could have a material adverse effect on our business, financial condition and results of operations.

The FDA also periodically inspects the sponsor's records related to safety reporting. Following such inspections, the FDA may issue notices on Form FDA 483 and warning letters that could cause us to modify certain activities. A Form FDA 483 notice, if issued at the conclusion of an FDA inspection, can list conditions the FDA investigators believe may have violated relevant FDA regulations or guidance. Failure to adequately and promptly correct the observation(s) can result in further regulatory enforcement action. For example, in April 2014, we received a Form FDA 483 at the conclusion of a pharmacovigilance inspection conducted by the FDA. The Form FDA 483 included observations relating to certain aspects of our ADE reporting system for all of our products, including Xyrem. We responded to the Form FDA 483 with a description of the corrective actions and improvements we had implemented before or shortly following the inspection and additional improvements that we planned to implement, and have now implemented, to address the observations in the Form FDA 483. In August 2014, the FDA issued an Establishment Inspection Report to us, which indicates that the inspection is closed. Although we have implemented improvements to our ADE reporting system, there can be no assurance that the FDA or other regulatory agencies will not identify additional matters in future pharmacovigilance inspections or that we will be able to adequately address any matters identified by the FDA or other regulatory agencies in the future, and the failure to do so could have a material adverse effect on our business, financial condition and results of operations.

If we receive regulatory approvals to sell our products, the FDA, the EC, the competent authorities of the EU member states and other non-U.S. regulatory authorities where our products are approved may impose significant restrictions on the indicated uses or marketing of our products, or impose requirements for burdensome post-approval study commitments. The terms of any product approval, including labeling, may be more restrictive than we desire and could affect the commercial

potential of the product. If we become aware of problems with any of our products in the United States, the EU or elsewhere in the world or at our contract manufacturers' facilities, a regulatory agency may impose restrictions on our products, our contract manufacturers or us. In such an instance, we could experience a significant drop in the sales of the affected products, our product revenues and reputation in the marketplace may suffer, and we could become the target of lawsuits. The EU has adopted a new legislation related to pharmacovigilance, or the assessment and monitoring of the safety of medicinal products, and this new legislation enhanced the authority of the EMA and the competent authorities of the EU member states to require companies to conduct additional post-approval clinical efficacy and safety studies and increased the burden on companies with respect to additional monitoring, adverse event management and reporting. Under the legislation and its related regulations and guidelines, we may be required to conduct a labor intensive collection of data regarding the risks and benefits of marketed products and may be required to engage in ongoing assessments of those risks and benefits, including the possible requirement to conduct additional clinical studies, which may be time consuming and expensive and could impact our profitability. Non-compliance with such obligations can lead to the variation, suspension or withdrawal of marketing authorization or imposition of financial penalties or other enforcement measures.

The FDA approved the BLA for Erwinaze in the United States in November 2011, subject to certain post-marketing requirements, including developing and validating assays and conducting certain non-clinical studies. In addition, the BLA approval for Erwinaze is subject to compliance with numerous post-marketing commitments, including certain commitments which must be met by PHE with respect to product manufacturing, which are outside of our control. While activities are underway to complete the post-marketing requirements and to comply with the post-marketing commitments, if we and/or PHE fail to do so within the timeframe established by the FDA, or if the results of the non-clinical studies raise concerns or other issues for the FDA, our approval to market Erwinaze in the United States may be withdrawn or otherwise jeopardized.

The marketing authorization in the EU for Defitelio requires us to comply with a number of post-marketing obligations. These include obligations relating to the establishment of a patient registry. We may be unable to comply with this or other post-marketing obligations imposed as part of the marketing authorization for Defitelio. Failure to comply with these requirements may lead to the suspension, variation or withdrawal of the marketing authorization for Defitelio in the EU.

Erwinase and defibrotide are available on a named patient basis in many countries where they are not commercially available. While we believe we have satisfied the regulations regarding our communications and medical affairs activities in those countries, if any such country's regulatory authorities determine that we are promoting Erwinase or defibrotide without proper authorization, we could be found to be in violation of pharmaceutical advertising law or the regulations permitting sales under named patient programs. In that case, we may be subject to financial or other penalties.

The FDA, the competent authorities of the EU member states and other governmental authorities require advertising and promotional labeling to be truthful and not misleading, and products to be marketed only for their approved indications and in accordance with the provisions of the approved label. The FDA routinely provides its interpretations of that authority in informal communications and also in more formal communications such as untitled letters or warning letters, and although such communications may not be considered final agency decisions, companies may decide not to contest the agency's interpretations so as to avoid disputes with the FDA, even if they believe the claims to be truthful, not misleading and otherwise lawful.

The FDA, the competent authorities of the EU member states and other governmental authorities also actively investigate allegations of off-label promotion activities in order to enforce regulations prohibiting these types of activities. A company that is found to have promoted an approved product for off-label uses may be subject to significant liability, including civil and administrative financial penalties and other remedies as well as criminal financial penalties and other sanctions. Even when a company is not determined to have engaged in off-label promotion, the allegation from government authorities or market participants that a company has engaged in such activities could have a significant impact on the company's sales, business and financial condition. The U.S. government has also required companies to enter into complex corporate integrity agreements and/or non-prosecution agreements that impose significant reporting and other burdens on the affected companies. For example, a predecessor company to Jazz Pharmaceuticals, Inc. was investigated for off-label promotion of Xyrem, and, while Jazz Pharmaceuticals, Inc. was not prosecuted, as part of the settlement Jazz Pharmaceuticals, Inc. entered into a corporate integrity agreement with the OIG, which extended through mid-2012. The investigation resulted in significant fines and penalties, which Jazz Pharmaceuticals, Inc. has paid, and the corporate integrity agreement required us to maintain a comprehensive compliance program. For all of our products, it is important that we maintain a comprehensive compliance program. Failure to maintain a comprehensive and effective compliance program, and to integrate the operations of acquired businesses into a combined comprehensive and effective compliance program on a timely basis, could subject us to a range of regulatory actions that could affect our ability to commercialize our products and could harm or prevent sales of the affected products, or could substantially increase the costs and expenses of commercializing and marketing our products.

Other Regulatory Authorities

We are also subject to regulation by other regional, national, state and local agencies, including the DEA, the DOJ, the FTC, the DOC, the OIG and other regulatory bodies, as well as governmental authorities in those non-U.S. countries in which we commercialize our products. In addition to the FDCA, other federal, state and non-U.S. statutes and regulations govern to varying degrees the research, development, manufacturing and commercial activities relating to prescription pharmaceutical products, including preclinical testing, approval, production, labeling, sale, distribution, import, export, post-market surveillance, advertising, dissemination of information, promotion, marketing, and pricing to government purchasers and government healthcare programs. Our partners, including our suppliers, manufacturers and distributors and the central pharmacy for Xyrem, are subject to many of the same requirements.

These requirements include obtaining sufficient quota from the DEA each year to manufacture sodium oxybate and Xyrem. In addition to quota requirements, the DEA imposes various registration, importing, exporting, recordkeeping and reporting requirements, labeling and packaging requirements, security controls and a restriction on prescription refills on certain pharmaceutical products under the CSA. The states also impose similar requirements for handling controlled substances. The United States and the EU member states are parties to the 1971 Convention. In October 2012, the World Health Organization sent a recommendation to the CND to reschedule GHB, under the 1971 Convention from its current Schedule IV status to Schedule II status. In March 2013, the CND voted to reschedule GHB from Schedule IV to Schedule II under the 1971 Convention. While the DEA imposes its own scheduling requirements in the United States under the CSA, the United States is obligated as a signatory to the 1971 Convention to ensure that drug scheduling in the United States is consistent with its obligations under the international treaties. Because sodium oxybate, the active pharmaceutical ingredient in Xyrem, is a derivative of GHB, the international rescheduling of GHB means that Xyrem and/or sodium oxybate may be subject to more restrictive registration, recordkeeping, reporting, importing, exporting and other requirements in the EU and certain other countries than the restrictions currently in place. In the United States, under DEA regulations, the Xyrem finished product is currently classified as a Schedule III controlled substance, with sodium oxybate, classified as a Schedule I controlled substance. Although the HHS has taken the position in the past that the United States would not be required to alter the domestic control of GHB should it be rescheduled to Schedule II under the 1971 Convention, we cannot guarantee that international rescheduling of GHB from Schedule IV to Schedule II will not impact restrictions on Xyrem in the United States. Failure by us or any of our partners, including suppliers, manufacturers and distributors, to comply with the requirements of the CSA and other regulatory bodies could result in, among other things, additional operating costs to us, delays in shipments outside or into the United States and adverse regulatory actions.

The U.S. federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting, or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical companies on one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common manufacturer business arrangements and activities from prosecution and administrative sanction, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations of our products may be subject to scrutiny if they do not qualify for an exemption or safe harbor. We seek to comply with the exemptions and safe harbors whenever possible, but our practices may not in all cases meet all of the criteria for safe harbor protection from anti-kickback liability.

The False Claims Act prohibits, among other things, any person from knowingly presenting, or causing to be presented, a false claim for payment of federal funds, or knowingly making, or causing to be made, a false statement to get a false claim paid. Many pharmaceutical and other healthcare companies have been investigated and have reached substantial financial settlements with the federal government under the False Claims Act for a variety of alleged improper marketing activities, including providing free product to customers with the expectation that the customers would bill federal programs for the product; providing consulting fees, grants, free travel, and other benefits to physicians to induce them to prescribe the company’s products; and inflating prices reported to private price publication services, which are used to set drug reimbursement rates under government healthcare programs. In addition, in recent years the government has pursued False Claims Act cases against a number of pharmaceutical companies for causing false claims to be submitted as a result of the marketing of their products for unapproved uses. Pharmaceutical and other healthcare companies also are subject to other federal false claim laws, including federal criminal healthcare fraud and false statement statutes that extend to non-government health benefit programs.

In addition, the Physician Payment Sunshine provisions of the Healthcare Reform Act require extensive tracking of payments and transfers of value to physicians and teaching hospitals and public reporting of the data collected. On September 30, 2014, CMS published the first set of data collected under the Sunshine provisions. On or before March 31, 2015, and on or before the 90th day of each subsequent calendar year, manufacturers covered under the Sunshine provisions will be required to submit a report disclosing payments and transfers of value made in the preceding calendar year, and CMS then will publish the reported data on or before June 30 of the reporting year. It is widely anticipated that public reporting under the

Physician Payment Sunshine provisions will result in increased scrutiny of the financial relationships between industry, teaching hospitals and physicians, and such scrutiny may negatively impact our ability to engage with physicians on matters of importance to us. In addition, if the data reflected in our reports are found to be in violation of any of the Physician Payment Sunshine provisions or any other U.S. federal, state or local regulations that may apply, we may be subject to significant civil, criminal and administrative penalties, damages or fines.

The majority of states also have statutes or regulations similar to the federal anti-kickback law and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. A number of states now require pharmaceutical companies to report expenses relating to the marketing and promotion of pharmaceutical products and to report gifts and payments to individual physicians in the states. Other states restrict when pharmaceutical companies may provide meals to prescribers or engage in other marketing related activities. Still other states require the posting of information relating to clinical studies and their outcomes. In addition, California, Connecticut, Massachusetts and Nevada require pharmaceutical companies to implement compliance programs or marketing codes of conduct. Other states have considered similar proposals in recent years. Non-U.S. governments often have similar regulations which we also will be subject to in those countries where we market and sell products.

In the EU, the advertising and promotion of our products are subject to EU member states' laws governing promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices. In addition, other legislation adopted by individual EU member states may apply to the advertising and promotion of medicinal products. These laws require that promotional materials and advertising in relation to medicinal products comply with the product's SmPC as approved by the competent authorities. The SmPC is the document that provides information to physicians concerning the safe and effective use of the medicinal product. It forms an intrinsic and integral part of the marketing authorization granted for the medicinal product. Promotion of a medicinal product that does not comply with the SmPC is considered to constitute off-label promotion. The off-label promotion of medicinal products is prohibited in the EU. The applicable laws at EU level and in the individual EU member states also prohibit the direct-to-consumer advertising of prescription-only medicinal products. Violations of the rules governing the promotion of medicinal products in the EU could be penalized by administrative measures, fines and imprisonment. These laws may further limit or restrict the advertising and promotion of our products to the general public and may also impose limitations on our promotional activities with health care professionals.

Interactions between pharmaceutical companies and physicians are also governed by strict laws, regulations, industry self-regulation codes of conduct and physicians' codes of professional conduct in the individual EU member states. The provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the EU. The provision of benefits or advantages to physicians is also governed by the national anti-bribery laws of the EU member states. One example is the UK Bribery Act. As further discussed below, the UK Bribery Act applies to any company incorporated in or "carrying on business" in the UK, irrespective of where in the world the alleged bribery activity occurs, which could have implications for our interactions with physicians both in and outside the UK. Violation of these laws could result in substantial fines and imprisonment. Payments made to physicians in certain EU member states also must be publicly disclosed. Moreover, agreements with physicians must often be the subject of prior notification and approval by the physician's employer, his/her competent professional organization, and/or the competent authorities of the individual EU member states. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

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 UK Bribery Act. The FCPA and similar anti-corruption laws generally prohibit the 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 UK Bribery Act prohibits giving, offering, or promising bribes to any person, including non-UK government officials and private persons, as well as requesting, agreeing to receive, or accepting bribes from any person. In addition, under the UK Bribery Act, companies which carry on a business or part of a business in the UK may be held liable for bribes given, offered or promised to any person, including non-UK 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 UK 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, our dealings with these prescribers and purchasers may be subject to regulation under the FCPA. Recently the SEC and the DOJ have increased their FCPA enforcement activities with respect to pharmaceutical companies. In addition, under the Dodd-

Frank 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.

We are also subject to laws and regulations covering data privacy and the protection of health-related and other personal information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which may affect our business, including recently enacted laws in all jurisdictions where we operate. Numerous federal and state laws, including state security breach notification laws, state health information privacy laws and federal and state consumer protection laws, govern the collection, use and disclosure of personal information. In addition, we obtain patient health information from most healthcare providers who prescribe our products and research institutions we collaborate with, and they are subject to privacy and security requirements under the HIPAA. Although we are not directly subject to HIPAA other than with respect to providing certain employee benefits, we could potentially be subject to criminal penalties if we knowingly obtain or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA. Moreover, EU member states and other jurisdictions have adopted data protection laws and regulations which impose significant compliance obligations. For example, the EU Data Protection Directive, as implemented into national laws by the EU member states, imposes strict obligations and restrictions on the ability to collect, analyze and transfer personal data, including health data from clinical trials and adverse event reporting. Furthermore, there is a move toward the public disclosure of clinical trial data in the EU, which also adds to the complexity of processing health data from clinical trials. Public disclosure of clinical trial data is provided for in the new EU Clinical Trials Regulation, EMA disclosure initiatives, and voluntary commitments by industry. Data protection authorities from the different EU member states may interpret the EU Data Protection Directive and national laws differently, which adds to the complexity of processing personal data in the EU, and guidance on implementation and compliance practices are often updated or otherwise revised. Failing to comply with these laws could lead to government enforcement actions and significant penalties against us, and adversely impact our operating results. The EU Data Protection Directive prohibits the transfer of personal data to countries outside of the EEA, such as the United States, which are not considered by the EC to provide an adequate level of data protection. There are also similar restrictions imposed on transfer of data from Switzerland to the United States. However, there are a number of legal mechanisms to allow for the transfer of personal data from the EEA and Switzerland to the United States, including, among others, a voluntary U.S. - EU Safe Harbor Framework, a voluntary U.S. - Switzerland Safe Harbor Framework and the EU's set of standard form contractual clauses for the transfer of personal data out of the EEA to third countries where different data protection rules apply. Our U.S. subsidiary, Jazz Pharmaceuticals, Inc., has certified compliance with the U.S. - EU Safe Harbor Framework through the DOC. A proposal for an EU Data Protection Regulation, intended to replace the current EU Data Protection Directive, is currently under consideration. The proposed EU Data Protection Regulation, if adopted, is expected to introduce new data protection requirements and substantial fines for breaches of the data protection rules. If the draft EU Data Protection Regulation is adopted in its current form it may increase our responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with the new EU data protection rules.

The number and complexity of both U.S. federal and state laws continue to increase, and additional governmental resources are being added to enforce these laws and to prosecute companies and individuals who are believed to be violating them. In particular, the Healthcare Reform Act includes a number of provisions aimed at strengthening the government's ability to pursue anti-kickback and false claims cases against pharmaceutical manufacturers and other healthcare entities, including substantially increased funding for healthcare fraud enforcement activities, enhanced investigative powers, and amendments to the False Claims Act that make it easier for the government and whistleblowers to pursue cases for alleged kickback and false claim violations. While it is too early to predict what effect these changes will have on our business, we anticipate that government scrutiny of pharmaceutical sales and marketing practices will continue for the foreseeable future and subject us to the risk of government investigations and enforcement actions. Responding to a government investigation or enforcement action would be expensive and time-consuming, and could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Compliance with U.S. federal and state, EU and EU member state national laws that apply to pharmaceutical manufacturers is difficult and time consuming, and companies that violate these laws may face substantial penalties. The potential sanctions include civil monetary penalties, exclusion of a company's products from reimbursement under government programs, criminal fines and imprisonment. Because of the breadth of these laws and, in some cases, the lack of extensive legal guidance in the form of regulations or court decisions, it is possible that some of our business activities could be subject to challenge under one or more of these laws. For example, the FTC has been paying increasing attention to the use of REMS by

companies selling branded products, in particular to whether REMS may be being deliberately used to reduce the risk of competition from generic drugs in a way that may be deemed to be anticompetitive. It is possible that the FTC or others could claim that our REMS or other practices are being used in an anticompetitive manner. The FDCA further states that a REMS shall not be used by an NDA holder to block or delay generic drugs from entering the market. Three of the ANDA applicants have asserted that our patents covering the distribution system for Xyrem should not have been listed in the Orange Book, and that the Xyrem REMS is blocking competition. Such a challenge or any other challenge that we or our business partners have failed to comply with applicable laws and regulations could have a material adverse effect on our business, financial condition, results of operations and growth prospects. If we or the other parties with whom we work fail to comply with applicable regulatory requirements, we or they could be subject to a range of regulatory actions that could affect our ability to commercialize our products and could harm or prevent sales of the affected products, or could substantially increase the costs and expenses of commercializing and marketing our products. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business.

We manufacture certain active pharmaceutical ingredients, including the defibrotide drug substance, at our manufacturing facilities in Italy. In addition, we have engaged a third party manufacturer to process defibrotide into the finished product in Italy. Our manufacturing facilities and those of our third party manufacturer are subject to continuing regulation by the Italian Health Authority and other Italian regulatory authorities with respect to the manufacturing of active pharmaceutical ingredients, including the defibrotide drug substance or its finished form. These facilities are also subject to inspection and regulation by the EMA with respect to the manufacturing of the defibrotide drug substance and its finished form. Also, part of the process to obtain approval for defibrotide is to pass a pre-approval inspection by the EMA, Italian Health Authority and the FDA to ensure that these facilities are in compliance with cGMP. Following initial approval in a jurisdiction, the applicable authorities will continue to inspect our manufacturing facilities and those of our third party manufacturer, in some cases, unannounced, to confirm ongoing compliance with cGMP. The cGMP requirements govern quality control of the manufacturing process and documentation policies and procedures, and we and our third party manufacturers will need to ensure that all of our processes, methods and equipment are compliant with cGMP. These authorities may deny approval to manufacture our products, require us to stop manufacturing our products, deny approval to the sale of our products or suspend the sale of our products, if they determine that either our facilities or our third party manufacturer’s facility in Italy does not meet the standards of compliance required under applicable regulations.

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

We participate in and have certain price reporting obligations to the Medicaid Drug Rebate program, several state Medicaid supplemental rebate and other governmental pricing programs, and we have obligations to report average sales price under the Medicare program.

Under the Medicaid Drug Rebate program, we are required to pay a rebate to each state Medicaid program for our covered outpatient drugs that are dispensed to Medicaid beneficiaries and paid for by a state Medicaid program as a condition of having federal funds being made available to the states for our drugs under Medicaid and Medicare Part B. Those rebates are based on pricing data reported by us on a monthly and quarterly basis to CMS, the federal agency that administers the Medicaid Drug Rebate program. These data include the average manufacturer price and, in the case of innovator products, the best price for each drug which, in general, represents the lowest price available from the manufacturer to any entity in the United States in any pricing structure, calculated to include all sales and associated rebates, discounts and other price concessions. Such data previously have not been submitted for ProstaScint® (capromab pendetide) and Quadramet® (samarium sm 153 lexidronam injection), which are radiopharmaceutical products. We engaged in interactions with CMS and a trade group, the Council on Radionuclides and Radiopharmaceuticals, or CORAR, regarding the reporting of Medicaid pricing data and paying Medicaid rebates for radiopharmaceutical products. For ProstaScint, we plan to begin making any required reports when CMS issues guidance on any requirements and reporting methodologies. We sold Quadramet to a third party in December 2013, but have retained any liabilities related to sales of the product during prior periods. In addition to the discussions with CMS as part of CORAR, we have had separate discussions with CMS directly regarding Quadramet. We are currently unable to predict whether price reporting and rebates will be required for ProstaScint and Quadramet and, if so, for what period they will be required. We are currently unable to reasonably estimate an amount or range of a potential contingent loss related to the payment of rebates for Quadramet or ProstaScint. Any material liability resulting from radiopharmaceutical price reporting and rebates would negatively impact our financial results.

The Healthcare Reform Act made significant changes to the Medicaid Drug Rebate program. Effective March 23, 2010, rebate liability expanded from fee-for-service Medicaid utilization to include the utilization of Medicaid managed care organizations as well. With regard to the amount of the rebates owed, the Healthcare Reform Act increased the minimum

Medicaid rebate from 15.1% to 23.1% of the average manufacturer price for most innovator products and from 11.0% to 13.0% for non-innovator products; changed the calculation of the rebate for certain innovator products that qualify as line extensions of existing drugs; and capped the total rebate amount for innovator drugs at 100% of the average manufacturer price. In addition, the Healthcare Reform Act and subsequent legislation changed the definition of average manufacturer price. Finally, the Healthcare Reform Act requires pharmaceutical manufacturers of branded prescription drugs to pay a branded prescription drug fee to the federal government. Each individual pharmaceutical manufacturer pays a prorated share of the branded prescription drug fee of $3.0 billion in 2015, based on the dollar value of its branded prescription drug sales to certain federal programs identified in the law. Sales of “orphan drugs” - those designated under section 526 of the FDCA - are excluded from this fee as long as no non-orphan indications have been approved for such orphan drugs.

In 2012, CMS issued proposed regulations to implement the changes to the Medicaid Drug Rebate program under the Healthcare Reform Act but has not yet issued final regulations. CMS is currently expected to release the final regulations in April 2015. Moreover, in the future, Congress could enact legislation that further increases Medicaid drug rebates or other costs and charges associated with participating in the Medicaid Drug Rebate program. The issuance of regulations and coverage expansion by various governmental agencies relating to the Medicaid Drug Rebate program has and will continue to increase our costs and the complexity of compliance, has been and will be time-consuming, and could have a material adverse effect on our results of operations.

Federal law requires that any company that participates in the Medicaid Drug Rebate program also participate in the Public Health Service’s 340B drug pricing discount program in order for federal funds to be available for the manufacturer’s drugs under Medicaid and Medicare Part B. The 340B pricing program requires participating manufacturers to agree to charge statutorily-defined covered entities no more than the 340B “ceiling price” for the manufacturer’s covered outpatient drugs. These 340B covered entities include a variety of community health clinics and other entities that receive health services grants from the Public Health Service, as well as hospitals that serve a disproportionate share of low-income patients, and the Healthcare Reform Act expanded the list of covered entities to include certain free-standing cancer hospitals, critical access hospitals, rural referral centers and sole community hospitals. The 340B ceiling price is calculated using a statutory formula, which is based on the average manufacturer price and rebate amount for the covered outpatient drug as calculated under the Medicaid Drug Rebate program. Changes to the definition of average manufacturer price and the Medicaid rebate amount under the Healthcare Reform Act and CMS’s issuance of final regulations implementing those changes also could affect our 340B ceiling price calculations and negatively impact our results of operations. The initiation of any reporting of Medicaid pricing data for ProstaScint and Quadramet could result in retroactive 340B ceiling price liability for these two products as well as prospective 340B ceiling price obligations for ProstaScint. We are currently unable to reasonably estimate an amount or range of a contingent loss. Any material liability resulting from radiopharmaceutical price reporting would negatively impact our financial results.

The Healthcare Reform Act also exempts “orphan drugs” from the ceiling price requirements for the covered entities added to the program by the Healthcare Reform Act. An interpretive rule to implement this statutory orphan drug exemption under a narrow interpretation was issued in July 2014 by the Health Resources and Services Administration, or HRSA, which administers the 340B program. However, a pending legal challenge to the validity of this interpretive rule has made the application of the statutory orphan drug exception uncertain. If the HRSA’s narrow interpretation of the scope of the orphan drug exemption prevails, it could potentially negatively impact the price we are paid for certain of our products by certain entities for some uses and increase the complexity of compliance with the 340B program.

The Healthcare Reform Act also obligates the Secretary of the HHS to create regulations and processes to improve the integrity of the 340B program and to update the agreement that manufacturers must sign to participate in the 340B program to obligate a manufacturer to offer the 340B price to covered entities if the manufacturer makes the drug available to any other purchaser at any price and to report to the government the ceiling prices for its drugs. The HRSA currently is expected to issue proposed regulations in 2015 that will address many aspects of the 340B program. Any final regulation could affect our obligations under the 340B program in ways we cannot anticipate. In addition, legislation may be introduced that, if passed, would further expand the 340B program to additional covered entities or would require participating manufacturers to agree to provide 340B discounted pricing on drugs used in the inpatient setting.

Federal law also requires that a company that participates in the Medicaid Drug Rebate program report average sales price information each quarter to CMS for certain categories of drugs that are paid under the Medicare Part B program. Manufacturers calculate the average sales price based on a statutorily defined formula as well as regulations and interpretations of the statute by CMS. CMS uses these submissions to determine payment rates for drugs under Medicare Part B. Statutory or regulatory changes or CMS binding guidance could affect the average sales price calculations for our products and the resulting Medicare payment rate, and could negatively impact our results of operations.

Pricing and rebate calculations vary among products and programs. The calculations are complex and are often subject to interpretation by us, governmental or regulatory agencies and the courts. The Medicaid rebate amount is computed each quarter based on our submission to CMS of our current average manufacturer prices and best prices for the quarter. If we become

aware that our reporting for a prior quarter was incorrect, or has changed as a result of recalculation of the pricing data, we are obligated to resubmit the corrected data for a period not to exceed twelve quarters from the quarter in which the data originally were due. Such restatements and recalculations increase our costs for complying with the laws and regulations governing the Medicaid Drug Rebate program. Any corrections to our rebate calculations could result in an overage or underage in our rebate liability for past quarters, depending on the nature of the correction. Price recalculations also may affect the ceiling price at which we are required to offer our products to certain covered entities, such as safety-net providers, under the 340B drug discount program.

We are liable for errors associated with our submission of pricing data. In addition to retroactive rebates and the potential for 340B program refunds, if we are found to have knowingly submitted any false price information to the government, we may be liable for civil monetary penalties in the amount of $100,000 per item of false information. If we are found to have made a misrepresentation in the reporting of our average sales price, the Medicare statute provides for civil monetary penalties of up to $10,000 for each misrepresentation for each day in which the misrepresentation was applied. Our failure to submit the required price data on a timely basis could result in a civil monetary penalty of $10,000 per day for each day the information is late beyond the due date. Such failure also could be grounds for CMS to terminate our Medicaid drug rebate agreement, pursuant to which we participate in the Medicaid program. In the event that CMS terminates our rebate agreement, federal payments may not be available under Medicaid or Medicare Part B for our covered outpatient drugs.

In September 2010, CMS and the OIG indicated that they intend to pursue more aggressively those companies who fail to report these data to the government in a timely manner. Governmental agencies may also make changes in program interpretations, requirements or conditions of participation, some of which may have implications for amounts previously estimated or paid. We cannot assure you that our submissions will not be found by CMS to be incomplete or incorrect.

In order to be eligible to have our products paid for with federal funds under the Medicaid and Medicare Part B programs and purchased by certain federal agencies, we participate in the VA FSS pricing program. Under this program, we are obligated to make our product available for procurement on an FSS contract and charge a price to four federal agencies – VA, DoD, Public Health Service, and Coast Guard – that is no higher than the statutory FCP. The FCP is based on the Non-FAMP, which we calculate and report to the VA on a quarterly and annual basis. Pursuant to applicable law, knowing provision of false information in connection with a Non-FAMP filing can subject a manufacturer to penalties of $100,000 for each item of false information.

FSS contracts are federal procurement contracts that include standard government terms and conditions, separate pricing for each product, and extensive disclosure and certification requirements. All items on FSS contracts are subject to a standard FSS contract clause that requires FSS contract price reductions under certain circumstances where pricing is reduced to an agreed “tracking customer.” Further, in addition to the “Big Four” agencies, all other federal agencies and some non-federal entities are authorized to access FSS contracts. FSS contractors are permitted to charge FSS purchasers other than the Big Four agencies “negotiated pricing” for covered drugs that is not capped by the FCP; instead, such pricing is negotiated based on a mandatory disclosure of the contractor’s commercial “most favored customer” pricing. We offer one single FCP-based FSS contract price to all FSS purchasers for all products.

We also participate in the Tricare Retail Pharmacy program, under which we pay quarterly rebates on utilization of innovator products that are dispensed through the Tricare Retail Pharmacy network to Tricare beneficiaries. We are required to list our covered products on a Tricare Agreement in order for these products to be eligible for DoD formulary inclusion. The rebates are calculated as the difference between the annual Non-FAMP and FCP.

If we overcharge the government in connection with our FSS contract or Tricare Agreement, whether due to a misstated FCP or otherwise, we are required to refund the difference to the government. Failure to make necessary disclosures and/or to identify contract overcharges can result in allegations against us under the False Claims Act and other laws and regulations. Unexpected refunds to the government, and responding to a government investigation or enforcement action, would be expensive and time-consuming, and could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Price approvals and reimbursement may not be available for our products, which could diminish our sales or affect our ability to sell our products profitably.

In both U.S. and non-U.S. markets, our ability to commercialize our products successfully, and to attract commercialization partners for our products, depends in significant part on the availability of adequate financial coverage and reimbursement from third party payors, including, in the United States, governmental payors such as the Medicare and Medicaid programs, managed care organizations and private health insurers. In many countries, price approvals must be obtained before products can be placed on the market or submitted for reimbursement. Third party payors, including government payors, decide which drugs can be reimbursed and establish reimbursement and co-pay levels and conditions for reimbursement. Third party payors are increasingly challenging the prices charged for medical products and services and examining their cost effectiveness, in addition to their safety and efficacy. In some cases, for example, third party payors try to

encourage the use of less expensive generic products through their prescription benefits coverage and reimbursement and co-pay policies. We may need to conduct expensive pharmacoeconomic and/or clinical studies in order to demonstrate the cost-effectiveness of our products. Even with such studies, our products may be considered less safe, less effective or less cost-effective than other products, and third party payors may not provide and maintain price approvals, coverage and reimbursement for our products or any of our product candidates that we commercialize, in whole or in part.

Political, economic and regulatory influences are subjecting the healthcare industry in the United States to fundamental changes. There have been, and we expect there will continue to be, legislative and regulatory proposals to change the healthcare system in ways that could impact our ability to sell our products profitably. We anticipate that the United States Congress, state legislatures and the private sector will continue to consider and may adopt healthcare policies intended to curb rising healthcare costs. These cost containment measures include: controls on government-funded reimbursement for drugs; new or increased requirements to pay prescription drug rebates to government health care programs, controls on healthcare providers; challenges to the pricing of drugs or limits or prohibitions on reimbursement for specific products through other means; requirements to try less expensive products or generics before a more expensive branded product; changes in drug importation laws; expansion of use of managed care systems in which healthcare providers contract to provide comprehensive healthcare for a fixed cost per person; and public funding for cost effectiveness research, which may be used by government and private third party payors to make coverage and payment decisions. For example, much attention has been paid to legislation proposing federal rebates on Medicare Part D and Medicare Advantage utilization for drugs issued to certain groups of lower income beneficiaries and the desire to change the provisions that treat these dual-eligible patients differently from traditional Medicare patients. Any such changes could have a negative impact on revenues from sales of our products.

In addition, beginning April 1, 2013, Medicare payments for all items and services, including drugs and biologics, were reduced by 2% under the sequestration (i.e., automatic spending reductions) required by the Budget Control Act of 2011, as amended by the American Taxpayer Relief Act of 2012. The Bipartisan Budget Act of 2013 extended the 2% reduction to 2023, and the Protecting Access to Medicare Act of 2014 extended the 2% reduction, on average, to 2024. These cuts reduce reimbursement payments related to our products, which could potentially negatively impact our revenue.

Third party payors' practices may affect the conditions required for reimbursement of our products, as well as the availability of reimbursement for our products, including Xyrem and Defitelio. Our business could be materially harmed if the Medicaid program, Medicare program or other third party payors in the United States or elsewhere were to deny reimbursement for our products or provide reimbursement only on unfavorable terms. This risk is particularly significant with respect to Xyrem in the United States and to Defitelio in Europe, in part due to payor sensitivity to the price of these products. Third party payors often require prior authorization for, require reauthorization for continuation of, or refuse to provide, reimbursement for our products, and others may do so in the future. Patients who cannot meet the conditions imposed by third party payors for prior authorizations or reauthorizations may not be able to obtain the prescribed medication due to an inability to afford the medication. For example, we are experiencing increasingly restrictive conditions for reimbursement required by some third party payors for Xyrem. While this increase has not had a material effect on the overall level of reimbursement coverage for Xyrem, it may do so in the future. In addition, increases in reimbursement-related activities have extended the time required to fill prescriptions and could continue to do so in the future. If we are unsuccessful in maintaining reimbursement for our products in a timely manner and at acceptable levels, if reimbursement for our products by third party payors is subject to overly restrictive conditions, or if third party payors refuse to provide reimbursement, the level of reimbursement for our products could be negatively impacted, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Our business could also be harmed if the Medicaid program, Medicare program or other reimbursing bodies or payors limit the indications for which our products will be reimbursed to a smaller set of indications than we believe is appropriate or limit the circumstances under which our products will be reimbursed to a smaller set of circumstances than we believe is appropriate. In addition, third party payors draw on diagnostic criteria to establish reimbursement guidelines. Meaningful changes to the diagnostic criteria for narcolepsy are included in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published in May 2013, and the third edition of International Classification of Sleep Disorders (ICSD-3) published in February 2014. As a result, third party payors may make changes to the coverage and reimbursement for our products, which may have a negative impact on revenues from our products, including Xyrem.

In many countries, procedures to obtain price approvals, coverage and reimbursement can take considerable time after the receipt of marketing approval. During 2014, Defitelio was launched in a number of European countries. We are in the process of making pricing and reimbursement submissions with respect to Defitelio, and discussing them with regulatory authorities, in those European countries where Defitelio is not yet launched, including in countries where pricing and reimbursement approvals are required for launch. We cannot predict the timing of Defitelio's launch in countries where we are awaiting pricing and reimbursement approvals. If we experience delays and unforeseen difficulties in obtaining favorable pricing and reimbursement approvals, planned launches in the affected countries would be delayed, or, if we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, our growth prospects in Europe could be negatively affected. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*We may not be*

able to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval of defibrotide in other countries, including the United States, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects."

We cannot predict actions third party payors may take, or whether they will limit the price approvals, coverage and level of reimbursement for our products or refuse to provide and maintain any approvals or coverage at all. For example, because some of our products compete in a market with both branded and generic products, obtaining and maintaining price approvals and reimbursement coverage by government and private payors may be more challenging than for new chemical entities for which no therapeutic alternatives exist. Additionally, in many countries, reimbursement guidelines and incentives provided to prescribing physicians by third party payors may have a significant impact on the prescribing physicians' willingness to prescribe our products. For example, the U.S. federal government follows a Medicare severity diagnosis-related group, or MS-DRG, payment system for certain institutional services provided under Medicare, which some states also use for Medicaid. The MS-DRG system entitles a healthcare facility to a fixed reimbursement based on discharge diagnoses rather than actual costs incurred in providing inpatient treatment, thereby increasing the incentive for the facility to limit or control expenditures for many healthcare products. For our products used in the inpatient setting, there may not be sufficient reimbursement under the MS-DRG to fully cover the cost of our products. We cannot be sure that reimbursement amounts, or the lack of reimbursement, will not reduce the demand for, or the price of, our products. If reimbursement is not available or is available only at limited levels, we may not be able to effectively commercialize our products.

Third party payors frequently require that drug companies negotiate agreements with them that provide discounts or rebates from list prices. We have agreed to provide such discounts and rebates to some third party payors in relation to our products. We expect increasing pressure to offer larger discounts or discounts to a greater number of third party payors to maintain acceptable reimbursement levels and access for patients at co-pay levels that are reasonable and customary. In addition, if our competitors reduce the prices of their products, or otherwise demonstrate that they are better or more cost effective than our products, this may result in a greater level of reimbursement for their products relative to our products, which would reduce our sales and harm our results of operations. The process for determining whether a payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Third party payors may limit coverage to specific products on an approved list, or formulary, which might not include all of the approved products for a particular indication. For example, third party payors have started to require discounts and/or exclusivity arrangements with some drug manufacturers in exchange for including a specific product on their formularies. Any such requirements could have a negative impact on revenues from sales of our products.

Payors also are increasingly considering new metrics as the basis for reimbursement rates, such as average sales price, average manufacturer price and actual acquisition cost. The existing data for reimbursement based on these metrics is relatively limited, although certain states have begun to survey acquisition cost data for the purpose of setting Medicaid reimbursement rates and since November 2013, CMS has been publishing final NADAC data, which reflect retail community pharmacy invoice costs, on a weekly basis. Therefore, it may be difficult to project the impact of these evolving reimbursement mechanics on the willingness of payors to cover our products. Any failure to cover our products appropriately, in addition to legislative and regulatory changes and others that may occur in the future, could impact our ability to maximize revenues in the federal marketplace. As discussed above, recent legislative changes to the 340B drug pricing program, the Medicaid Drug Rebate program, and the Medicare Part D prescription drug benefit also could impact our revenues. A significant portion of our revenue from sales of Erwinaze is obtained through government payors, including Medicaid, and any failure to qualify for reimbursement for Erwinaze under those programs would have a material adverse effect on revenues from sales of Erwinaze.

We expect to experience pricing pressure in the United States in connection with the sale of our products due to managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals. In various EU member states we expect to be subject to continuous cost-cutting measures, such as lower maximum prices, lower or lack of reimbursement coverage and incentives to use cheaper, usually generic, products as an alternative. If we fail to successfully secure and maintain reimbursement coverage for our products or are significantly delayed in doing so, we will have difficulty achieving market acceptance of our products and our business will be harmed. We have periodically increased the price of Xyrem, most recently in February 2015, and we have made and may in the future make similar price increases on our other products. We cannot assure you that such price adjustments will not negatively affect our ability to secure and maintain reimbursement coverage for our products, which could negatively impact our sales volumes and revenue.

Health Technology Assessment, or HTA, of medicinal products is becoming an increasingly common part of the pricing and reimbursement procedures in some EU member states. These EU member states include the United Kingdom, France, Germany and Sweden. The HTA process, which is governed by the national laws of these countries, is the procedure according to which the assessment of the public health impact, therapeutic impact and the economic and societal impact of use of a given medicinal product in the national healthcare systems of the individual country is conducted. HTA generally focuses on the clinical efficacy and effectiveness, safety, cost, and cost-effectiveness of individual medicinal products, as well as their potential implications for the healthcare system. Those elements of medicinal products are compared with other treatment

options available on the market. The outcome of HTA regarding specific medicinal products will often influence the pricing and reimbursement status granted to these medicinal products by the competent authorities of individual EU member states. The extent to which pricing and reimbursement decisions are influenced by the HTA of the specific medicinal product vary between EU member states and cannot be determined or anticipated in relation to our products at the present time. For example, France requires the evaluation of the medical benefits of a new product as well as the added clinical value of a new product in comparison with existing therapies, and we are evaluating the impact of this evaluation on our ability to obtain favorable pricing and reimbursement in France. If we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, including France, especially where a country's reimbursed price influences other countries, our growth prospects in Europe could be negatively affected.

In the EU, our products are marketed through various channels and within different legal frameworks. In certain EU member states, reimbursement for unauthorized products may be provided through national named patient programs. Such reimbursement may no longer be available if authorization for named patient programs expire or are terminated. In other EU member states, authorization and reimbursement policies may also delay commercialization of our products, or may adversely affect our ability to sell our products on a profitable basis. After initial price and reimbursement approvals, reductions in prices and changes in reimbursement levels can be triggered by multiple factors, including reference pricing systems and publication of discounts by third party payors or authorities in other countries. In the EU, prices can be reduced further by parallel distribution and parallel trade, or arbitrage between low-priced and high-priced member states.

We are unable to predict what additional legislation, regulations or policies, if any, relating to the healthcare industry or third party coverage and reimbursement may be enacted in the future or what effect such legislation, regulations or policies would have on our business. Any cost containment measures, including those listed above, or other healthcare system reforms that are adopted, could negatively affect our growth prospects in Europe.

There also continue to be legislative proposals to amend U.S. laws to allow the importation into the United States of prescription drugs, which can be sold at prices that are regulated by the governments of various non-U.S. countries. For example, in October 2013, the State of Maine enacted a bill to allow residents of the state to purchase prescription drugs from other countries, including Canada. The potential importation of prescription drugs could pose significant safety concerns for patients, increase the risk of counterfeit products becoming available in the market, and could also have a negative impact on prescription drug prices in the United States. For example, the potential importation of Xyrem without the safeguard of our Xyrem REMS program could harm patients and could also negatively impact Xyrem revenues.

Product liability and product recalls could harm our business.

The development, manufacture, testing, marketing and sale of pharmaceutical products are associated with significant risks of product liability claims or recalls. Side effects or adverse events known or reported to be associated with, or manufacturing defects in, the products sold by us could exacerbate a patient's condition, or could result in serious injury or impairments or even death. This could result in product liability claims and/or recalls of one or more of our products. Some of our products, including Xyrem and Prialt, have boxed warnings in their labels. In addition, in the EU, Defitelio's label includes an inverted black triangle that indicates the product is subject to additional monitoring to permit quick identification of new safety information, as a condition of authorization of Defitelio under "exceptional circumstances." In many countries, including in EU member states, national laws provide for strict (no-fault) liability which applies even where damages are caused both by a defect in a product and by the act or omission of a third party.

Product liability claims may be brought by individuals seeking relief for themselves, or by groups seeking to represent a class of injured patients. Further, third party payors, either individually or as a putative class, may bring actions seeking to recover monies spent on one of our products. While we have not had to defend against any product liability claims to date, as sales of our products increase, we believe it is likely product liability claims will be made against us. The risk of product liability claims may also increase if a company receives a warning letter from a regulatory agency. We cannot predict the frequency, outcome or cost to defend any such claims.

Product liability insurance coverage is expensive, can be difficult to obtain and may not be available in the future on acceptable terms, or at all. Our product liability insurance may not cover all of the future liabilities we might incur in connection with the development, manufacture or sale of our products. In addition, we may not continue to be able to obtain insurance on satisfactory terms or in adequate amounts.

A successful claim or claims brought against us in excess of available insurance coverage could subject us to significant liabilities and could have a material adverse effect on our business, financial condition, results of operations and growth prospects. Such claims could also harm our reputation and the reputation of our products, adversely affecting our ability to market our products successfully. In addition, defending a product liability lawsuit is expensive and can divert the attention of key employees from operating our business.

Product recalls may be issued at our discretion or at the discretion of our suppliers, government agencies and other entities that have regulatory authority for pharmaceutical sales. Any recall of our products could materially adversely affect our

business by rendering us unable to sell that product for some time and by adversely affecting our reputation. A recall could also result in product liability claims by individuals and third party payors. In addition, product liability claims could result in an investigation of the safety or efficacy of our products, our manufacturing processes and facilities, or our marketing programs conducted by the FDA, the EMA, or the competent authorities of the EU member states. Such investigations could also potentially lead to a recall of our products or more serious enforcement actions, limitations on the indications for which they may be used, or suspension, variation, or withdrawal of approval. Any such regulatory action by the FDA, the EMA or the competent authorities of the EU member states could lead to product liability lawsuits as well.

We use, or will use, hazardous materials in our current and planned manufacturing facilities, and any claims relating to the improper handling, storage, release or disposal of these materials could be time-consuming and expensive.

Our operations are subject to complex and increasingly stringent environmental, health and safety laws and regulations in the countries where we operate and, in particular, in Italy where we have, and in Ireland where we are building, manufacturing facilities. Environmental and health and safety authorities in the relevant jurisdictions administer laws, which implement EU directives and regulations governing, among other matters, the emission of pollutants into the air (including the workplace), the discharge of pollutants into bodies of water, the storage, use, handling and disposal of hazardous substances, the exposure of persons to hazardous substances, and the general health, safety and welfare of employees and members of the public. Our manufacturing of active pharmaceutical ingredients in Italy involves, and our planned manufacturing activities in Ireland will also involve, the controlled storage, use and disposal of chemicals and solvents. For our facility in Italy, we have obtained certification under the UNI EN ISO 14001 Standard for our environmental management system and have an Eco-management and Audit Scheme (EMAS). Our environmental policy is designed to comply with current EU laws and regulations on environmental protection, to provide for continuous improvement of our manufacturing performance, to protect our employees' health, to protect the safety of people working at our location in Italy and to respect the safety of people living close to our plant and in the surrounding community. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by these EU laws and regulations, we cannot completely eliminate the risk of contamination or injury from hazardous materials. If an accident occurs, an injured party could seek to hold us liable for any damages that result and any liability could exceed the limits or fall outside the coverage of our insurance. We may not be able to maintain insurance on acceptable terms, or at all. We may incur significant costs to comply with current or future EU environmental laws and regulations.

Risks Relating to Our Financial Condition

We have incurred substantial debt, which could impair our flexibility and access to capital and adversely affect our financial position.

As of December 31, 2014, we had total indebtedness of approximately $1.5 billion, which included $895.4 million of outstanding secured indebtedness under a credit agreement that we entered into in June 2012 and subsequently amended in June 2013 and January 2014, which we refer to as our credit agreement, and $575.0 million of outstanding indebtedness under our 1.875% exchangeable senior notes due 2021, or the 2021 Notes, which were issued in August 2014. Our debt 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;
- result in dilution to our existing shareholders in the event exchanges of our 2021 Notes are settled in our ordinary shares;
- place us at a competitive disadvantage compared to our less leveraged competitors; and
- increase our vulnerability to the impact of adverse economic and industry conditions.

Our ability to meet our debt service obligations will depend on our future performance, which will be subject to financial, business and other factors affecting our operations, many of which are beyond our control. If we do not have sufficient funds to meet our debt service obligations, we may be required to refinance or restructure all or part of our existing debt, sell assets, borrow more money or sell securities, none of which we can assure you that we would be able to do in a timely manner, or at all.

Covenants in our credit agreement 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.

Our credit agreement currently provides for $904.4 million of term loans due in June 2018 and a $425.0 million revolving credit facility, with loans under such revolving credit facility due in June 2017, subject to early mandatory repayments under certain circumstances. The credit agreement contains various covenants that limit our ability and/or our restricted subsidiaries' ability to, among other things:

- incur or assume liens or additional debt or provide guarantees in respect of obligations of other persons;
- issue redeemable preferred stock;
- pay dividends or distributions or redeem or repurchase capital stock;
- prepay, redeem or repurchase certain debt;
- make loans, investments, acquisitions (including acquisitions of exclusive licenses) and capital expenditures;
- enter into agreements that restrict distributions from our subsidiaries;
- sell assets and capital stock of our subsidiaries;
- enter into certain transactions with affiliates; and
- consolidate or merge with or into, or sell substantially all of our assets to, another person.

Our credit agreement also includes a financial covenant that requires us to maintain a maximum secured leverage ratio. Our ability to comply with this financial covenant may be affected by events beyond our control. In addition, the covenants under the credit agreement could restrict our operations, particularly our ability to respond to changes in our business or to take specified actions to take advantage of certain business opportunities that may be presented to us. Our failure to comply with any of the covenants could result in a default under the credit agreement, which could permit the lenders to declare all or part of any outstanding borrowings to be immediately due and payable, or to refuse to permit additional borrowings under the revolving credit facility. In addition, the holders of our 2021 Notes have the ability to require us to repurchase their notes for cash if we undergo certain fundamental changes, such as a specified change of control transactions, our liquidation or dissolution or the delisting of our ordinary shares from The NASDAQ Global Select Market. Moreover, upon exchange of the 2021 Notes, unless we elect to cause to be delivered solely ordinary shares to settle such exchange, we will be required to make cash payments in respect of the 2021 Notes being exchanged. In this regard, it is our intent and policy to settle the principal amount of the 2021 Notes in cash upon exchange. However, we may not have enough available cash or be able to obtain financing at the time we are required to make any required repurchases of surrendered 2021 Notes or to pay cash upon exchanges of 2021 Notes. Our failure to repurchase 2021 Notes at a time when the repurchase is required by the indenture governing the 2021 Notes or to pay any cash payable on future exchanges of the 2021 Notes as required by the indenture governing the 2021 Notes would constitute a default under that indenture. A default under that indenture could also lead to a default under agreements governing our current or future indebtedness, including our credit agreement. If the repayment of the related indebtedness were to be accelerated, we may not have sufficient funds to repay the related indebtedness, which could have a material adverse effect on our financial condition and our business. In this regard, if we are unable to repay amounts under our credit agreement, the lenders under the credit agreement could proceed against the collateral granted to them to secure that debt, which would seriously harm our business.

To continue to grow our business, we will need to commit substantial resources, which could result in future losses or otherwise limit our opportunities or affect our ability to operate our business.

The scope of our business and operations has grown substantially since the beginning of 2012 through a series of transactions, including the Azur Merger, the EUSA Acquisition and the Gentium Acquisition. To continue to grow our business over the longer-term, we will need to commit substantial additional resources to in-licensing and/or acquiring new products and product candidates, and to costly and time-consuming product development and clinical trials of our product candidates. We also intend to continue to invest in our commercial operations in an effort to grow sales of our current products. Our future capital requirements will depend on many factors, including many of those discussed above, such as:

- the revenues from our commercial products, which may be affected by many factors, including the extent of generic competition for our products;
- the costs of our commercial operations;
- the costs of integration activities related to any future strategic transactions we may engage in;
- the cost of acquiring and/or licensing any new products and product candidates;
- the scope, rate of progress, results and costs of our development and clinical activities;

- the cost and timing of obtaining regulatory approvals and of compliance with laws and regulations;
- the cost of preparing, filing, prosecuting, defending and enforcing patent claims and other intellectual property rights;
- the cost of investigations, litigation and/or settlements related to regulatory oversight and third party claims; and
- changes in laws and regulations, including, for example, healthcare reform legislation.

Our strategy includes the expansion of our business through the acquisition or in-licensing and development of additional marketed or product candidates that are in late-stage development. We cannot assure you that we will continue to identify attractive opportunities or that our funds will be sufficient to fund these activities if opportunities arise. We may be unable to expand our business if we do not have sufficient capital or cannot borrow or raise additional capital on attractive terms. In particular, our substantial indebtedness may limit our ability to borrow additional funds for acquisitions or to use our cash flow or obtain additional financing for future acquisitions. In addition, if we use a substantial amount of our funds to acquire or in-license products or product candidates, we may not have sufficient additional funds to conduct all of our operations in the manner we would otherwise choose.

We may not be able to access the capital and credit markets on terms that are favorable to us, or at all.

During the past several years, domestic and international financial markets have experienced extreme disruption from time to time, including, among other things, high volatility and significant declines in stock prices and severely diminished liquidity and credit availability for both borrowers and investors. We expect to opportunistically seek access to the capital and credit markets to supplement our existing cash balances, cash we expect to generate from operations and funds available under our revolving credit facility to satisfy our needs for working capital, capital expenditures and debt service requirements or to continue to grow our business over the longer term through product acquisition and in-licensing, product development and clinical trials of product candidates, and expansion of our commercial operations. In the event of adverse capital and credit market conditions, we may not be able to obtain capital market financing or credit on favorable terms, or at all, which could have a material adverse effect on our business and growth prospects. Changes in our credit ratings issued by nationally recognized credit rating agencies could adversely affect our cost of financing and have an adverse effect on the market price of our securities.

We may not be able to successfully maintain our tax rates, which could adversely affect our business and financial condition, results of operations and growth prospects.

We are incorporated in Ireland and maintain subsidiaries in North America and a number of other foreign jurisdictions. We are able to achieve a low average tax rate through the performance of certain functions and ownership of certain assets in tax-efficient jurisdictions, together with intra-group service and transfer pricing agreements, each on an arm's length basis. However, changes in tax laws in any of these jurisdictions could adversely affect our ability to do so in the future. Taxing authorities, such as the U.S. Internal Revenue Service, or the IRS, actively audit and otherwise challenge these types of arrangements, and have done so in the pharmaceutical industry. The IRS or other taxing authority 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 generally 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, 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 products 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 the conclusion that we should be treated as a foreign corporation for U.S. federal tax purposes.

Although we are incorporated in Ireland, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended, or the Code. For U.S. federal tax purposes, a corporation generally is considered a tax resident in the jurisdiction of its organization or incorporation. Because we are an Irish incorporated entity, we would be classified as a foreign corporation (and, therefore, a non-U.S. tax resident) under these rules. Section 7874 of the Code provides an exception under which a foreign incorporated entity may, in certain circumstances, be treated as a U.S. corporation for U.S. federal tax purposes. Because we indirectly acquired all of Jazz Pharmaceuticals, Inc.'s assets through the acquisition of the shares of Jazz Pharmaceuticals, Inc. common stock in the Azur Merger, the IRS could assert that we should be treated as a U.S. corporation for U.S. federal tax purposes under Section 7874. For us to be treated as a foreign corporation for U.S. federal tax purposes under Section 7874 of the Code, either (1) the former stockholders of Jazz Pharmaceuticals, Inc. must have owned (within the meaning of Section 7874 of the Code) less than 80% (by both vote and value) of our ordinary shares by reason of holding shares in Jazz Pharmaceuticals, Inc. (the "ownership test"), or (2) we must have substantial business activities in Ireland after the Azur Merger (taking into account the activities of our expanded affiliated group). The Jazz Pharmaceuticals, Inc.

stockholders owned less than 80% of our share capital immediately after the Azur Merger by reason of their ownership of shares of Jazz Pharmaceuticals, Inc. common stock. As a result, we believe that we should be treated as a foreign corporation for U.S. federal tax purposes under current law. It is possible that the IRS could disagree with the position that the ownership test is satisfied and assert that Section 7874 of the Code applies to treat us as a U.S. corporation following the Azur Merger. There is limited guidance regarding the Code Section 7874 provisions, including the application of the ownership test described above. The IRS continues to scrutinize transactions that are potentially subject to Section 7874, and issued new final and temporary regulations under Section 7874 in June 2012 and in January 2014, as well as a notice in September 2014 outlining further regulations the IRS plans to issue. We do not expect these regulations to affect the U.S. tax consequences of the Azur Merger. Nevertheless, new statutory and/or regulatory provisions under Section 7874 of the Code or otherwise could be enacted that adversely affect our status as a foreign corporation for U.S. federal tax purposes, and any such provisions could have retroactive application to us, Jazz Pharmaceuticals, Inc., our respective shareholders and/or the Azur Merger. See the risk factor in Part I, Item 1A of this Annual Report on Form 10-K entitled "*Future changes to the tax laws under which we expect to be treated as a foreign corporation for U.S. federal tax purposes or in other tax laws relating to multinational corporations could adversely affect us*."

Section 7874 of the Code limits Jazz Pharmaceuticals, Inc. and its U.S. affiliates' ability to utilize their U.S. tax attributes to offset certain U.S. taxable income, if any, generated by certain taxable transactions.

Following certain acquisitions of a U.S. corporation by a foreign corporation, Section 7874 of the Code can limit the ability of the acquired U.S. corporation and its U.S. affiliates to utilize U.S. tax attributes such as net operating losses, or NOLs, to offset U.S. taxable income resulting from certain transactions. Based on the limited guidance available, this limitation applies to us. As a result, after the Azur Merger, Jazz Pharmaceuticals, Inc. and its U.S. affiliates have not been able and will continue to be unable, for a period of time, to utilize their U.S. tax attributes to offset their U.S. taxable income, if any, resulting from certain taxable transactions. Notwithstanding this limitation, we plan to fully utilize Jazz Pharmaceuticals, Inc.'s U.S. NOLs prior to their expiration. As a result of this limitation, however, it may take Jazz Pharmaceuticals, Inc. longer to use its NOLs. Moreover, contrary to these plans, it is possible that the limitation under Section 7874 of the Code on the utilization of U.S. tax attributes could prevent Jazz Pharmaceuticals, Inc. from fully utilizing its U.S. tax attributes prior to their expiration if Jazz Pharmaceuticals, Inc. does not generate sufficient taxable income.

Our U.S. affiliates' ability to use their net operating losses to offset potential taxable income and related income taxes that would otherwise be due could be subject to further limitations if we do not generate taxable income in a timely manner or if the "ownership change" provisions of Sections 382 and 383 of the Code result in further annual limitations.

Our U.S. affiliates have a significant amount of NOLs. Our ability to use these NOLs to offset potential future taxable income and related income taxes that would otherwise be due is dependent upon our generation of future taxable income before the expiration dates of the NOLs, and we cannot predict with certainty when, or whether, our U.S. affiliates will generate sufficient taxable income to use all of the NOLs. In addition, realization of NOLs to offset potential future taxable income and related income taxes that would otherwise be due is subject to annual limitations under the "ownership change" provisions of Sections 382 and 383 of the Code and similar state provisions, which may result in the expiration of additional NOLs before future utilization. In general, an "ownership change" occurs if, during a three-year rolling period, there is a change of 50% or more in the percentage ownership of a company by 5% shareholders (and certain persons treated as 5% shareholders), as defined in the Code and the U.S. Treasury Department regulations, or Treasury Regulations, promulgated thereunder. In this regard, we currently estimate that, as a result of these ownership change provisions, we have an annual limitation on the utilization of certain NOLs of $28.8 million for 2015, $28.9 million for 2016, $15.0 million for 2017, $1.4 million for 2018 and a combined total of $4.9 million for 2019 to 2026.

However, Sections 382 and 383 of the Code are extremely complex provisions with respect to which there are many uncertainties, and we have not requested a ruling from the IRS to confirm our analysis of the ownership change limitations related to the NOLs generated by our U.S. affiliates. Therefore, we have not established whether the IRS would agree with our analysis regarding the application of Sections 382 and 383 of the Code. If the IRS were to disagree with our analysis, or if our U.S. affiliates were to experience additional ownership changes in the future, our U.S. affiliates could be subject to further annual limitations on the use of the NOLs to offset potential taxable income and related income taxes that would otherwise be due.

Future changes to the tax laws under which we expect to be treated as a foreign corporation for U.S. federal tax purposes or in other tax laws relating to multinational corporations could adversely affect us.

As described above, under current law, we believe that we should be treated as a foreign corporation for U.S. federal tax purposes. However, changes to the Code or the Treasury Regulations or other IRS guidance promulgated thereunder, including under Section 7874 of the Code, could adversely affect our status as a foreign corporation for U.S. federal tax purposes or could otherwise affect our effective tax rate, and any such changes could have prospective or retroactive application. In addition, recent legislative proposals have aimed to expand the scope of U.S. corporate tax residence. This legislation, if passed, could

adversely affect us.

In addition, the U.S. Congress, the Organization for Economic Co-operation and Development and other government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting," where payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. As a result, the tax laws in the United States and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could adversely affect us.

We have significant intangible assets and goodwill. Consequently, the future impairment of our intangible assets and goodwill may significantly impact our profitability.

As of December 31, 2014, we had recorded $2.1 billion of intangible assets and goodwill related to our past acquisitions. Intangible assets and goodwill are subject to an impairment analysis whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. Additionally, goodwill and indefinite-lived assets are subject to an impairment test at least annually.

Events giving rise to impairment are an inherent risk in the pharmaceutical industry and cannot be predicted. As a result of the significance of intangible assets and goodwill, our results of operations and financial position in future periods could be negatively impacted should additional impairments of intangible assets or goodwill occur.

Our financial results could be adversely affected by foreign exchange fluctuations.

We have significant operations in Europe as well as in the United States, but we report revenues, costs and earnings in U.S. dollars. Our primary currency translation exposures relate to our subsidiaries that have functional currencies denominated in the Euro and the British Pound. Exchange rates between the U.S. dollar and each of the Euro and British Pound are likely to fluctuate from period to period. Because our financial results are reported in U.S. dollars, we are exposed to foreign currency exchange risk as the functional currency financial statements of non-U.S. subsidiaries are translated to U.S. dollars for reporting purposes. As we continue to expand our international operations, including with the Gentium Acquisition, we will conduct more transactions in currencies other than the U.S. dollar. To the extent that revenue and expense transactions are not denominated in the functional currency, we are also subject to the risk of transaction losses. Given the volatility of exchange rates, there is no assurance that we will be able to effectively manage currency transaction and/or conversion risks. We have not entered into derivative instruments to offset the impact of foreign exchange fluctuations. Fluctuations in foreign currency exchange rates could have a material adverse effect on our results of operations and financial condition.

Risks Relating to Our Ordinary Shares

The market price of our ordinary shares has been volatile and may continue to be volatile in the future, and the value of your investment could decline significantly.

The market price for our ordinary shares has fluctuated significantly from time to time, varying between a high of $183.84 on December 8, 2014 and a low of $120.38 on May 9, 2014 during the year ended December 31, 2014. The market price of our ordinary shares is likely to continue to be volatile and subject to significant price and volume fluctuations in response to market, industry and other factors, including the risk factors described above. In addition, the stock market in general, including the market for life sciences companies, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may seriously harm the market price of our ordinary shares, regardless of our operating performance.

Our share price may be dependent upon the valuations and recommendations of the analysts who cover our business. If our results do not meet these analysts' forecasts, the expectations of our investors or the financial guidance we provide to investors in any period, the market price of our ordinary shares could decline. In the past, following periods of volatility in the market or significant price decline, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

In addition, the market price of our ordinary shares may decline if the effects of our past transactions, including the Gentium Acquisition and/or potential future acquisitions, on the financial results of our company are not consistent with the expectations of financial analysts or investors. The market price of our ordinary shares could also be affected by possible sales of our ordinary shares by holders of our 2021 Notes who may view the 2021 Notes as a more attractive means of equity participation in our company and by hedging or arbitrage trading activity involving our ordinary shares by the holders of these notes.

Future sales of our ordinary shares in the public market could cause our share price to fall.

Sales of a substantial number of our ordinary shares in the public market, including sales by members of our management or board of directors, or the perception that these sales might occur, could depress the market price of our ordinary shares and could impair our ability to raise capital through the sale of additional equity or equity-related securities. As of February 18, 2015, we had 60,657,182 ordinary shares outstanding, all of which shares are eligible for sale in the public market, subject in some cases to the volume limitations and manner of sale and other requirements under Rule 144. In addition, future issuances by us of our ordinary shares upon the exercise or settlement of equity-based awards and exchanges of our 2021 Notes would dilute existing shareholders' ownership interest in our company and any sales in the public market of these ordinary shares, or the perception that these sales might occur, could also adversely affect the market price of our ordinary shares.

Moreover, we have in the past and may in the future grant rights to some of our shareholders that require us to register the resale of our ordinary shares on behalf of these shareholders and/or facilitate offerings of ordinary shares held by these shareholders, including in connection with potential future acquisitions of additional products, product candidates, or companies. For example, consistent with our obligations under then-existing registration rights agreements, we entered into underwriting agreements with certain underwriters and selling shareholders pursuant to which selling shareholders sold an aggregate of approximately 13 million ordinary shares in two separate registered public offerings in March 2012 and in March 2013. If potential future holders of registration rights, by exercising their registration rights or otherwise, sell a large number of shares, the sale could adversely affect the market price of our ordinary shares. We have also filed registration statements to register the sale of our ordinary shares reserved for issuance under our equity incentive and employee stock purchase plans, and intend to file additional registration statements to register any shares automatically added each year to the share reserves under these plans.

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, Irish law and the indenture governing our 2021 Notes 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;
- 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; and
- permit our board of directors to issue one or more series of preferred shares with rights and preferences, as our shareholders may determine by ordinary resolution.

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 its shares in certain circumstances. Furthermore, the indenture governing our 2021 Notes requires us to repurchase the notes for cash if we undergo certain fundamental changes and, in certain circumstances, to increase the exchange rate for a

holder of 2021 Notes. A takeover of us may trigger the requirement that we purchase our 2021 Notes and/or increase the exchange rate, which could make it more costly for a potential acquiror to engage in a business combination transaction with us.

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 other shareholders to elect directors other than the candidates nominated by our board.

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

Other than funds we have allocated for the purposes of supporting our share repurchase program announced in May 2013, we anticipate that we will retain all earnings, if any, to support our operations and our proprietary drug development programs, acquire or in-license additional products and product candidates, and pursue other opportunities. If we propose to pay dividends in the future, we must do so in accordance with Irish law, which provides that distributions including dividend payments, share repurchases and redemptions be funded from "distributable reserves." In addition, our ability to pay cash dividends on or repurchase our ordinary shares is restricted under the terms of our credit agreement. 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, compliance with the terms of our credit agreement and other factors our board of directors deems relevant. Accordingly, holders of our ordinary shares must rely on increases in the trading price of their shares for returns on their investment in the foreseeable future.

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% 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 of this stamp duty is available to transfers by shareholders who hold our ordinary shares beneficially through brokers which in turn hold those shares through the Depositary Trust Company, or DTC, to holders who also hold through DTC. However, a transfer by a record holder who holds our 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 Irish Companies Acts or any other applicable law permit, may, or may provide that a subsidiary of ours 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 our 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 our 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 our 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 us or our 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.

Our auditor, like other independent registered public accounting firms operating in Ireland and a number of other European countries, is not currently permitted to be subject to inspection by the U.S. Public Company Accounting Oversight Board, or the PCAOB, and as such, our investors currently do not have the benefits of PCAOB oversight.

As an auditor of companies that are publicly-traded in the United States and as a firm registered with the PCAOB, our independent registered public accounting firm is required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and the professional standards of the PCAOB. However, because our auditor is located in Ireland, a jurisdiction where the PCAOB is currently unable to conduct inspections, our auditor is not currently inspected by the PCAOB. Inspections of other auditors conducted by the PCAOB outside of Ireland have at times identified deficiencies in those auditor's audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. The lack of PCAOB inspections in Ireland prevents the PCAOB from regularly evaluating our auditor's audits and its quality control procedures. In addition, the inability of the

PCAOB to conduct auditor inspections in Ireland makes it more difficult to evaluate the effectiveness of our auditor's audit procedures or quality control procedures as compared to auditors located outside of Ireland that are subject to regular PCAOB inspections. As a result, our investors are deprived of the benefits of PCAOB inspections, and may lose confidence in our reported financial information and procedures and the quality of our financial statements.

Item 1B. Unresolved Staff Comments

There are no material unresolved written comments that were received from the SEC staff 180 days or more before the end of our 2014 fiscal year relating to our periodic or current reports under the Exchange Act.

Item 2. Properties

Our corporate headquarters are located in Dublin, Ireland and our United States operations are located in Palo Alto, California and Philadelphia, Pennsylvania.

We occupy approximately 17,000 square feet of office space in Dublin, Ireland, 12,000 square feet of which is under one lease, or the Dublin Lease, that expires in May 2022, and 5,000 square feet of which is under a second lease that also expires in May 2022. We have an option to terminate these leases, in May 2017 for the Dublin Lease and in January 2019 for the second lease, with no less than six months' prior written notice and the payment of a termination fee. We are currently constructing a manufacturing and development facility on land owned by us in Athlone, Ireland. Once complete, the facility will be approximately 54,000 square feet in size.

In Palo Alto, California, we occupy a total of approximately 100,000 square feet of office space, 44,000 square feet of which is occupied under a lease, or the Palo Alto Lease, that expires in August 2017, 39,000 square feet of which is occupied under a sublease that expires in April 2016 and 17,000 square feet of which is occupied under a sublease that expires in July 2017. We have the right to extend the term of the Palo Alto Lease for up to an additional two years. In January 2015, we entered into an agreement to lease approximately 100,000 square feet of office space in Palo Alto, California. We expect to occupy this office space by the end of 2017. This lease has a term of 12 years from commencement and we have an option to extend the term of the lease twice for a period of five years each. We also have an option to terminate this lease 10 years from commencement, with no less than one year's prior written notice and the payment of a termination fee.

We occupy approximately 19,000 square feet of office space in Philadelphia, Pennsylvania under a lease that expires in April 2019. In addition, we have offices in Oxford, United Kingdom, Lyon, France, Villa Guardia (Como), Italy and elsewhere in Europe. We occupy approximately 14,000 square feet of office space in Oxford, United Kingdom under a lease that expires in August 2024. We have an option to terminate this lease in August 2019, with no less than six months' prior written notice and the payment of a termination fee. We also occupy approximately 9,000 square feet of office space in Lyon, France under a lease that expires January 2019. We have an option to terminate this lease in December 2015. We own a manufacturing facility in Villa Guardia (Como), Italy which is subject to a mortgage securing repayment of an aggregate of approximately €0.8 million ($1 million) of debt owed to Banca Nazionale del Lavoro. The manufacturing facility is 25,295 square feet in size. We also lease approximately 51,667 square feet of office and laboratory space and 1,076 square feet of laboratory and manufacturing space in Villa Guardia (Como), Italy under leases that expire in December 2017 and June 2015, respectively.

We believe that our existing properties are in good condition and suitable for the conduct of our business. As we continue to expand our operations, we may need to lease additional or alternative facilities.

Item 3. Legal Proceedings

Xyrem ANDA Matters: On October 18, 2010, we received a notice of Paragraph IV Certification from Roxane that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem (sodium oxybate) oral solution. Roxane's initial notice alleged that all five patents then listed for Xyrem in the Orange Book on the date of the notice are invalid, unenforceable or not infringed by Roxane's proposed generic product. On November 22, 2010, we filed a lawsuit against Roxane in response to Roxane's initial notice in the U.S. District Court for the District of New Jersey, or the District Court, seeking a permanent injunction to prevent Roxane from introducing a generic version of Xyrem that would infringe our patents. In accordance with the Hatch-Waxman Act, as a result of our having filed a timely lawsuit against Roxane, FDA approval of Roxane's ANDA was stayed for 30 months, or until April 18, 2013. That stay has expired. Additional patents covering Xyrem were issued between December 2010 and December 2012, and, after receiving Paragraph IV Certification notices from Roxane, we filed additional lawsuits against Roxane on February 4, 2011, May 2, 2011, October 26, 2012 and December 5, 2012 to include these additional patents in the litigation. All of the lawsuits filed against Roxane between 2010 and 2012 have been consolidated by the District Court into a single case, or the Roxane consolidated case, alleging that 10 of our patents covering Xyrem are or will be infringed by Roxane's ANDA and seeking a permanent injunction to prevent Roxane from launching a generic version of Xyrem that would infringe these patents.

In December 2013, the District Court permitted Roxane to amend its answer in the Roxane consolidated case to allege additional equitable defenses, and the parties were given additional time for discovery on those new defenses. In addition, in

March 2014, the District Court granted our motion to bifurcate and stay the portion of the Roxane consolidated case regarding patents related to the distribution system for Xyrem. Although no trial date has been scheduled, based on the District Court's current schedule, we anticipate that trial on the patents in the Roxane consolidated case that are not subject to the stay could occur as early as the third quarter of 2015. We do not have any estimate of a possible trial date for trial on the patents in the Roxane consolidated case that are currently subject to the stay. The actual timing of events in this litigation may be significantly earlier or later than we currently anticipate, and we cannot predict the specific timing or outcome of events in this litigation.

On April 1, 2014 and January 15, 2015, we received additional notices of Paragraph IV Certification from Roxane regarding newly issued patents for Xyrem listed in the Orange Book. On February 20, 2015, we filed a new lawsuit against Roxane in the District Court, alleging that three of our patents covering Xyrem are infringed or will be infringed by Roxane's ANDA and seeking a permanent injunction to prevent Roxane from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in this matter or its impact on the Roxane consolidated case.

On December 10, 2012, December 12, 2012 and August 8, 2013, we received notices of Paragraph IV Certification from Amneal Pharmaceuticals, LLC, or Amneal, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On January 18, 2013 and September 12, 2013, we filed lawsuits against Amneal in the District Court, alleging that nine of our patents covering Xyrem are infringed or will be infringed by Amneal's ANDA and seeking a permanent injunction to prevent Amneal from introducing a generic version of Xyrem that would infringe these patents. These lawsuits against Amneal were consolidated by the District Court on November 6, 2013.

On November 21, 2013 and November 24, 2013, we received notices of Paragraph IV Certification from Par Pharmaceutical, Inc., or Par, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On December 27, 2013, we filed a lawsuit against Par in the District Court, alleging that 13 of our patents covering Xyrem are infringed or will be infringed by Par's ANDA and seeking a permanent injunction to prevent Par from introducing a generic version of Xyrem that would infringe these patents.

In April 2014, Amneal asked the District Court to consolidate its case with the Par case, stating that both cases would proceed on the schedule for the Par case. The District Court granted this request in May 2014. The order consolidating the cases provides that Amneal's 30-month stay period will be extended to coincide with the date of Par's 30-month stay period. As a result, FDA's approval of both Amneal's and Par's ANDAs is stayed until the earlier of (i) May 20, 2016, or (ii) a District Court decision finding that the identified patents are invalid, unenforceable or not infringed. We cannot predict the timing or outcome of events in the Amneal/Par consolidated case or their impact on other ongoing proceedings with Amneal or Par.

On April 7, 2014 and January 19, 2015, we received additional notices of Paragraph IV Certification from Amneal regarding newly issued patents for Xyrem listed in the Orange Book. On May 20, 2014 and February 6, 2015, we filed additional lawsuits against Amneal in the District Court, alleging that four of our patents covering Xyrem are infringed or will be infringed by Amneal's ANDA and seeking a permanent injunction to prevent Amneal from introducing a generic version of Xyrem that would infringe these patents. These additional lawsuits have not been consolidated with the Amneal/Par consolidated case. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Amneal.

On July 3, 2014, August 6, 2014 and November 25, 2014, we received additional notices of Paragraph IV Certification from Par regarding newly issued patents for Xyrem listed in the Orange Book. We filed additional lawsuits against Par in the District Court on August 15, 2014, October 2, 2014 and January 8, 2015, alleging that three of our patents covering Xyrem are infringed or will be infringed by Par's ANDA and seeking a permanent injunction to prevent Par from introducing a generic version of Xyrem that would infringe these patents. These additional lawsuits have not been consolidated with the Amneal/Par consolidated case. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Par.

On June 4, 2014, we received a notice of Paragraph IV Certification from Ranbaxy Laboratories Limited, or Ranbaxy, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On June 6, 2014, we received a notice of an amended Paragraph IV Certification from Ranbaxy. On July 15, 2014, we filed a lawsuit against Ranbaxy in the District Court, alleging that 14 of our patents covering Xyrem are infringed or will be infringed by Ranbaxy's ANDA and seeking a permanent injunction to prevent Ranbaxy from introducing a generic version of Xyrem that will infringe these patents. On August 20, 2014 and December 1, 2014, we received additional notices of Paragraph IV Certification from Ranbaxy regarding newly issued patents for Xyrem listed in the Orange Book. On October 2, 2014 and January 9, 2015, we filed additional lawsuits against Ranbaxy in the District Court, alleging that two of our patents covering Xyrem are infringed or will be infringed by Ranbaxy's ANDA and seeking a permanent injunction to prevent Ranbaxy from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Ranbaxy.

On October 30, 2014, we received a notice of Paragraph IV Certification from Watson Laboratories, Inc., or Watson, that it has submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On December 11, 2014, we filed a lawsuit against Watson in the District Court, alleging that 15 of our patents covering Xyrem are or will be infringed by Watson's ANDA and seeking a permanent injunction to prevent Watson from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in this litigation.

In January 2015, Amneal, Ranbaxy and Watson proposed the consolidation of their respective cases and a consolidated schedule to the District Court. Under the proposed consolidated schedule, the District Court would hold a Markman hearing no earlier than January 2016. Par is currently seeking its own proposed schedule. Under Par's proposed schedule, the District Court would hold a Markman hearing in the Par case no earlier than September 2015. We cannot predict the timing or outcome of events in these proceedings, including what cases, if any, the District Court will consolidate and what cases, if any, the District Court will permit to go forward separately.

Between June and August 2014, petitions seeking CBM post-grant patent review by the PTAB were filed by certain of the ANDA filers with respect to the validity of six of our patents related to the distribution system for Xyrem. In the fall of 2014, we filed preliminary responses to the petitions in which, among other things, we asserted that the challenged patents should not be subject to CBM review. In early 2015, the PTAB issued decisions denying institution of CBM review for all of these petitions.

In January 2015, petitions for IPR were filed by certain of the ANDA filers with respect to the validity of six of our patents related to the distribution system for Xyrem. The PTAB has not yet determined whether to institute proceedings with respect to these petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings.

FazaClo ANDA Matters: Azur Pharma received notices of Paragraph IV Certifications from three generics manufacturers, Barr Laboratories, Inc., or Barr, Novel Laboratories, Inc., or Novel, and Mylan Pharmaceuticals, Inc., or Mylan, indicating that ANDAs had been filed with the FDA requesting approval to market generic versions of FazaClo® (clozapine, USP) LD orally disintegrating clozapine tablets. Azur Pharma and CIMA Labs Inc., or CIMA, a subsidiary of Teva, our licensor and the entity whose drug-delivery technology is incorporated into FazaClo LD, filed a lawsuit in response to each certification claiming infringement based on such certification against Barr on August 21, 2008, against Novel on November 25, 2008 and against Mylan on July 23, 2010. Each case was filed in the U.S. District Court for the District of Delaware, or the Delaware Court. On July 6, 2011, CIMA, Azur Pharma and Teva, which had acquired Barr, entered into an agreement settling the patent litigation and Azur Pharma granted a sublicense to an affiliate of Teva of Azur Pharma's rights to have manufactured, market and sell a generic version of both FazaClo LD and FazaClo HD, as well as an option for supply of authorized generic product. The sublicense for FazaClo LD commenced in July 2012, and the sublicense for FazaClo HD will commence in May 2015. Teva exercised its option for supply of an authorized generic product for FazaClo LD and launched the authorized generic product at the end of August 2012. Teva has also exercised its option for supply of an authorized generic product for FazaClo HD. The Novel and Mylan matters had been stayed pending reexamination of the patents in the lawsuits. In September 2013 and January 2014, reexamination certificates were issued for the two patents-in-suit, and the patentability of the claims of the patents confirmed. The Delaware Court lifted the stay of litigation in the two cases in March 2014. On December 19, 2014, we and CIMA entered into an agreement with Novel settling the patent litigation against Novel and we granted Novel a sublicense to manufacture, market and sell a generic version of FazaClo LD and, if applicable, FazaClo HD. The sublicense will commence on May 1, 2017, or earlier upon the occurrence of certain events. Trial in the Mylan case is currently set for the third quarter of 2015, but we cannot predict the specific timing or outcome of this litigation.

Cutler Matter: On October 19, 2011, Dr. Neal Cutler, one of the original owners of FazaClo, filed a complaint against Azur Pharma and one of its subsidiaries, as well as Avanir Pharmaceuticals, Inc., or Avanir, in the California Superior Court in the County of Los Angeles, or the Superior Court. The complaint alleges that Azur Pharma and its subsidiary breached certain contractual obligations. Azur Pharma acquired rights to FazaClo from Avanir in 2007. The complaint alleges that as part of the acquisition of FazaClo, Azur Pharma's subsidiary agreed to assume certain contingent payment obligations to Dr. Cutler. The complaint further alleges that certain contingent payments are due because revenue thresholds have been achieved, entitling Dr. Cutler to a $10.5 million and an additional $25.0 million contingent payment, plus unspecified punitive damages and attorneys' fees. In March 2012, the Superior Court granted our petition to compel arbitration of the dispute in New York and stayed the Superior Court litigation. In July 2012, the arbitrator dismissed the arbitration on the grounds that the parties' dispute falls outside of the scope of the arbitration clause in the applicable contract. That ruling was affirmed by the California Court of Appeal in January 2014, and the case was remanded to Superior Court for discovery and trial. Trial has been scheduled for October 2015. We cannot predict the specific timing or outcome of this litigation.

Shareholder Litigation Matter: In January 2014, we became aware of a purported class action lawsuit filed in the U.S. District Court for the Southern District of New York in connection with our acquisition pursuant to a tender offer of a majority of the voting securities of Gentium S.p.A., or Gentium, which we refer to as the Gentium Acquisition. The lawsuit named

Gentium, each of the Gentium's directors, us and our Italian subsidiary as defendants. The lawsuit alleged, among other things, that Gentium's directors breached their fiduciary duties to Gentium's shareholders in connection with the Gentium tender offer agreement that Gentium entered into with us and our Italian subsidiary valuing Gentium ordinary shares and American Depositary Shares, or ADSs, at $57.00 per share, and that we and our Italian subsidiary violated Sections 14(e) and 20(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, by allegedly overseeing Gentium's preparation of an allegedly false and misleading Section 14D-9 Solicitation/Recommendation Statement. On November 19, 2014, the plaintiff dismissed us and our Italian subsidiary from the lawsuit. On January 22, 2015, the entire lawsuit was dismissed with prejudice by the court.

From time to time we are involved in legal proceedings arising in the ordinary course of business. We believe there is no other litigation pending that could have, individually or in the aggregate, a material adverse effect on our results of operations or financial condition.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

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

Market Information

Our ordinary shares trade on The NASDAQ Global Select Market under the trading symbol "JAZZ." The following table sets forth the high and low intraday sales prices of our ordinary shares on The NASDAQ Global Select Market for the periods indicated.

	High	Low
Calendar Quarter—2013		
First Quarter	$ 60.79	$ 53.52
Second Quarter	$ 72.00	$ 50.76
Third Quarter	$ 93.84	$ 69.00
Fourth Quarter	$ 128.49	$ 80.40
Calendar Quarter—2014		
First Quarter	$ 176.60	$ 123.55
Second Quarter	$ 156.34	$ 120.38
Third Quarter	$ 176.36	$ 131.69
Fourth Quarter	$ 183.84	$ 137.34

On February 18, 2015, the last reported sales price per share of our ordinary shares was $171.68 per share.

Holders of Ordinary Shares

As of February 18, 2015, there were three 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.

Dividends

No cash dividends have ever been declared or paid on the common equity to date by Jazz Pharmaceuticals, Inc. or us, and we do not currently plan to pay cash dividends in 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, the terms of our credit agreement restrict our ability to make certain restricted payments, including dividends and other distributions by us in respect of our ordinary shares, subject to (1) a general exception for dividends and other restricted payments up to $30 million and (2) so long as there is no default or event of default under our credit agreement, another exception that is capped at $100 million plus a formula-based amount tied to our consolidated net income if our total leverage ratio (as defined in our credit agreement) exceeds 2:1 after giving pro forma effect to the dividend or distribution. 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, compliance with the terms of our credit agreement and other factors our board of directors deems relevant.

Unregistered Sales of Equity 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, or SEC, during the year ended December 31, 2014, there were no unregistered sales of equity securities by us during the year ended December 31, 2014.

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 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 European Union, or 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. At present the Financial Transfers Act, 1992 prohibits financial transfers involving the late Slobodan Milosevic and associated persons, 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, Sudan, Somalia, Republic of Guinea, Afghanistan, Egypt, Eritrea, Libya, Syria, Tunisia, certain known terrorists and terrorist groups, countries that harbor certain terrorist groups and Ukraine without the prior permission of the Central Bank of Ireland.

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 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 20%), 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.

While the United States/Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from DWT available under Irish domestic law, it would generally be unnecessary for a United States 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 comprised 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% 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

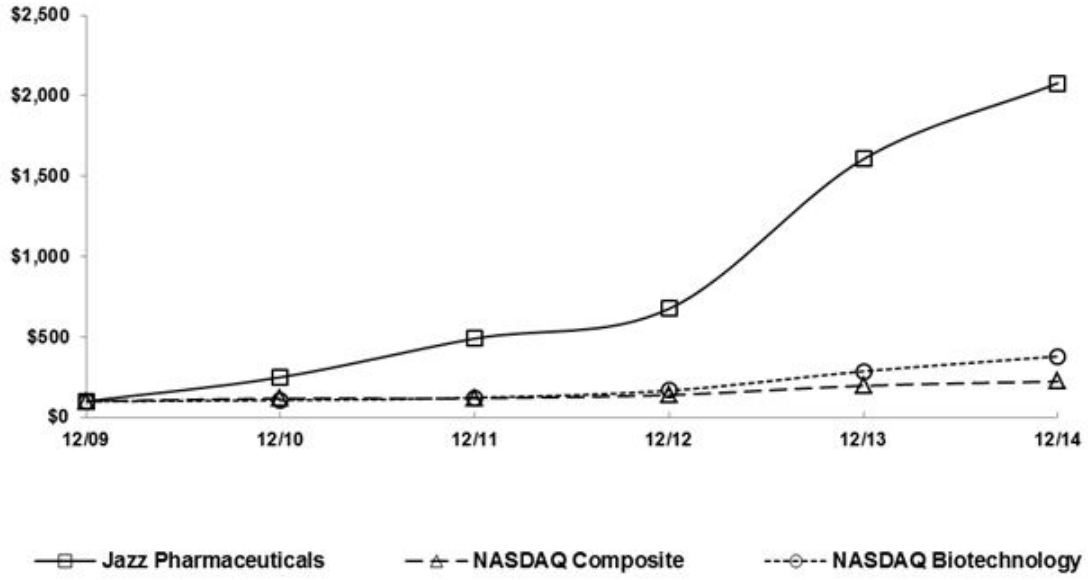
outside of DTC, may be subject to Irish stamp duty (currently at the rate of 1% of the price paid or the market value of the ordinary shares acquired, if greater). The person accountable for payment of stamp duty is the buyer or, in the case of a transfer by way of a gift or for less than market value, 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) (or vice-versa) as a result of the transfer and there is no agreement being contemplated for the sale of the related book-entry interest or the ordinary shares or an interest in the ordinary shares, as the case may be, by the shareholder to a third party.

Performance Measurement Comparison (1)

The following graph shows the total shareholder return on the last day of each year of an investment of $100 in cash as if made on December 31, 2009 in (i) our ordinary shares; (ii) the NASDAQ Composite Index; and (iii) the NASDAQ Biotechnology Index through December 31, 2014. Information set forth in the graph below represents the performance of the Jazz Pharmaceuticals, Inc. common stock from December 31, 2009 until January 17, 2012, the day before the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma Public Limited Company, or Azur Pharma, were combined in a merger transaction, or the Azur Merger, and the performance of our ordinary shares from January 18, 2012 through December 31, 2014. Our ordinary shares trade on the same exchange, The NASDAQ Global Select Market (or The NASDAQ Global Market prior to January 3, 2012), and under the same trading symbol, “JAZZ,” as the Jazz Pharmaceuticals, Inc. common stock prior to the Azur Merger. Pursuant to applicable SEC rules, all values assume reinvestment of the full amount of all dividends; however, we did not declare or pay any dividends on our common stock or ordinary shares during the comparison period. The shareholder return shown in the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future shareholder returns.

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN(2)



(1) This section is not “soliciting material”, is not deemed “filed” with the SEC and is not to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as

amended, or Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

(2) Information used in the graph was obtained from Research Data Group, Inc.

Issuer Purchases of Equity Securities

The following table summarizes purchases of our ordinary shares made by or on behalf of us or any of our "affiliated purchasers" as defined in Rule 10b-18(a)(3) under the Exchange Act during each fiscal month during the three-month period ended December 31, 2014:

	Total Number of Shares Purchased (1)	Average Price Paid per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (3)	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs (4)
October 1 - October 31, 2014	42,000	$ 151.75	42,000	$ 27,211,930
November 1 - November 30, 2014	11,058	$ 169.89	11,058	$ 25,333,480
December 1 - December 31, 2014	24,157	$ 165.15	24,157	$ 21,344,385
Total	77,215	$ 158.54	77,215	

(1) This table does not include ordinary shares that we withheld in order to satisfy minimum tax withholding requirements in connection with the vesting of restricted stock units.

(2) Average price paid per share includes brokerage commissions.

(3) The ordinary shares reported in the table above were purchased pursuant to our publicly announced share repurchase program. On May 7, 2013, we announced that our board of directors authorized the use of up to $200 million to repurchase our ordinary shares. This authorization has no expiration date.

(4) The dollar amount shown represents, as of the end of each period, the approximate dollar value of ordinary shares that may yet be purchased under our publicly announced share repurchase program, exclusive of any brokerage commissions. The timing and amount of repurchases will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, restrictions under our credit agreement, corporate and regulatory requirements and market conditions, and may be suspended or otherwise discontinued at any time without prior notice.

Item 6. Selected Financial Data

The following selected consolidated financial data should be read together with our consolidated financial statements and accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this Annual Report on Form 10-K. The selected consolidated financial data in this section is not intended to replace our consolidated financial statements and the accompanying notes. Our historical results are not necessarily indicative of our future results.

We derived the consolidated statements of income data for the years ended December 31, 2014, 2013 and 2012 and the consolidated balance sheet data as of December 31, 2014 and 2013 from the audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K. The consolidated statements of income data for the years ended December 31, 2011 and 2010, and the selected consolidated balance sheet data as of December 31, 2012, 2011 and 2010 are derived from audited consolidated financial statements not included in this Annual Report on Form 10-K. The selected consolidated financial data for periods prior to the year ended December 31, 2012 is that of Jazz Pharmaceuticals, Inc. and its consolidated subsidiaries, while the selected consolidated financial data for periods after and including the year ended December 31, 2012 is that of Jazz Pharmaceuticals plc and its consolidated subsidiaries.

	Year Ended December 31,				
	2014(1)	2013	2012(2)	2011	2010
	(In thousands, except per share amounts)				
Consolidated Statements of Income Data:					
Revenues:					
Product sales, net	$ 1,162,716	$ 865,398	$ 580,527	$ 266,518	$ 170,006
Royalties and contract revenues	10,159	7,025	5,452	5,759	3,775
Total revenues	1,172,875	872,423	585,979	272,277	173,781
Operating expenses:					
Cost of product sales (excluding amortization of acquired developed technologies and intangible asset impairment)	117,418	102,146	78,425	13,942	13,559
Selling, general and administrative	406,114	304,303	223,882	108,936	68,996
Research and development	85,181	41,632	20,477	14,120	25,612
Acquired in-process research and development	202,626	4,988	—	—	—
Intangible asset amortization	126,584	79,042	65,351	7,448	7,825
Impairment charges	39,365	—	—		
Total operating expenses	977,288	532,111	388,135	144,446	115,992
Income from operations	195,587	340,312	197,844	127,831	57,789
Interest expense, net (including $570 for the year ended December 31, 2010 pertaining to a related party)	(52,713)	(26,916)	(16,869)	(1,600)	(12,724)
Foreign currency gain (loss)	8,683	(1,697)	(3,620)	—	—
Loss on extinguishment and modification of debt (including $701 for the year ended December 31, 2010 pertaining to a related party)	—	(3,749)	—	(1,247)	(12,287)
Income from continuing operations before income tax provision (benefit)	151,557	307,950	177,355	124,984	32,778
Income tax provision (benefit)	94,231	91,638	(83,794)	—	—
Income from continuing operations	57,326	216,312	261,149	124,984	32,778
Income from discontinued operations, net of taxes	—	—	27,437	—	—
Net income	57,326	216,312	288,586	124,984	32,778
Net loss attributable to noncontrolling interests, net of tax	(1,061)	—	—	—	—
Net income attributable to Jazz Pharmaceuticals plc	$ 58,387	$ 216,312	$ 288,586	$ 124,984	$ 32,778
Net income per ordinary share attributable to Jazz Pharmaceuticals plc (3):					
Basic:					
Income from continuing operations	$ 0.98	$ 3.71	$ 4.61	$ 3.01	$ 0.90
Income from discontinued operations	—	—	0.48	—	—
Net income attributable to Jazz Pharmaceuticals plc	$ 0.98	$ 3.71	$ 5.09	$ 3.01	$ 0.90
Diluted:					
Income from continuing operations	$ 0.93	$ 3.51	$ 4.34	$ 2.67	$ 0.83
Income from discontinued operations	—	—	0.45	—	—
Net income attributable to Jazz Pharmaceuticals plc	$ 0.93	$ 3.51	$ 4.79	$ 2.67	$ 0.83
Weighted-average ordinary shares used in calculating net income per ordinary share attributable to Jazz Pharmaceuticals plc (3):					
Basic	59,746	58,298	56,643	41,499	36,343
Diluted	62,614	61,569	60,195	46,798	39,411

	As of December 31,				
	2014(1)	2013	2012(2)	2011	2010
	(In thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$ 684,042	$ 636,504	$ 387,196	$ 157,898	$ 44,794
Working capital	799,044	660,589	360,034	146,261	14,522
Total assets	3,338,955	2,238,221	1,966,493	253,573	135,729
Long-term debt, current and non-current	1,342,428	549,976	456,761	—	40,693
Retained earnings (accumulated deficit)	34,704	18,532	(61,296)	(349,882)	(474,866)
Total Jazz Pharmaceuticals plc shareholders' equity	1,371,144	1,295,534	1,121,292	192,788	30,551

(1) On January 23, 2014, pursuant to a tender offer, we became the indirect majority shareholder of Gentium S.p.A., or Gentium, acquiring control of Gentium on that date. In February 2014, we completed a subsequent offering period of the tender offer, resulting in total purchases pursuant to the tender offer of approximately 98% of the fully diluted voting securities of Gentium. As of December 31, 2014, we had acquired a further 1.8% interest in Gentium for cash consideration of $17.8 million, resulting in an aggregate acquisition cost to us of $994.1 million, comprising cash payments of $1,011.2 million offset by proceeds from the exercise of Gentium share options of $17.1 million. The results of operations of the acquired Gentium business, along with the estimated fair values of the assets acquired and liabilities assumed in the transaction, have been included in our consolidated financial statements since the completion of the acquisition of Gentium on January 23, 2014, which is referred to as the Gentium Acquisition in this report. We record noncontrolling interests in our consolidated financial statements which represent the ownership interest of minority shareholders in the equity of Gentium. In connection with the Gentium Acquisition, on January 23, 2014, we entered into a second amendment to our credit agreement. The credit agreement, as amended to date, provides for (i) a tranche of incremental term loans in the aggregate principal amount of $350.0 million, (ii) a tranche of term loans to refinance the $554.4 million aggregate principal amount of previously outstanding term loans and (iii) a $425.0 million revolving credit facility. We used the proceeds from the incremental term loans and $300.0 million of loans under the revolving credit facility together with cash on hand to finance the Gentium Acquisition. Refer to Note 3 of Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for more information on the Gentium Acquisition. In August 2014, we completed a private placement of $575.0 million aggregate principal amount of 1.875% exchangeable senior notes due 2021, or the 2021 Notes, resulting in net proceeds to us, after debt issuance costs, of $558.9 million. We used a portion of the net proceeds from the issuance of the 2021 Notes to repay all outstanding borrowings under the revolving credit facility provided for under our credit agreement.

(2) On January 18, 2012, the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma were combined in the Azur Merger pursuant to which all outstanding shares of Jazz Pharmaceuticals, Inc.'s common stock were canceled and converted into the right to receive, on a one-for-one basis, our ordinary shares. Jazz Pharmaceuticals, Inc. was treated as the acquiring company in the Azur Merger for accounting purposes, and as a result, the historical consolidated financial statements of Jazz Pharmaceuticals, Inc. became our consolidated financial statements. On June 12, 2012, we completed our acquisition of EUSA Pharma Inc., or EUSA Pharma, which we refer to as the EUSA Acquisition. At the closing of the EUSA Acquisition, we paid $678.4 million in cash, and agreed to make an additional contingent payment of $50.0 million in cash if Erwinaze achieved net sales in the United States of $124.5 million or more in 2013. In 2013, net sales of Erwinaze in the United States exceeded $124.5 million and as a result, we made this payment in the first quarter of 2014. The results of operations of the acquired Azur Pharma and EUSA Pharma businesses, along with the estimated fair values of the assets acquired and liabilities assumed in each transaction, are included in our consolidated financial statements since the effective dates of the Azur Merger and the EUSA Acquisition, respectively. We financed the EUSA Acquisition, in part, by entering into our credit agreement, which at the time provided for $475.0 million principal amount of term loans and a $100.0 million revolving credit facility. We used all of the proceeds of those term loans, together with cash on hand, for the EUSA Acquisition.

(3) All references to "ordinary shares" refer to Jazz Pharmaceuticals, Inc.'s common stock with respect to periods prior to the year ended December 31, 2012 and to our ordinary shares with respect to periods after and including the year ended December 31, 2012. Our earnings per share in the periods prior to the year ended December 31, 2012 were not impacted by the Azur Merger since each share of Jazz Pharmaceuticals, Inc. common stock issued and outstanding immediately prior to the effective time of the Azur Merger was canceled and converted into the right to receive one ordinary share upon the consummation of the Azur Merger.

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

The following discussion of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and notes to consolidated financial statements included elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. When reviewing the discussion below, you should keep in mind the substantial risks and uncertainties that impact our business. In particular, we encourage you to review the risks and uncertainties described in Part I, Item 1A "Risk Factors" in this Annual Report on Form 10-K. These risks and uncertainties could cause actual results to differ materially from those projected in forward-looking statements contained in this report or implied by past results and trends.

Overview

Jazz Pharmaceuticals plc is an international biopharmaceutical company focused on improving patients' lives by identifying, developing and commercializing meaningful products that address unmet medical needs. We have a diverse portfolio of products and product candidates, with a focus in the areas of sleep and hematology/oncology.

Our strategy is to create shareholder value by:

- Growing sales of the existing products in our portfolio, including by identifying new growth opportunities;
- Acquiring additional differentiated products that are on the market or product candidates that are in late-stage development; and
- Pursuing focused development of a pipeline of post-discovery differentiated product candidates.

Throughout 2014 and so far in 2015, we have made substantial progress in the execution of our strategy. Some of the significant developments affecting our business in 2014 are summarized below.

Strong Revenue Growth

In 2014, our total net product sales increased by 34% compared to 2013, primarily from the growth in sales of Xyrem® (sodium oxybate) oral solution and Erwinaze® (asparaginase *Erwinia chrysanthemi*), and from the addition to our product portfolio of defibrotide, marketed under the name Defitelio® (defibrotide) in certain countries in Europe.

Xyrem is the only product approved by the United States Food and Drug Administration, or FDA, for the treatment of both cataplexy and excessive daytime sleepiness, or EDS, in patients with narcolepsy. Sales of Xyrem increased 37% in 2014 compared to 2013.

Erwinaze is a treatment approved in the United States and in certain markets in Europe (where it is marketed as Erwinase®) for patients with acute lymphoblastic leukemia, or ALL, who have developed hypersensitivity to *E. coli*-derived asparaginase. First approved by the FDA for administration via intramuscular injection in conjunction with chemotherapy, Erwinaze received approval for administration via intravenous infusion in conjunction with chemotherapy in December 2014. Sales of Erwinaze/Erwinase increased 15% in 2014 compared to 2013.

Total product sales are expected to increase in 2015 over 2014, primarily due to anticipated growth in sales of our lead marketed products.

Expansion of Marketed Product Portfolio

We strengthened our commercial portfolio with the addition of Defitelio/defibrotide in January 2014 through our acquisition of a controlling interest in Gentium. Our aggregate acquisition cost for the Gentium Acquisition to date is $994.1 million, comprising cash payments of $1,011.2 million, offset by proceeds from the exercise of Gentium share options of $17.1 million. Defitelio was granted marketing authorization under exceptional circumstances by the European Commission, or EC, in October 2013 for the treatment of severe hepatic veno-occlusive disease, or VOD, in adults and children undergoing hematopoietic stem cell transplantation, or HSCT, therapy.

During 2014, Defitelio was launched in a number of European countries. We expect to continue to launch the product in additional European countries on a rolling basis in 2015 and are in the process of making pricing and reimbursement submissions with respect to Defitelio, and discussing them with regulatory authorities, in those European countries where Defitelio is not yet launched, including in countries where pricing and reimbursement approvals are required for launch. Defibrotide has been, and continues to be, provided to patients where it is not commercially available through an expanded access treatment protocol that is open under an investigational new drug application, or IND, in the United States and on a named patient basis elsewhere.

Acquisition of Product Candidates

We have made significant investment in building our product development pipeline. In 2014, we acquired products and/or product candidates in the sleep and hematology/oncology therapeutic areas, where we believe we will be able to leverage our existing specialty commercial expertise and infrastructure, as well as our strong clinical, medical and commercial teams.

- **JZP-110**. In January 2014, we entered into an asset purchase agreement with Aerial BioPharma LLC, or Aerial, to acquire the worldwide development, manufacturing and commercial rights to JZP-110, other than in certain jurisdictions in Asia where SK Biopharmaceuticals Co., Ltd, or SK, retains rights. JZP-110 is a late-stage investigational compound being developed for potential treatment of EDS in patients with narcolepsy and EDS in patients with obstructive sleep apnea, or OSA. Under the agreement, we made an upfront payment of $125.0 million to Aerial. We also paid a $2.0 million milestone to SK on assignment of the JZP-110 rights from Aerial to us. We are obligated to make milestone payments, in an aggregate amount of up to $270.0 million, based on development, regulatory and sales milestones and to pay tiered royalties from high single digits to mid-teens based on potential future sales of JZP-110.

- **Defibrotide**. In August 2014, we acquired from Sigma-Tau Pharmaceuticals, Inc., or Sigma-Tau, the rights to defibrotide for the treatment and prevention of VOD in North America, Central America and South America. In exchange for the rights to defibrotide in the Americas, we made an upfront payment of $75.0 million to Sigma-Tau and are also obligated to make milestone payments of up to $175.0 million comprised of (i) $25.0 million upon the acceptance for filing by the FDA of the first NDA for defibrotide for VOD; and (ii) up to an additional $150.0 million based on the timing of potential FDA approval of defibrotide for VOD.

Increased Research and Development Activities

We substantially increased our research and development activities, which include clinical development of new product candidates, line extensions for existing products and the generation of additional clinical data for existing products, all in our sleep and hematology/oncology therapeutic areas. A summary of our development pipeline activities is provided below:

Project	Disease Area	Status
Sleep		
JZP-110	EDS in narcolepsy	Expect to initiate a Phase 3 clinical trial in the second quarter of 2015
	EDS in OSA	Expect to initiate two Phase 3 clinical trials in the second quarter of 2015
JZP-386	EDS in narcolepsy	Phase 1 clinical trial in progress; expect additional data in the second quarter of 2015
Xyrem	Cataplexy in narcolepsy in children and adolescents	Phase 3 clinical trial initiated in the fourth quarter of 2014
Hematology/Oncology		
Defibrotide	Severe VOD	Rolling new drug application, or NDA, submission initiated in the United States in December 2014; expect to complete the submission in mid-2015
Erwinaze	ALL in young adult population	Pharmacokinetic study in Phase 2 initiated in the second quarter of 2014
JZP-416	ALL	Phase 1 clinical trial in Europe completed; enrollment suspended in pivotal Phase 2 clinical trial in North America in first quarter of 2015
Leukotac™	Steroid refractory acute graft vs. host disease, or GvHD	Phase 3 clinical trial enrollment complete; expect preliminary data in mid-2015

In the sleep area, we have ongoing and planned clinical studies for our product and product candidates.

- *JZP-110*. Based on feedback from the FDA on our development plans for JZP-110, we expect to commence our planned Phase 3 clinical program in the second quarter of 2015, subject to the availability of clinical trial materials. We plan to conduct one Phase 3 clinical trial in patients with EDS associated with narcolepsy and two Phase 3 clinical trials in patients with EDS associated with OSA. Approximately 900 patients are expected to be enrolled in these three trials in the aggregate. In addition, we plan to evaluate the long-term safety of JZP-110 in an open label extension trial and expect to enroll up to 450 patients from the three Phase 3 clinical trials in this extension trial.
- *JZP-386*. JZP-386 is a deuterium-modified analog of sodium oxybate, the active pharmaceutical ingredient in Xyrem, which we licensed from Concert Pharmaceuticals, Inc., or Concert, in February 2013. We have conducted preclinical research and development work on JZP-386 for potential use in patients with narcolepsy. We submitted an investigational medicinal product dossier, or IMPD, for JZP-386 in Europe at the end of 2013 and received approval of the IMPD in January 2014. The first study of JZP-386 in humans to evaluate the safety, pharmacokinetics and

pharmacodynamics of the compound was conducted in 2014, and we initiated a second Phase 1 study in the first quarter of 2015, with data expected in the second quarter of 2015.

- *Xyrem*. While in many patients narcolepsy can begin during childhood and adolescence, there is limited information on the treatment of pediatric narcolepsy patients with Xyrem. We have worked with the FDA and several leading specialists to design a clinical trial to generate additional data on the treatment of pediatric narcolepsy patients with Xyrem. As a result, in the fourth quarter of 2014, we initiated a Phase 3 clinical trial to assess the safety and efficacy of Xyrem in children and adolescents aged seven to 17 who have narcolepsy with cataplexy.

In the hematology and oncology area, we also have a number of development programs, including ongoing clinical trials.

- *Defibrotide*. We are engaged in activities related to the potential approval of defibrotide in the United States. We initiated a rolling submission of an NDA to the FDA for defibrotide for the treatment of severe VOD in December 2014 and expect to complete the submission in mid-2015. We are also assessing the potential for approval of defibrotide in other countries and for development of defibrotide in indications in addition to the treatment of severe VOD.
- *Erwinaze*. In the second quarter of 2014, we initiated a pharmacokinetics study in Phase 2 to further evaluate the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase.
- *JZP-416 (formerly known as Asparec)*. We completed a Phase 1 clinical trial in Europe of JZP-416 (pegcrisantaspase), a PEGylated recombinant *Erwinia chrysanthemi* L-asparaginase, being developed for the treatment of patients with ALL who are hypersensitive to *E. coli*-derived asparaginase. In addition, we initiated our first study of JZP-416 in children in a pivotal Phase 2 clinical trial in North America in late 2014. In February 2015, we voluntarily suspended patient enrollment in this trial. Our decision to suspend enrollment and to discontinue treatment with JZP-416 for enrolled patients is based on the occurrence of hypersensitivity-like reactions following the administration of JZP-416 in some treated patients. We are in the process of collecting and evaluating the available data and plan to conduct additional research and analysis prior to determining whether to resume the study and determining next steps regarding the development of JZP-416.
- *Leukotac*. We are conducting a Phase 3 clinical trial in Europe of Leukotac (inolimomab), an anti-CD25 monoclonal antibody for the treatment of steroid-refractory acute GvHD. We completed enrollment for this study in March 2014 and expect to receive preliminary data in mid-2015.

For 2015 and beyond, we expect that our research and development expenses will increase substantially from historical levels, particularly as we initiate our planned clinical trials and related development work and potentially acquire rights to additional product candidates.

In June 2012, we entered into a credit agreement that provided for $475.0 million principal amount of term loans and a $100.0 million revolving credit facility. The proceeds from the term loans were used to partially finance the EUSA Acquisition in June 2012. In June 2013, we amended the credit agreement to provide for $557.2 million principal amount of term loans and a revolving credit facility of $200.0 million that replaced the $100.0 million revolving credit facility. We used a portion of the proceeds from the new term loans to refinance in full the $457.2 million principal amount of term loans outstanding under the credit agreement prior to the amendment. In January 2014, in connection with the Gentium Acquisition, we further amended the credit agreement to provide for a tranche of incremental term loans in the aggregate principal amount of $350.0 million, a tranche of term loans that refinanced the approximately $554.4 million principal amount of term loans outstanding prior to this amendment, and a $425.0 million revolving credit facility that replaced the $200.0 million revolving credit facility. We used the proceeds from the incremental term loans and $300.0 million of loans under the revolving credit facility, together with cash on hand, to purchase Gentium ordinary shares and American Depository Shares, or ADSs.

In August 2014, we completed a private placement of $575.0 million aggregate principal amount of 1.875% exchangeable senior notes due 2021, or the 2021 Notes, to several investment banks acting as initial purchasers who subsequently resold the 2021 Notes to qualified institutional buyers. The net proceeds from this offering were approximately $558.9 million, after deducting initial purchasers' discounts and related offering expenses. We used a portion of the net proceeds from this offering to repay all then outstanding borrowings under the revolving credit facility provided for under our current credit agreement and intend to use the remainder of the net proceeds for general corporate purposes, including potential business development activities. For a more detailed discussion regarding our 2021 Notes, see "Liquidity and Capital Resources" below.

In 2013, we initiated purchases under a share repurchase program for up to $200 million of our ordinary shares. As of December 31, 2014, we had spent a total of $178.7 million, including brokerage commissions, to repurchase our ordinary shares under this program.

Over the past two years, we have made targeted investments to strengthen our operational capabilities to support our lead marketed products and product candidates in our primary therapeutic areas. During 2014, we reorganized our operations in Europe to focus on our hematology/oncology therapeutic area following the Gentium Acquisition and streamlined our U.S.

commercial operations to devote more resources to our lead marketed products. In the fourth quarter of 2014, we entered into an agreement to sell certain products acquired as part of the EUSA Acquisition and the related business. The sale, subject to certain closing conditions, is expected to close in the first half of 2015. We acquired a manufacturing facility located in Italy in the Gentium Acquisition that produces active pharmaceutical ingredients, including defibrotide, and commenced construction of a manufacturing and development facility in Ireland.

We anticipate that we will continue to face a number of challenges and risks to our business and our ability to execute our strategy in 2015. For example, while we now have a more diversified product portfolio than in the past, our financial results remain significantly influenced by sales of Xyrem, which accounted for 67.0% of our net product sales in 2014 and 65.8% of our net product sales in 2013. As a result, we continue to place a high priority on seeking to maintain and increase sales of Xyrem in its approved indications, while remaining focused on ensuring the safe and effective use of the product. We are also focusing on the lifecycle management of Xyrem, including seeking to enhance and enforce our intellectual property rights and to develop product, service and safety improvements for patients.

Our ability to maintain or increase Xyrem product sales is subject to a number of risks and uncertainties, including those discussed in Part I, Item 1A "Risk Factors" of this Annual Report on Form 10-K. In particular, five abbreviated new drug applications, or ANDAs, have been filed with the FDA by third parties seeking to market generic versions of Xyrem, including the most recent in the fourth quarter of 2014. We have initiated lawsuits against all five third parties, and the litigation proceedings are ongoing. We cannot predict the timing or outcome of these proceedings. Although no trial date has been set in any of the ANDA suits, we anticipate that trial on some of the patents in the case against the first ANDA filer, Roxane Laboratories, Inc., or Roxane, could occur as early as the third quarter of 2015. In addition, certain of the ANDA filers have sought to challenge the validity of our patents covering the distribution system for Xyrem by filing petitions for covered business method, or CBM, post-grant patent review and/or inter partes review, or IPR, by the Patent Trial and Appeal Board, or PTAB, of the U.S. Patent and Trademark Office, or USPTO. The PTAB has issued decisions denying institution of CBM review for all of the CBM petitions and has not yet determined whether to institute proceedings with respect to the petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings. We expect that the approval of an ANDA that results in the launch of a generic version of Xyrem, or the approval and launch of other sodium oxybate products that compete with Xyrem, would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We are continuing our efforts on various regulatory matters, including updating documents that we have submitted to the FDA on our risk management and controlled distribution system for Xyrem, which we refer to as the Xyrem Risk Management Program. We are engaged in ongoing communications with respect to our risk evaluation and mitigation strategies, or REMS, documents for Xyrem, but have not reached agreement with the FDA on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Among other things, we disagree with the FDA's position in the late 2013 notice that, as part of the current REMS process, the Xyrem deemed REMS should be modified to enable the distribution of Xyrem through more than one pharmacy, or potentially through retail pharmacies and wholesalers, as well as with certain modifications proposed by the FDA that would, in the FDA's view, be sufficient to ensure that the REMS includes only those elements necessary to ensure that the benefits of Xyrem outweigh its risks, and that would, in the FDA's view, reduce the burden on the healthcare system. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014. We received the FDA's denial of our initial dispute resolution submission in the second quarter of 2014, and our dispute is currently subject to further supervisory review at the next administrative level of the FDA. We have received interim responses from the FDA, but the FDA has not yet communicated a decision on our further appeal to us. We expect to receive the FDA's decision in the first quarter of 2015. We cannot predict whether, or on what terms, we will reach agreement with the FDA on final REMS documents for Xyrem, the outcome or timing of the current dispute resolution procedure, whether we will initiate additional dispute resolution proceedings with the FDA or other legal proceedings prior to finalizing the REMS documents, or the outcome or timing of any such proceedings. We expect that final REMS documents for Xyrem will include modifications to, and/or requirements that are not currently implemented in, the Xyrem Risk Management Program. Any such modifications or additional requirements could potentially make it more difficult or expensive for us to distribute Xyrem, make it easier for future generic competitors, and/or negatively affect sales of Xyrem.

We also expect to face pressure to license or share our Xyrem Risk Management Program, which is the subject of multiple issued patents, or elements of it, with generic competitors. In January 2014, the FDA held an initial meeting with us and the then-current Xyrem ANDA applicants to facilitate the development of a single shared system REMS for Xyrem (sodium oxybate). The parties have had numerous interactions with respect to a single shared system REMS since the initial meeting, and we expect the interactions to continue. In addition, if we do not develop a single shared system REMS or license or share our REMS with a generic competitor within a time frame or on terms that the FDA considers acceptable, the FDA may assert that its waiver authority permits it to allow the generic competitor to market a generic drug with a REMS that does not

include the same elements that are in our deemed REMS or, when Xyrem REMS documents are approved, with a separate REMS that includes different, but comparable, elements to assure safe use. Similarly, it is possible that, consistent with the position that the FDA articulated in its December 2012 response denying a Citizen Petition we filed in July 2012, the FDA could approve an ANDA with a risk management plan that is separate from our Xyrem deemed REMS, rather than with a final REMS or a shared REMS for both the generic and Xyrem. We cannot predict the outcome or impact on our business of any future action that we may take with respect to the development of a single shared system REMS for Xyrem (sodium oxybate), licensing or sharing our REMS, or the FDA's response to a certification that a third party had been unable to obtain a license.

Sales of our second largest product, Erwinaze/Erwinase, continue to grow. Sales of Erwinaze/Erwinase accounted for 17.2% of our net product sales in 2014 and 20.1% of our net product sales in 2013. We seek to maintain and increase sales of Erwinaze, as well as to make Erwinaze more widely available, through ongoing sales and marketing and research and development activities. However, our ability to successfully and sustainably maintain or grow sales of Erwinaze is subject to a number of risks and uncertainties, including the limited population of patients with ALL and the incidence of hypersensitivity reactions to *E. coli*-derived asparaginase within that population, our ability to obtain clinical data on the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase, as well as our need to apply for and receive marketing authorizations, through the EU's mutual recognition procedure or otherwise, in certain additional countries so we can launch promotional efforts in those countries, as well as those other risks and uncertainties discussed in Part I, Item 1A "Risk Factors" of this Annual Report on Form 10-K. In particular, a significant challenge to our ability to maintain current sales levels and to increase sales is our need to avoid supply interruptions of Erwinaze due to capacity constraints, production delays, quality challenges or other manufacturing difficulties. We have limited inventory of Erwinaze, which puts us at significant risk of not being able to meet product demand. The current manufacturing capacity for Erwinaze is nearly completely absorbed by demand for the product. As a consequence of constrained manufacturing capacity, we have had an extremely limited ability to build an excess level of product inventory that could be used to absorb disruptions to supply resulting from any quality or other issues. If we continue to be subject to capacity constraints or experience quality or other manufacturing challenges in the future, we may be unable to build a desired excess level of product inventory, and our ability to supply the market may be compromised. Although we are taking steps to improve the Erwinaze manufacturing process, if our ongoing efforts are not successful, we could experience additional Erwinaze supply interruptions in the future, which could have a material adverse effect on our sales of and revenues from Erwinaze and limit our potential future maintenance and growth of the market for this product. In addition, while we continue to work with the manufacturer of Erwinaze to evaluate potential steps to expand production capacity to increase the supply of Erwinaze over the longer term to address worldwide demand, our ability to maintain or increase sales of Erwinaze may be limited by our ability to obtain a sufficient supply of the product.

In furtherance of our growth strategy, we have made a significant investment in Defitelio. Our ability to realize the anticipated benefits from this investment is subject to a number of risks and uncertainties, including those discussed in Part I, Item 1A "Risk Factors" of this Annual Report on Form 10-K. In particular, we may not be able to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval in other countries, including the United States, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects. A key challenge to our success in maintaining or growing sales of Defitelio in Europe is our ability to obtain appropriate pricing and reimbursement approvals in those European countries where Defitelio is not yet launched. If we experience delays or unforeseen difficulties in obtaining favorable pricing and reimbursement approvals, planned launches in the affected countries would be delayed, or, if we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, especially where a country's reimbursed price influences other countries, our growth prospects in Europe could be negatively affected.

We do not expect to be required to complete any additional clinical trials prior to completion of the submission of an NDA for defibrotide in the United States. However, we may be unable to acquire and remediate key information to be included in the data package for the NDA in a timely manner or our analysis of such information may not support submission, which would delay or preclude the completion of our NDA submission, and we may be unable to otherwise obtain regulatory approval of defibrotide in the United States in a timely manner, if at all. We also face other challenges that could impact the anticipated value of Defitelio/defibrotide, including the limited size of the population of patients who undergo HSCT therapy and develop severe VOD, the need to establish U.S. pricing and reimbursement support for the product in the event we are able to obtain U.S. marketing approval for defibrotide, the possibility that we may be required to conduct time-consuming and costly clinical trials as a condition of any U.S. marketing approval for the product, the lack of experience of U.S. physicians in diagnosing and treating VOD, and challenges to our ability to develop the product for indications in addition to the treatment of severe VOD. If sales of Defitelio/defibrotide do not reach the levels we expect, our anticipated revenue from the product would be negatively affected, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

The implementation of our strategy is also subject to other challenges and risks specific to our business, as well as risks and uncertainties common to companies in the pharmaceutical industry with development and commercial operations. In

addition to risks specifically related to Xyrem, Erwinaze and Defitelio/defibrotide, other key challenges and risks that we face include risks and uncertainties related to:

- the challenges of protecting and enhancing our intellectual property rights;
- delays or problems in the supply or manufacture of our products, particularly with respect to certain products as to which we maintain limited inventories, including products for which our supply demands are growing, and our dependence on single source suppliers to continue to meet our ongoing commercial demand or our requirements for clinical trial supplies;
- the need to obtain and maintain appropriate pricing and reimbursement for our products in an increasingly challenging environment due to, among other things, the attention being paid to healthcare cost containment and other austerity measures in the United States and worldwide, including the need to obtain and maintain reimbursement for Xyrem in the United States in an environment in which we are subject to increasingly restrictive conditions for reimbursement required by third party payors;
- the challenges of compliance with the requirements of the FDA, the U.S. Drug Enforcement Administration, or DEA, and non-U.S. regulatory agencies, including with respect to product labeling, requirements for distribution, obtaining sufficient DEA quotas where needed, marketing and promotional activities, adverse event reporting and product recalls or withdrawals;
- the challenges of achieving and maintaining commercial success of our products, such as obtaining sustained acceptance of our products by patients, physicians and payors;
- the risks associated with business combination or product or product candidate acquisition transactions, such as the challenges inherent in the integration of acquired businesses with our historic business, the increase in geographic dispersion among our centers of operation, taking on the operation of a manufacturing plant as a result of the Gentium Acquisition and the risks that we may acquire unanticipated liabilities along with acquired businesses or otherwise fail to realize the anticipated benefits (commercial or otherwise) from such transactions;
- the difficulty and uncertainty of pharmaceutical product development, including the timing thereof, and the uncertainty of clinical success, such as the risk that results from preclinical studies and/or early clinical trials may not be predictive of results obtained in later and larger clinical trials planned or anticipated to be conducted for our product candidates;
- the inherent uncertainty associated with the regulatory approval process, especially as we continue to undertake increased activities and make growing investment in our product pipeline development projects;
- our ability to identify and acquire, in-license or develop additional products or product candidates to grow our business; and
- possible restrictions on our ability and flexibility to pursue certain future opportunities as a result of our substantial outstanding debt obligations, which increased significantly in 2014.

All of these risks are discussed in greater detail, along with other risks, in Part I, Item 1A “Risk Factors” of this Annual Report on Form 10-K.

Results of Operations

The following table presents revenues and expenses for the years ended December 31, 2014, 2013 and 2012 (amounts in thousands):

	2014 (1)	Change	2013	Change	2012 (2)
Product sales, net	$ 1,162,716	34%	$ 865,398	49 %	$ 580,527
Royalties and contract revenues	10,159	45%	7,025	29 %	5,452
Cost of product sales (excluding amortization of acquired developed technologies and intangible asset impairment)	117,418	15%	102,146	30 %	78,425
Selling, general and administrative	406,114	33%	304,303	36 %	223,882
Research and development	85,181	105%	41,632	103 %	20,477
Acquired in-process research and development	202,626	N/A(3)	4,988	N/A(3)	—
Intangible asset amortization	126,584	60%	79,042	21 %	65,351
Impairment charges	39,365	N/A(3)	—	N/A(3)	—
Interest expense, net	52,713	96%	26,916	60 %	16,869
Foreign currency (gain) loss	(8,683)	N/A(3)	1,697	(53)%	3,620
Loss on extinguishment and modification of debt	—	N/A(3)	3,749	N/A(3)	—
Income tax provision (benefit)	94,231	3%	91,638	N/A(3)	(83,794)
Net loss attributable to noncontrolling interests, net of tax	(1,061)	N/A(3)	—	N/A(3)	—

(1) Our financial results include the financial results of the historic Gentium business since the closing of the Gentium Acquisition on January 23, 2014.
(2) Our financial results include the financial results of the historic Azur Pharma and EUSA Pharma businesses since the completion of the Azur Merger on January 18, 2012 and the EUSA Acquisition on June 12, 2012. The following discussions of our results of operations exclude the results related to the women's health business sold in 2012 (see "Income from Discontinued Operations, Net of Taxes" below for more information). This business was segregated from continuing operations and reflected as a discontinued operation for the 2012 period.
(3) Comparison to prior period is not meaningful.

Revenues

The following table presents product sales, royalties and contract revenues, and total revenues for the years ended December 31, 2014, 2013 and 2012 (amounts in thousands):

	2014	Change	2013	Change	2012
Xyrem	$ 778,584	37 %	$ 569,113	50 %	$ 378,663
Erwinaze/Erwinase	199,665	15 %	174,251	142 %	72,083
Defitelio/defibrotide	70,537	N/A(1)	—	N/A(1)	—
Prialt® (ziconotide) intrathecal infusion	26,421	(3)%	27,103	3 %	26,360
Psychiatry	40,879	(17)%	49,226	(36)%	76,489
Other	46,630	2 %	45,705	70 %	26,932
Product sales, net	1,162,716	34 %	865,398	49 %	580,527
Royalties and contract revenues	10,159	45 %	7,025	29%	5,452
Total revenues	$ 1,172,875	34 %	$ 872,423	49 %	$ 585,979

(1) Comparison to prior period is not meaningful.

Product Sales, Net

Xyrem product sales increased in 2014 and 2013 compared to the immediately preceding years, primarily due to higher average net selling prices in the 2014 and 2013 periods and, to a lesser extent, increases in sales volume. Price increases in

2014 and 2013 were based on market analysis. Xyrem product sales volumes increased by 10% and 12% in 2014 and 2013, respectively, compared to the immediately preceding years. The sales volume increases in both periods were driven by an increase in the average number of patients on Xyrem and by a greater number of Xyrem patients who refilled their Xyrem prescriptions on schedule and who remained on therapy, which we believe resulted from our efforts to increase physician knowledge about Xyrem and to improve patient support services. Recently, we have seen higher growth in sales volume from new or previously infrequent physician prescribers who treat narcolepsy. We acquired Erwinaze/Erwinase in the EUSA Acquisition in June 2012. Erwinaze/Erwinase product sales increased by 15% in 2014 compared to 2013 primarily due to an increase in sales volume and, to a lesser extent, price increases in 2014. Erwinaze/Erwinase product sales increased in 2013 compared to 2012, primarily due to the inclusion of product sales for the full reporting period in 2013. On a pro forma basis, Erwinaze/Erwinase product sales increased by 32% in 2013 compared to 2012, primarily due to an increase in sales volume and, to a lesser extent, a price increase in January 2013. The Erwinaze/Erwinase sales volume increases in 2014 and 2013 were driven primarily by a growth in new treatment sites prescribing Erwinaze/Erwinase as well as existing treatment sites identifying additional ALL patients with hypersensitivity to *E. coli*-derived asparaginase. Defitelio/defibrotide product sales in 2014, beginning from the closing of the Gentium Acquisition on January 23, 2014, were $70.5 million. On a pro forma basis, Defitelio/defibrotide product sales in 2014 were $73.4 million compared with $44.6 million in 2013. On a pro forma basis, Defitelio/defibrotide product sales increased in 2014 compared to 2013 primarily due to territory-specific price increases instituted in April 2013, continuing roll-out to new launch territories and commercial pricing in launch territories. Prior to the commencement of the commercial launch of Defitelio in Europe in March 2014 we provided, and we continue to provide, access to defibrotide to patients where it is not commercially available. Prialt product sales decreased by 3% in 2014 compared to 2013 and increased by 3% in 2013 compared to 2012. Psychiatry product sales decreased in 2014 and in 2013 compared to the immediately preceding years, due to the launch of a generic version of Luvox CR® (fluvoxamine maleate) in 2013 and, to a lesser extent, the continued impact of the sale of the authorized generic product for FazaClo® (clozapine, USP) LD orally disintegrating clozapine tablets. Commencing in 2015, we discontinued sales representative-led promotion of our psychiatry products. We expect total product sales will increase in 2015 over 2014, primarily due to anticipated growth in sales of our lead marketed products, partially offset by decreases in sales of certain other products.

Royalties and Contract Revenues

Royalties and contract revenues increased in 2014 compared to 2013, primarily due to a $2.0 million milestone payment we received under an agreement with UCB Pharma Limited, or UCB, under which UCB has the right to market Xyrem for certain indications in various countries outside of the United States, and increased royalties in relation to our out-licensed products. Royalties and contract revenues increased in 2013 compared to 2012 due to royalties from the acquired EUSA Pharma business. We expect royalties and contract revenues in 2015 to be lower than 2014 due to the UCB milestone payment received in 2014.

Cost of Product Sales

Cost of product sales increased in 2014 compared to 2013, primarily due to increased sales and the cost of product sales in relation to products acquired in the Gentium Acquisition, including an increase in acquisition accounting inventory fair value step-up adjustments of $6.7 million. Cost of product sales increased in 2013 compared to 2012, primarily due to increased sales, partially offset by a decrease in acquisition accounting inventory fair value step-up adjustments. Gross margins as a percentage of net product sales were 89.9%, 88.2% and 86.5% in 2014, 2013 and 2012, respectively. The increase in our gross margin percentage in 2014 as compared to 2013 was primarily due to a change in product mix. The increase in our gross margin percentage in 2013 as compared to 2012 was primarily due to a decrease in acquisition accounting inventory fair value step-up adjustments of $13.0 million in 2013 compared to 2012. We expect our product gross margin in 2015 to be consistent with 2014.

Selling, General and Administrative Expenses

Selling, general and administrative expenses were higher in 2014 compared to 2013, primarily due to an increase in salary and benefit-related expenses (including share-based compensation expense) of $48.2 million, driven by increased headcount primarily due to our expanded business and the Gentium Acquisition, an increase in sales and promotional expenses of $23.7 million, an increase in transaction and integration expenses of $22.1 million and an increase in professional services expenses of $15.6 million, partially offset by a $15.2 million change in fair value of contingent consideration in connection with the EUSA Acquisition in 2012 in which we agreed to make a contingent payment of $50.0 million in cash if Erwinaze achieved net sales in the United States of $124.5 million or more in 2013. Selling, general and administrative expenses were higher in 2013 compared to 2012, primarily due to an increase in salary and benefit-related expenses (including share-based compensation expense) of $47.8 million, driven primarily by the expansion of our business, an increase in the change in fair value of the contingent consideration payable of $15.5 million, an increase in sales and promotional expenses of $10.8 million and an increase in facility and maintenance expenses of $7.2 million, partially offset by decreases in transaction, integration

and restructuring expenses of $13.9 million. We expect that selling, general and administrative expenses will be higher in 2015 than in 2014 due to an increase in direct marketing spend and support of our lead marketed products, increased legal expenses, costs of preparing for a potential launch of defibrotide in the United States and increased headcount to support our larger, global organization.

Research and Development Expenses

Research and development expenses consist primarily of personnel expenses, costs related to clinical studies and outside services, and other research and development costs. Personnel expenses relate primarily to salaries, benefits and share-based compensation. Clinical study and outside services costs relate primarily to services performed by clinical research organizations, materials and supplies, and other third party fees. Other research and development expenses primarily include overhead allocations consisting of various support and facilities-related costs. We do not track fully-burdened research and development expenses on a project-by-project basis. We manage our research and development expenses by identifying the research and development activities that we anticipate will be performed during a given period and then prioritizing efforts based on our assessment of what development activities are important to our business and have a reasonable probability of success, and by dynamically allocating resources accordingly. We also continually review our development pipeline projects and the status of their development and, as necessary, reallocate resources among our development pipeline projects that we believe will best support the future growth of our business.

The following table provides a breakout of our research and development expenses by major categories of expense (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Personnel expenses	$ 38,228	$ 22,019	10,432
Clinical studies and outside services	41,769	16,385	8,566
Other	5,184	3,228	1,479
Total	$ 85,181	$ 41,632	$ 20,477

Research and development expenses increased by $43.5 million in 2014 compared to 2013, primarily due to increased clinical studies and outside services costs of $25.4 million as a result of higher costs incurred to develop our sleep and hematology/oncology product candidates including, but not limited to, JZP-386, JZP-110 and JZP-416, as well as the addition of costs related to development programs for defibrotide. Personnel expenses increased by $16.2 million, primarily due to salary and benefit-related expenses (including share-based compensation) in support of our development programs and, to a lesser extent, increased headcount due to the Gentium Acquisition. Research and development expenses increased by $21.2 million in 2013 compared to 2012, primarily due to increased personnel expenses of $11.6 million due to a 40% increase in headcount and increased clinical studies and outside services costs of $7.8 million. Clinical studies and outside services costs increased in 2013 compared to 2012, primarily due to an increase in costs incurred to develop new product candidates that we acquired in the EUSA Acquisition, in addition to an increase in costs related to the development of line extensions for existing products and the generation of additional clinical data.

For 2015 and beyond, we expect that our research and development expenses will continue to increase substantially from historical levels due to planned clinical trials and development work. A discussion of the risks and uncertainties with respect to our research and development activities, including completing the development of our product candidates, and the consequences to our business, financial position and growth prospects can be found in Part I, Item 1A “Risk Factors” of this Annual Report on Form 10-K.

Acquired In-Process Research and Development

In 2014, we acquired the rights to defibrotide in the Americas from Sigma-Tau for an upfront payment of $75.0 million and we also acquired the worldwide development, manufacturing and commercial rights to JZP-110, other than in certain jurisdictions in Asia where SK retained rights, for an upfront payment of $125.0 million to Aerial. We also paid a $2.0 million milestone to SK, which was triggered on assignment of the JZP-110 rights from Aerial to us. In addition, we paid $0.6 million in license fees in connection with JZP-416. In 2013, we incurred $4.0 million in upfront license fees in connection with our licensing of JZP-386 and $1.0 million in license fees with respect to JZP-416.

Intangible Asset Amortization

The increase in amortization expense in 2014 compared to 2013 was primarily due to the Gentium Acquisition. We acquired finite-lived intangible assets of $734.4 million in connection with the Gentium Acquisition that are expected to be amortized over their weighted-average useful economic lives of approximately 16 years. The increase in amortization expense

in 2013 compared to 2012 was primarily due to the inclusion of a full year of amortization expense relating to the intangible assets acquired in the EUSA Acquisition. We expect intangible asset amortization to decrease in 2015 compared to 2014 as a result of the cessation of amortization on intangible assets classified as assets held for sale as of December 31, 2014 and certain other intangible assets becoming fully amortized in 2014.

Impairment Charges

In 2014, we recorded impairment charges of $39.4 million. The impairment charge resulted from the reorganization of our operations in Europe to focus on our hematology/oncology therapeutic area following the Gentium Acquisition and the decision to sell certain products acquired as part of the EUSA Acquisition. In the fourth quarter of 2014, we entered into a definitive agreement to sell these products and the related business for approximately $34 million in cash, subject to certain working capital adjustments. The sale, subject to certain closing conditions, is expected to close in the first half of 2015.

Interest Expense, Net

Interest expense, net increased by $25.8 million in 2014 compared to 2013, primarily due to a larger debt balance, partially offset by a decrease in interest rates associated with our long-term debt under our current credit agreement. In January 2014, in connection with the Gentium Acquisition, we incurred an additional $650.0 million in secured debt, including $350.0 million of incremental term loans and $300.0 million of loans under the revolving credit facility. As of December 31, 2014, $895.4 million principal amount of term loans was outstanding and the interest rate on these term loans was 3.25%. In August 2014, we issued $575.0 million principal amount of the 2021 Notes, which remained outstanding at December 31, 2014. We used a portion of the net proceeds from the issuance of the 2021 Notes to repay all then outstanding borrowings under the revolving credit facility. Interest expense, net increased by $10.0 million in 2013 compared to 2012 primarily due to a larger debt balance, with the inclusion of interest expense on the term loans we obtained under our credit agreement in June 2012 and on the term loans we obtained in connection with the first amendment of our credit agreement in June 2013. We expect interest expense will be higher in 2015 compared to 2014 due to the increase in our debt balance and the amortization of the debt discount on the 2021 Notes.

Foreign Currency (Gain) Loss

The foreign currency gain in 2014 primarily related to the translation of Euro denominated net monetary liabilities, including intercompany balances, held by subsidiaries with a U.S. dollar functional currency. The foreign currency loss in 2013 and 2012 related to the translation of foreign currency monetary assets and liabilities, including intercompany balances.

Loss on Extinguishment and Modification of Debt

We recorded a loss of $3.7 million in 2013 in connection with the June 2013 refinancing of the term loans under our credit agreement. This was comprised of $2.7 million related to the expensing of unamortized deferred financing costs and unamortized original issue discount associated with extinguished debt and $1.0 million related to new third party fees associated with modified debt.

Income Tax Provision (Benefit)

During 2014, we recognized an income tax provision of $94.2 million. The effective tax rate for 2014 was 62.2%. After adjusting the income before income tax provision for 2014 by excluding a total of $202.0 million in upfront and milestone payments for rights to JZP-110 and to defibrotide in the Americas, which were acquired by our subsidiaries in a non-taxable jurisdiction, the effective tax rate on the resulting income before income tax provision for 2014 was 26.7%. During 2013, we recognized an income tax provision of $91.6 million. Our 2013 effective tax rate from continuing operations was 29.8%. During 2012, we recognized an income tax benefit of $83.8 million relating to the United States, Ireland and other foreign jurisdictions. This tax benefit included a deferred tax benefit of $113.9 million, offset by an income tax provision of $30.1 million. The deferred tax benefit included a benefit of $104.2 million, primarily attributable to the release of a valuation allowance against substantially all of our U.S. federal and state deferred tax assets. Management determined that it was more likely than not that these deferred tax assets would be recoverable and the related valuation allowance was no longer needed based on an assessment of the relative impact of all positive and negative evidence that existed at December 31, 2012, including an evaluation of cumulative income in recent years, future sources of taxable income, and significant risks and uncertainties related to our business. The 2014 effective tax rate was higher than the Irish statutory rate of 12.5%, primarily due to income taxable at a rate higher than the Irish statutory rate, uncertain tax positions, current year losses in some jurisdictions for which no tax benefit is available and various expenses not deductible for tax purposes, partially offset by changes in U.S. state valuation allowances and benefits resulting from certain originating income tax credits. The 2013 effective tax rate was higher than the Irish statutory rate of 12.5%, primarily due to income taxable at a rate higher than the

Irish statutory rate, certain uncertain tax positions, current year losses in some jurisdictions for which no tax benefit is available and various expenses not deductible for tax purposes, partially offset by benefits from certain originating income tax credits. The 2012 effective income tax rate on continuing activities before utilization of our U.S. federal net operating loss carryforwards, or NOLs, and tax credit carryforwards and release in valuation allowance in 2012 of 42.5% was higher than the Irish statutory rate of 12.5% due to a number of factors, including income taxable at a rate higher than the Irish statutory rate, losses in certain tax jurisdictions for which no tax benefit is available and various expenses not deductible for tax purposes. The decrease in the effective tax rate, after excluding the upfront and milestone payments, for 2014 compared to 2013 was primarily due to changes in income mix among the various jurisdictions in which we operate, changes in valuation allowances and benefits from certain originating income tax credits. The decrease in the effective tax rate in 2013 compared to 2012 was primarily due to changes in income mix among the various jurisdictions in which we operate as well as higher taxes in 2012 relating to acquisition restructuring.

Net Loss Attributable to Noncontrolling Interests, Net of Tax

Net loss attributable to noncontrolling interests, net of tax relates to the portion of the net loss of Gentium not attributable, directly or indirectly, to our ownership interest. The net loss attributable to noncontrolling interests, net of tax was $1.1 million in 2014.

Income from Discontinued Operations, Net of Taxes

In 2012, we sold our women's health business to Meda Pharmaceuticals Inc. and Meda Pharma, Sàrl, or collectively, Meda, for $97.6 million, including $2.6 million for certain inventory transferred to Meda upon the closing of the sale, less transaction costs of $3.7 million. As part of the transaction, Meda purchased six women's health products from us. As part of the sale, approximately 60 employees who directly supported the women's health business became Meda employees. We recorded a non-recurring gain on the sale of $35.2 million.

Net revenue and income from discontinued operations were as follows (in thousands):

	Year Ended December 31, 2012
Product sales, net	$ 20,873
Loss from discontinued operations before income taxes (1)	$ (5,787)
Income tax expense (1)	(2,020)
Loss from discontinued operations, net of taxes	(7,807)
Gain on sale of discontinued operations (2)	35,244
Income from discontinued operations, net of taxes	$ 27,437

(1) The income tax expense related to profits generated by the women's health business in 2012 which were attributable to the United States.
(2) The gain on sale of discontinued operations was not impacted by income taxes as the value attributable to the women's health business was held in a non-taxable jurisdiction.

Non-GAAP Financial Measures

To supplement our financial results presented on a U.S. generally accepted accounting principles, or GAAP, basis, we use certain non-GAAP, also referred to as adjusted or non-GAAP adjusted, financial measures as shown in the table below. We believe that each of these non-GAAP financial measures is helpful in understanding our past financial performance and potential future results, particularly in light of the effect of various acquisition and divestiture transactions effected by us. They are not meant to be considered in isolation or as a substitute for comparable GAAP measures, and should be read in conjunction with our consolidated financial statements prepared in accordance with GAAP. Our management regularly uses these supplemental non-GAAP financial measures internally to understand, manage and evaluate our business and make operating decisions. Compensation of our executives is based in part on the performance of our business based on certain of these non-GAAP financial measures. In addition, we believe that the presentation of these non-GAAP financial measures is useful to investors because it enhances the ability of investors to compare our results from period-to-period and allows for greater transparency with respect to key financial metrics we use in making operating decisions, and also because our investors and analysts regularly use them to model and track our financial performance. Investors should note that these non-GAAP financial measures are not prepared under any comprehensive set of accounting rules or principles and do not reflect all of the amounts associated with our results of operations as determined in accordance with GAAP. Investors should also note that these non-

GAAP financial measures have no standardized meaning prescribed by GAAP and, therefore, have limits in their usefulness to investors. In addition, from time-to-time in the future there may be other items that we may exclude for purposes of our non-GAAP financial measures; likewise, we have ceased and may in the future cease to exclude items that we have historically excluded for purposes of our non-GAAP financial measures. In this regard, we have determined that, beginning with results to be reported for the first quarter of 2015, we will no longer include an adjustment for depreciation expense in our non-GAAP financial measures. Accordingly, any historical non-GAAP financial measures presented by us in the future, beginning with financial results to be reported for the first quarter of 2015, will not include an adjustment for depreciation expense. Any comparative historical periods presented will be updated to reflect this change beginning with financial results to be reported for the first quarter of 2015. However, for purposes of comparability with the company's prior presentations of non-GAAP financial measures, the historical non-GAAP financial measures presented in the table below include an adjustment for depreciation expense. In addition, because of the non-standardized definitions of non-GAAP financial measures, the non-GAAP financial measures used in this Annual Report on Form 10-K may be calculated differently from, and therefore may not be directly comparable to, similarly titled measures used by our competitors and other companies. In the table below, adjusted net income measures attributable to Jazz Pharmaceuticals plc (and the related per share measures) exclude from GAAP reported income from continuing operations attributable to Jazz Pharmaceuticals plc (and the related per share measures), as applicable, intangible asset amortization, share-based compensation expense, acquired in-process research and development, impairment charges, transaction and integration costs, acquisition accounting inventory fair value step-up adjustments, depreciation expense, restructuring charges, change in fair value of contingent consideration, loss on extinguishment and modification of debt and non-cash interest expense; adjust the income tax provision to the estimated amount of taxes payable in cash; and adjust for the amount attributable to noncontrolling interests.

Reconciliations of GAAP reported income from continuing operations attributable to Jazz Pharmaceuticals plc to non-GAAP adjusted net income attributable to Jazz Pharmaceuticals plc and the related per share amounts are as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2014	2013	2012
GAAP reported income from continuing operations attributable to Jazz Pharmaceuticals plc	$ 58,387	$ 216,312	$ 261,149
Intangible asset amortization	126,584	79,042	65,351
Share-based compensation expense	69,638	44,551	23,006
Acquired in-process research and development	202,626	4,988	—
Impairment charges	39,365	—	—
Transaction and integration costs	28,840	6,240	18,821
Acquisition accounting inventory fair value step-up adjustments	10,477	3,826	16,794
Depreciation expense	7,097	3,048	—
Restructuring charges	1,941	1,457	2,789
Change in fair value of contingent consideration	—	15,200	(300)
Loss on extinguishment and modification of debt	—	3,749	—
Non-cash interest expense	13,725	4,591	2,860
Income tax adjustments (1)	(29,620)	5,253	(100,076)
Adjustments for amount attributable to noncontrolling interests (2)	(1,506)	—	—
Non-GAAP adjusted net income attributable to Jazz Pharmaceuticals plc (3)	$ 527,554	$ 388,257	$ 290,394
GAAP reported income from continuing operations attributable to Jazz Pharmaceuticals plc per diluted share	$ 0.93	$ 3.51	$ 4.34
Non-GAAP adjusted net income attributable to Jazz Pharmaceuticals plc per diluted share	$ 8.43	$ 6.31	$ 4.82
Shares used in computing GAAP reported income from continuing operations attributable to Jazz Pharmaceuticals plc and non-GAAP adjusted net income attributable to Jazz Pharmaceuticals plc per diluted share amounts	62,614	61,569	60,195

(1) Tax adjustments to convert the income tax provision to the estimated amount of taxes payable in cash. In 2012, income tax adjustments included a valuation allowance reversal of $104.2 million against deferred tax assets, primarily in the United States.

(2) The noncontrolling interests' share of the above adjustments, as applicable.
(3) Non-GAAP adjusted net income and non-GAAP adjusted net income per diluted share attributable to Jazz Pharmaceuticals plc in the table above exclude the impact of discontinued operations.

Liquidity and Capital Resources

As of December 31, 2014, we had cash and cash equivalents of $684.0 million, borrowing availability under the revolving credit facility of $425.0 million and long-term debt of $1,472.0 million. Our long-term debt included $895.4 million aggregate principal amount of term loans, $575.0 million principal amount of the 2021 Notes and other borrowings of $1.7 million. During 2014, 2013 and 2012, we generated cash flows from operations of $405.8 million, $288.6 million and $249.8 million, respectively, and we expect to continue to generate positive cash flow from operations.

In January 2014, we amended our credit agreement to provide for $350.0 million aggregate principal amount of incremental term loans, a tranche of term loans that refinanced the approximately $554.4 million aggregate principal amount of term loans previously outstanding, and a $425.0 million revolving credit facility that replaced our $200.0 million revolving credit facility. We used the proceeds from the incremental term loans and $300.0 million of loans under the revolving credit facility, together with cash on hand, to purchase approximately 98% of the outstanding and fully diluted Gentium ordinary shares and ADSs in January and February 2014. As of December 31, 2014, we had acquired a further 1.8% interest in Gentium for cash consideration of $17.8 million, resulting in an aggregate acquisition cost to us of $994.1 million, comprising cash payments of $1,011.2 million, offset by proceeds from the exercise of Gentium share options of $17.1 million. In August 2014, we completed the private placement of the 2021 Notes resulting in net proceeds to us, after debt issuance costs, of approximately $558.9 million. We used a portion of the net proceeds from the issuance of the 2021 Notes to repay all then outstanding borrowings under the revolving credit facility provided for under our current credit agreement and intend to use the remainder of the net proceeds for general corporate purposes, including potential business development activities.

In January 2014, we entered into an asset purchase agreement with Aerial to acquire the worldwide development, manufacturing and commercial rights to JZP-110, other than in certain jurisdictions in Asia where SK retains rights. Under the agreement, we made an upfront payment of $125.0 million to Aerial. We also paid a $2.0 million milestone to SK on assignment of the JZP-110 rights from Aerial to us. We are obligated to make milestone payments, in an aggregate amount of up to $270.0 million, based on development, regulatory and sales milestones and to pay tiered royalties from high single digits to mid-teens based on potential future sales of JZP-110.

In July 2014, we signed a definitive agreement to acquire rights to defibrotide in the United States and all other countries in the Americas from Sigma-Tau. Pursuant to the agreement, upon the closing of the transaction in August 2014, we paid Sigma-Tau an upfront payment of $75.0 million. Sigma-Tau is also eligible to receive milestone payments of $25.0 million upon the acceptance for filing by the FDA of the first NDA for defibrotide for VOD and up to an additional $150.0 million based on the timing of potential FDA approval of defibrotide for VOD. We funded the upfront payment with cash on hand.

In connection with the EUSA Acquisition in 2012, we agreed to make a contingent payment of $50.0 million in cash if Erwinaze achieved net sales in the United States of $124.5 million or more in 2013. This net sales milestone was achieved in the fourth quarter of 2013, and as a result we made the contingent payment in the first quarter of 2014.

We believe that our existing cash balances, cash we expect to generate from operations and funds available under our revolving credit facility will be sufficient to fund our operations, to fund our share repurchase program and to meet our existing obligations for the foreseeable future, including our obligations under our current credit agreement. The adequacy of our cash resources depends on many assumptions, including primarily our assumptions with respect to product sales and expenses, as well as the other factors set forth in Part I, Item 1A "Risk Factors" of this Annual Report on Form 10-K under the headings *"Xyrem is our largest selling product, and our inability to maintain or increase sales of Xyrem would have a material adverse effect on our business, financial condition, results of operations and growth prospects," "If generic versions of Xyrem or other sodium oxybate products that compete with Xyrem are approved and launched, sales of Xyrem would be adversely affected," "The manufacture, distribution and sale of Xyrem are subject to significant regulatory oversight and restrictions and the requirements of a risk management program, and these restrictions and requirements, as well as the potential impact of changes to these restrictions and requirements, subject us to increased risks and uncertainties, any of which could negatively impact sales of Xyrem,"* and *"To continue to grow our business, we will need to commit substantial resources, which could result in future losses or otherwise limit our opportunities or affect our ability to operate our business."* Our assumptions may prove to be wrong or other factors may adversely affect our business, and as a result we could exhaust or significantly decrease our available cash resources which could, among other things, force us to raise additional funds and/or force us to reduce our expenses, either of which could have a material adverse effect on our business.

To continue to grow our business over the longer term, we plan to commit substantial resources to product acquisition and in-licensing, product development, clinical trials of product candidates and expansion of our commercial, manufacturing and other operations. In this regard, we have evaluated and expect to continue to evaluate a wide array of strategic transactions as part of our strategy to acquire or in-license and develop additional products and product candidates. Acquisition opportunities that we pursue could materially affect our liquidity and capital resources and may require us to incur additional indebtedness, seek equity capital or both. In addition, we may pursue new operations or continue the expansion of our existing operations, such as the construction and opening of a manufacturing and development facility in Ireland announced in February 2014, in which we expect to invest approximately €45 to €50 million. Accordingly, we expect to continue to opportunistically seek access to additional capital to license or acquire additional products, product candidates or companies, to expand our operations or for general corporate purposes. Raising additional capital could be accomplished through one or more public or private debt or equity financings, collaborations or partnering arrangements. Any equity financing would be dilutive to our shareholders, and the consent of the lenders under our current credit agreement could be required for certain financings.

In May 2013, our board of directors authorized a share repurchase program pursuant to which we may repurchase a number of ordinary shares having an aggregate repurchase price of up to $200.0 million, exclusive of any brokerage commissions. The authorization became effective immediately and has no set expiration date. Under this authorization, we may repurchase our ordinary shares through open market purchases, privately negotiated purchases or a combination of these transactions. The timing and amount of repurchases depends on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, restrictions under our credit agreement, corporate and regulatory requirements and market conditions. Share repurchases may be suspended or discontinued at any time without prior notice. In 2014, we spent a total of $42.2 million to repurchase 0.3 million of our ordinary shares under the share repurchase program at an average total purchase price, including brokerage commissions, of $138.64 per share. All ordinary shares repurchased were canceled. As of December 31, 2014, the remaining amount authorized under the share repurchase program was $21.3 million.

The following table shows a summary of our cash flows for the periods indicated (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Net cash provided by operating activities	$ 405,765	$ 288,604	$ 249,752
Net cash used in investing activities	(1,067,649)	(16,264)	(395,294)
Net cash provided by (used in) financing activities	712,875	(24,029)	448,530
Effect of exchange rates on cash and cash equivalents	(3,453)	997	2,132
Net increase in cash and cash equivalents	$ 47,538	$ 249,308	$ 305,120

Net cash provided by operating activities of $405.8 million in 2014 related to net income of $57.3 million, adjusted for upfront and milestone payments totaling $202.6 million primarily in connection with our acquisition of rights to JZP-110 and to defibrotide in the Americas and non-cash items of $212.2 million primarily related to intangible asset amortization, share-based compensation expense, impairment charges, acquisition accounting inventory fair value step-up adjustments and deferred income taxes. This was partially offset by $66.3 million of net cash outflow related to changes in operating assets and liabilities which included an increase of $55.0 million in our accounts receivable, primarily due to an increase in sales, and $14.9 million in respect of the payment of the contingent consideration in connection with the EUSA Acquisition. Net cash provided by operating activities of $288.6 million in 2013 related to net income of $216.3 million, adjusted for non-cash items of $153.3 million, primarily related to intangible asset amortization, share-based compensation expense and the change in fair value of contingent consideration. This was partially offset by $81.0 million of net cash outflow related to changes in operating assets and liabilities which included an increase in accounts receivable of $48.8 million, primarily related to a pre-negotiated change in payment terms under a long-term contract with one large customer in connection with the elimination of a prompt pay discount as well as the impact of income tax payments. The revised payment terms will continue to result in higher accounts receivable balances in future periods that will reduce net cash from operating activities in those periods. However, we do not anticipate that the change in payment terms will result in potential collectability difficulties nor do we expect that the change will materially impact our liquidity. Net cash provided by operating activities of $249.8 million in 2012 related to net income of $288.6 million, offset by non-cash items of $33.7 million, primarily related to deferred income taxes, and by a net cash outflow of $5.2 million related to changes in operating assets and liabilities.

Net cash used in investing activities in 2014 primarily related to the funding of the Gentium Acquisition, the acquisition of rights to JZP-110 and to defibrotide in the Americas and, to a lesser extent, expenditures related to property and equipment. Net cash used in investing activities in 2013 primarily related to purchases of property and equipment and acquisition of in-process research and development. Net cash used in investing activities in 2012 primarily related to funding the EUSA Acquisition, partially offset by net proceeds of $93.9 million from the sale of our women’s health business and net proceeds from the sales and maturities of investments of $75.8 million.

Net cash provided by financing activities in 2014 primarily related to net proceeds of $1,194.4 million from our long-term debt and proceeds of $58.5 million from employee equity incentive and purchase plans and exercise of warrants, partially offset by $300.0 million used to repay outstanding borrowings under the revolving credit facility, $137.0 million for the acquisition of noncontrolling interests in Gentium, $35.1 million in respect of the payment of the contingent consideration in connection with the EUSA Acquisition and $42.2 million used to repurchase our ordinary shares under our share repurchase program. Net cash used in financing activities in 2013 primarily related to repayments totaling $465.9 million, primarily for the full principal amount outstanding under the original term loans, $136.5 million used to repurchase our ordinary shares under our share repurchase program and payments totaling $5.6 million of income tax withholdings on behalf of employees related to the net share settlement of vested RSUs, partially offset by net proceeds of $553.4 million from our term loans under the June 2013 amendment to our credit agreement and proceeds of $30.7 million from employee equity incentive and purchase plans and exercise of warrants. Net cash provided by financing activities in 2012 primarily related to net proceeds of $450.9 million from the original term loans and proceeds of $25.0 million from employee equity incentive and purchase plans and exercise of warrants, partially offset by payments totaling $25.3 million of income tax withholdings on behalf of certain employees related to the net share settlement of exercised share options in connection with the Azur Merger.

Credit Agreement

As discussed above, we entered into a credit agreement in July 2012 in connection with the EUSA Acquisition, and we subsequently amended the credit agreement in July 2013 and January 2014. After giving effect to the January 2014 amendment, the current credit agreement provides for $904.4 million principal amount of term loans and a $425.0 million revolving credit facility. The term loans under the credit agreement have a June 12, 2018 maturity date and the borrowings under the revolving credit facility have a June 12, 2017 maturity date.

As a result of the June 2013 amendment, the interest rate margins on the term loans and the revolving loans were reduced by 150 basis points, and as a result of the January 2014 amendment, the interest rate margins on the terms loans were reduced by a further 25 basis points. The term loans under the current credit agreement bear interest, at our option, at a rate equal to either the LIBOR, plus an applicable margin of 2.50% per annum (subject to a 0.75% LIBOR floor), or the prime lending rate, plus an applicable margin equal to 1.50% per annum (subject to a 1.75% prime rate floor). Borrowings under the current revolving credit facility bear interest, at our option, at a rate equal to either the LIBOR, plus an applicable margin of 2.50% per annum, or the prime lending rate, plus an applicable margin equal to 1.50% per annum, subject to reduction by 0.25% or 0.50% based upon our secured leverage ratio. The revolving credit facility has a commitment fee payable on the undrawn amount ranging from 0.25% to 0.50% per annum based upon our secured leverage ratio. As of December 31, 2014, the interest rate on the outstanding term loans was 3.25%.

Certain of our wholly-owned subsidiaries are borrowers under the credit agreement. The borrowers' obligations under the credit agreement, and any hedging or cash management obligations entered into with a lender or an affiliate of a lender, are guaranteed on a senior secured basis by Jazz Pharmaceuticals plc and certain of its subsidiaries (including the issuer of the 2021 Notes as described below) and are secured by substantially all of Jazz Pharmaceuticals plc's, the borrowers' and the guarantor subsidiaries' assets.

We may make voluntary prepayments of principal at any time without payment of a premium. We are required to make mandatory prepayments of the term loans (without payment of a premium) with (1) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (2) net cash proceeds from issuances of debt (other than certain permitted debt), (3) 50% of our excess cash flow as defined in the current credit agreement (subject to decrease to 25% if our total leverage ratio is equal to or less than 2.25 to 1.00 and greater than 1.25 to 1.00 or 0% if our total leverage ratio is equal to or less than 1.25 to 1.00), and (4) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions).

Principal repayments of the term loans, which are due quarterly, began in March 2014 and are equal to 1.0% per annum of the original principal amount of $904.4 million, with any remaining balance payable on the final maturity date.

Our credit agreement contains customary representations and warranties and customary affirmative and negative covenants applicable to us and our restricted subsidiaries, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness and dividends and other distributions. The credit agreement also contains a financial covenant that requires us and our restricted subsidiaries to maintain a maximum secured leverage ratio. We were, as of December 31, 2014, and are currently in compliance with this financial covenant.

2021 Notes

In August 2014, Jazz Pharmaceuticals plc, through its wholly-owned finance subsidiary Jazz Investments I Limited, completed a private placement of $575.0 million principal amount of the 2021 Notes. The 2021 Notes are the senior unsecured

obligations of Jazz Investments I Limited and are fully and unconditionally guaranteed on a senior unsecured basis by Jazz Pharmaceuticals plc. Interest on the 2021 Notes is payable semi-annually in cash in arrears on February 15 and August 15 of each year, beginning on February 15, 2015, at a rate of 1.875% per year. In certain circumstances, we may be required to pay additional amounts as a result of any applicable tax withholding or deductions required in respect of payments on the 2021 Notes. The 2021 Notes mature on August 15, 2021, unless earlier exchanged, repurchased or redeemed.

The holders of the 2021 Notes have the ability to require us to repurchase all or a portion of their 2021 Notes for cash in the event we undergo certain fundamental changes, such as specified change of control transactions, our liquidation or dissolution or the delisting of our ordinary shares from The NASDAQ Global Select Market. Prior to August 15, 2021, we may redeem the 2021 Notes, in whole but not in part, subject to compliance with certain conditions, if we have, or on the next interest payment date would, become obligated to pay to the holder of any 2021 Note additional amounts as a result of certain tax-related events. We also may redeem the 2021 Notes on or after August 20, 2018, in whole or in part, if the last reported sale price per ordinary share has been at least 130% of the exchange price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide the notice of redemption.

The 2021 Notes are exchangeable at an initial exchange rate of 5.0057 ordinary shares per $1,000 principal amount of 2021 Notes, which is equivalent to an initial exchange price of approximately $199.77 per ordinary share. Upon exchange, the 2021 Notes may be settled in cash, ordinary shares or a combination of cash and ordinary shares, at our election. Our intent and policy is to settle the principal amount of the 2021 Notes in cash upon exchange. 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 make-whole fundamental changes occurring prior to the maturity date of the 2021 Notes or upon our issuance of a notice of redemption, we will in certain circumstances increase the exchange rate for holders of the 2021 Notes who elect to exchange their 2021 Notes in connection with that make-whole fundamental change or during the related redemption period. Prior to February 15, 2021, the 2021 Notes will be exchangeable only upon satisfaction of certain conditions and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the maturity date.

Contractual Obligations

The table below presents a summary of our contractual obligations as of December 31, 2014 (in thousands):

	Payments due by period				
Contractual Obligations (1)	**Total**	**Less than 1 Year**	**1-3 Years**	**3-5 Years**	**More than 5 years**
Term and other loans - principal	$ 897,042	$ 9,428	$ 18,871	$ 868,593	$ 150
Term and other loans - interest (2)	100,297	29,451	58,048	12,792	6
2021 Notes - principal	575,000	—	—	—	575,000
2021 Notes - interest (3)	75,529	10,841	21,562	21,563	21,563
Revolving credit facility - commitment fee (4)	3,958	1,616	2,342	—	—
Purchase obligations (5)	36,343	34,583	400	410	950
Operating lease obligations (6)	25,046	10,165	12,767	2,114	—
Total	$ 1,713,215	$ 96,084	$ 113,990	$ 905,472	$ 597,669

(1) This table does not include potential future milestone payment or royalty obligations to third parties under asset purchase, product development, license and other agreements as the timing and likelihood of such milestone payments are not known, and, in the case of royalty obligations, as the amount of such obligations are not estimable. In 2014, we signed a definitive agreement with Aerial under which we acquired worldwide development, manufacturing and commercial rights to JZP-110 (other than in certain jurisdictions in Asia where SK retains rights). Under the agreement, Aerial received an upfront payment of $125.0 million and SK received a milestone payment of $2.0 million. Aerial and SK are eligible to receive additional milestone payments up to an aggregate of $270.0 million based on development, regulatory and sales milestones and tiered royalties from high single digits to mid-teens based on potential future sales of JZP-110. In 2014, we entered into a definitive agreement to acquire rights to defibrotide in the United States and all other countries in the Americas from Sigma-Tau. Pursuant to the agreement, upon the closing of the transaction in 2014, we paid Sigma-Tau an upfront payment of $75.0 million. Sigma-Tau is also eligible to receive milestone payments of $25.0 million upon the acceptance for filing by the FDA of the first NDA for defibrotide for VOD and up to an additional $150.0 million based on the timing of potential FDA approval of defibrotide for VOD. Potential future milestone payments to other third parties under other agreements could be up to an aggregate of $286.0 million, of

which up to $120.0 million will become due and payable to Perrigo Company plc (formerly Elan Pharmaceuticals, Inc.) in tiered contingent payments, with the first such payment becoming due if net sales of Prialt of at least $75.0 million are achieved in a calendar year. The remainder would become due and payable to other third parties upon the achievement of certain developmental, clinical, regulatory and/or commercial milestones, the timing and likelihood of which are not known. We are also obligated under these agreements to pay royalties on net sales of certain products at specified rates, which royalties are dependent on future product sales and are not provided for in the table above as they are not estimable.

(2) The interest rate was 3.25% at December 31, 2014, which we used to estimate interest owed on the term loans outstanding as of December 31, 2014 until the final maturity date in June 2018.

(3) We used the fixed interest rate of 1.875% to estimate interest owed on the 2021 Notes as of December 31, 2014 until the final maturity date in August 2021.

(4) Our revolving credit facility has a commitment fee payable on the undrawn amount ranging from 0.25% to 0.50% per annum based upon our secured leverage ratio. In the table above, we used a rate of 0.375% and assumed undrawn amounts of $425.0 million to estimate commitment fees owed.

(5) Consists primarily of non-cancelable commitments to third party manufacturers.

(6) Includes the minimum lease payments for our office buildings, manufacturing plant and automobile lease payments for our sales force.

In January 2015, we entered into an agreement to lease approximately 100,000 square feet of office space in Palo Alto, California. We expect to occupy this office space by the end of 2017. This lease has a term of 12 years from commencement, and we have an option to extend the term of the lease twice for a period of five years each. As a result, we are obligated to make lease payments over the initial term of the lease totaling approximately $96 million in addition to estimated operating expenses totaling $25 million. We also have an option to terminate this lease 10 years from commencement, with no less than one year's prior written notice and the payment of a termination fee. The obligations related to this lease are not included in the table above.

No provision for income tax in Ireland has been recognized on undistributed earnings of our foreign subsidiaries because we consider such earnings to be indefinitely reinvested. Cumulative unremitted earnings of our foreign subsidiaries totaled approximately $736.9 million at December 31, 2014. In the event of the distribution of those earnings in the form of dividends or otherwise, we may be liable for income taxes, subject to an adjustment, if any, for foreign tax credits and foreign withholding taxes payable to certain foreign tax authorities. As of December 31, 2014, it is not practicable to determine the amount of the income tax liability related to these undistributed earnings due to a variety of factors.

As of December 31, 2014, our liability for unrecognized tax benefits amounted to $40.8 million (including 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 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.

Critical Accounting Policies and Significant Estimates

A critical accounting policy is one that is both important to the portrayal of our financial condition and results of operations and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. While our significant accounting policies are more fully described in Note 2 of the Notes to the Consolidated Financial Statements included in this Annual Report on Form 10-K, we believe the following accounting estimates and policies to be critical.

Revenue Recognition

Revenues are recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable and collection is reasonably assured.

Product Sales, Net

Product sales revenue is recognized when title has transferred to the customer and the customer has assumed the risks and rewards of ownership, which is typically on delivery to the customer or, in the case of products that are subject to consignment agreements, when the customer removes product from our consigned inventory location for shipment directly to a patient.

A significant portion of our net product revenues are derived from sales of Xyrem. We sell Xyrem in the United States to a single central pharmacy, Express Scripts Specialty Distribution Services and its affiliate CuraScript, Inc., or Express Scripts. In 2014, sales of Xyrem to Express Scripts accounted for 66.9% of our net product sales. We recognize revenues from sales of

Xyrem within the United States upon transfer of title, which occurs when Express Scripts removes product from our consigned inventory location at its facility for shipment directly to a patient. We accept returns from and provide Express Scripts with a credit for any product returned by patients to Express Scripts with defects that were not reasonably discoverable upon receipt of the consigned product by Express Scripts. Based on our experience over the past eight years, product returns to Express Scripts from patients are rare; during 2014, we issued credits totaling less than $0.1 million to Express Scripts for returned product.

Items Deducted from Gross Product Sales. Revenues from sales of products are recorded net of government rebates and rebates under managed care plans, estimated allowances for sales returns, government chargebacks, prompt payment discounts, patient coupon programs, and specialty distributor and wholesaler fees. Calculating certain of these items involves estimates and judgments based on sales or invoice data, contractual terms, historical utilization rates, new information regarding changes in applicable regulations and guidelines that would impact the amount of the actual rebates, our expectations regarding future utilization rates and channel inventory data. We review the adequacy of our provisions for sales deductions on a quarterly basis. Amounts accrued for sales deductions are adjusted when trends or significant events indicate that adjustment is appropriate and to reflect actual experience. Because we derive a significant portion of our revenues from sales of Xyrem in the United States to one specialty pharmacy customer, Express Scripts, we have a much higher level of knowledge about each prescription than if we sold the product through the normal pharmaceutical wholesaler channel as we do with most of our other products. The most significant items deducted from gross product sales where we exercise judgment are rebates, sales returns and chargebacks.

The following table presents the activity and ending balances for our sales-related accruals and allowances (in thousands):

	Rebates Payable	Sales Returns Reserve	Chargebacks	Discounts and Distributor Fees	Total
Balance at December 31, 2011	$ 10,777	$ 4,302	$ 20	$ 1,767	$ 16,866
Additions relating to acquisitions	8,809	18,833	—	911	28,553
Provision (1)	52,603	9,733	13,072	35,161	110,569
Payments/credits	(46,942)	(6,483)	(10,556)	(34,193)	(98,174)
Balance at December 31, 2012 (2)	25,247	26,385	2,536	3,646	57,814
Provision	66,895	2,836	21,777	51,432	142,940
Payments/credits	(60,584)	(8,111)	(19,903)	(49,188)	(137,786)
Balance at December 31, 2013 (2)	31,558	21,110	4,410	5,890	62,968
Provision	88,729	3,148	28,722	71,864	192,463
Payments/credits	(75,854)	(10,219)	(28,588)	(71,879)	(186,540)
Balance at December 31, 2014 (2)	$ 44,433	$ 14,039	$ 4,544	$ 5,875	$ 68,891

(1) The 2012 provision includes rebates, sales returns, chargebacks, and discounts and distributor fees related to our discontinued women's health business of $1.2 million, $3.8 million, $0.8 million and $2.4 million, respectively. The women's health business was acquired and disposed of in 2012.
(2) Includes both continuing operations and discontinued operations to date of disposal.

Total items deducted from gross product sales from continuing operations were $192.5 million, $142.9 million and $102.4 million, or 14.2%, 14.2% and 15.0% as a percentage of gross product sales from continuing operations, for the years ended December 31, 2014, 2013 and 2012, respectively. Included in these amounts are immaterial adjustments related to prior-year sales due to changes in estimates. Such amounts represented less than 1% of net product sales for each of the years ended December 31, 2014, 2013 and 2012.

Rebates

We are subject to rebates on sales made under governmental and managed-care pricing programs in the United States. The largest of these rebates is associated with sales covered by Medicaid. We participate in state government-managed Medicaid programs as well as certain other qualifying federal and state government programs under the terms of which discounts and rebates are provided to participating government entities. We offer rebates and discounts to managed health care organizations in the United States. In estimating our provisions for rebates, we consider relevant statutes with respect to governmental pricing programs and contractual sales terms with managed-care providers and group purchasing organizations. We estimate the rebate provision based on historical utilization rates, historical payment experience, new information regarding changes in regulations and guidelines that would impact the amount of the actual rebates, our

expectations regarding future utilization rates and channel inventory data obtained from our major U.S. wholesalers in accordance with our inventory management agreements. Estimating these rebates is complex, in part due to the time delay between the date of sale and the actual settlement of the liability. We believe that the methodology we use to estimate rebates on product sales made under governmental and managed-care pricing programs is reasonable and appropriate given current facts and circumstances. However, estimates may vary from actual experience.

Rebates from continuing operations were $88.7 million, $66.9 million and $51.4 million, or 6.5%, 6.6% and 7.5% as a percentage of gross product sales from continuing operations, for the years ended December 31, 2014, 2013 and 2012, respectively. Rebates as a percentage of gross product sales did not materially change in 2014 compared to 2013. Rebates as a percentage of gross product sales decreased in 2013 compared to 2012 primarily due to our exiting certain programs for certain products and the impact of generics on per-unit rebate amounts. We expect that rebates will continue to significantly impact our reported net sales. However, rebates as a percentage of gross product sales are not expected to change materially in 2015 compared to 2014.

Sales returns

For certain products, we allow customers to return product within a specified period before and after the applicable expiration date and issue credits which may be applied against existing or future invoices. We account for sales returns as a reduction in net revenue at the time a sale is recognized by establishing an accrual in an amount equal to the estimated value of products expected to be returned. The sales return accrual is estimated principally based on historical experience, the level and estimated shelf life of inventory in the distribution channel, our return policy and expected future market events including generic competition.

Sales returns from continuing operations were $3.1 million, $2.8 million and $5.9 million, or 0.2%, 0.3% and 0.9% as a percentage of gross product sales from continuing operations, for the years ended December 31, 2014, 2013 and 2012, respectively. Sales returns as a percentage of gross product sales did not materially change in 2014 compared to 2013. Sales returns as a percentage of gross product sales in 2013 were lower compared to 2012, primarily due to a reduction in the sales returns reserve rate for certain products as a result of lower than anticipated product returns and decreased sales of products for which we have historically experienced higher levels of sales returns. Sales returns as a percentage of gross product sales are not expected to materially change in 2015 compared to 2014.

Chargebacks

We participate in chargeback programs with a number of entities, principally the U.S. Department of Defense, the U.S. Department of Veterans Affairs and other public parties, under which pricing on products below wholesalers' list prices is provided to participating entities. These entities purchase product through wholesalers at the lower negotiated price and the wholesalers charge back to us the difference between their acquisition cost and the lower negotiated price. We record the difference as allowances against accounts receivable. We determine our estimate of the chargebacks provision primarily based on historical experience on a product and program basis, current contract prices under the chargeback programs and channel inventory data.

Chargebacks from continuing operations were $28.7 million, $21.8 million and $12.3 million, or 2.1%, 2.2%, and 1.8% as a percentage of gross product sales from continuing operations, for the years ended December 31, 2014, 2013 and 2012, respectively. Chargebacks as a percentage of gross product sales did not change materially in 2014 compared to 2013. Chargebacks as a percentage of gross product sales increased in 2013 compared to 2012, primarily due to products acquired as part of the EUSA Acquisition being included for the full year. As a result of the products we acquired in the EUSA Acquisition, particularly Erwinaze, chargebacks are expected to continue to significantly impact our reported net product sales. Chargebacks as a percentage of gross product sales are not expected to change materially in 2015 compared to 2014.

Discounts and distributor fees

Discounts and distributor fees comprise prompt payment discounts, patient coupon programs and specialty distributor and wholesaler fees. We offer customers a cash discount on gross product sales as an incentive for prompt payment. We estimate provisions for prompt pay discounts based on contractual sales terms with customers and historical payment experience. To help patients afford our products, we have various programs to assist them, including patient assistance programs, a free product voucher program and co-pay coupon programs for certain products. We estimate provisions for these programs primarily based on expected program utilization, adjusted as necessary to reflect our actual experience on a product and program basis. Specialty distributor and wholesaler fees comprise fees for distribution of our products. We

estimate provisions for distributor and wholesaler fees primarily based on sales volumes and contractual terms with our distributors.

Discounts and distributor fees from continuing operations were $71.9 million, $51.4 million and $32.8 million, or 5.3%, 5.1% and 4.8% as a percentage of gross product sales from continuing operations, for the years ended December 31, 2014, 2013 and 2012, respectively. Discounts and distributor fees as a percentage of gross product sales increased slightly in 2014 compared to 2013 due primarily to an increase in patient coupon programs. Discounts and distributor fees as a percentage of gross product sales increased in 2013 compared to 2012, primarily due to increased patient coupon programs partially offset by decreased wholesaler dispensing fees and prompt payment discounts. We expect that discounts and distributor fees as a whole will continue to significantly impact our reported net product sales. In this regard, discounts and distributor fees as a percentage of gross product sales are expected to increase slightly in 2015 compared to 2014 due primarily to an increase in patient coupon programs.

Goodwill and Intangible Assets

Goodwill

Goodwill represents the excess of the acquisition consideration over the fair value of assets acquired and liabilities assumed. We test goodwill for impairment annually in October and when events or changes in circumstances indicate that the carrying value may not be recoverable. We have determined that we operate in a single segment and have a single reporting unit associated with the development and commercialization of pharmaceutical products. The annual test for goodwill impairment is a two-step process. The first step is a comparison of the fair value of the reporting unit with its carrying amount, including goodwill. If this step indicates impairment, then in the second step, the loss is measured as the excess of recorded goodwill over its implied fair value. Implied fair value is the excess of the fair value of the reporting unit over the fair value of all identified assets and liabilities. We have determined the fair value of our single reporting unit to be equal to our market capitalization, as determined by our traded share price, plus a control premium. The control premium used was based on a review of such premiums identified in recent acquisitions of companies of similar size and in similar industries. We performed our annual goodwill impairment test in October 2014 and concluded that goodwill was not impaired as the fair value of the reporting unit significantly exceeded its carrying amount, including goodwill. As of December 31, 2014, we had $702.7 million of goodwill primarily resulting from the Azur Merger on January 18, 2012, the EUSA Acquisition on June 12, 2012 and the Gentium Acquisition on January 23, 2014.

Intangible Assets

In connection with the Azur Merger, the EUSA Acquisition and the Gentium Acquisition, we acquired a number of intangible assets, including intangible assets related to currently marketed products (developed technology) and intangible assets related to product candidates (in-process research and development, or IPR&D). When significant identifiable intangible assets are acquired, we engage an independent third party valuation firm to assist in determining the fair values of these assets as of the acquisition date. Discounted cash flow models are typically used in these valuations, which require the use of significant estimates and assumptions, including but not limited to:

- estimating the timing of and expected costs to complete the in-process projects;
- projecting regulatory approvals;
- estimating future cash flows from product sales resulting from completed products and in-process projects; and
- developing appropriate discount rates and probability rates by project.

We believe the fair values that we assign to the intangible assets acquired are based upon reasonable estimates and assumptions given available facts and circumstances as of the acquisition dates. No assurance can be given, however, that the underlying assumptions used to estimate expected cash flows will transpire as estimated. In addition, we are required to estimate the period of time over which to amortize the intangible assets, which requires significant judgment.

Our finite-lived intangible assets are amortized on a straight-line basis over their estimated useful lives, which range from two to 16 years. The estimated useful lives associated with intangible assets are consistent with the estimated lives of the products and may be modified when circumstances warrant. Intangible assets with finite lives are reviewed for impairment whenever events or circumstances indicate that the carrying value of an asset may not be recoverable. Events giving rise to impairment are an inherent risk in the pharmaceutical industry and cannot be predicted. Factors that we consider in deciding when to perform an impairment review include significant under-performance of a product in relation to expectations, significant negative industry or economic trends, and significant changes or planned changes in our use of the assets. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Estimating future cash flows related to an intangible asset

involves estimates and assumptions. If our assumptions are not correct, there could be an impairment loss or, in the case of a change in the estimated useful life of the asset, a change in amortization expense.

IPR&D is not amortized but is tested for impairment annually or when events or circumstances indicate that the fair value may be below the carrying value of the asset. If the carrying value of the assets is not expected to be recovered, the assets are written down to their estimated fair values.

As of December 31, 2014, we had $1,200.7 million of finite-lived intangible assets and $236.7 million of IPR&D assets related to the marketed products and the IPR&D projects that we acquired in the Azur Merger, the EUSA Acquisition and the Gentium Acquisition. In 2014, we recorded impairment charges of $39.4 million. The impairment charge resulted from the reorganization of our operations in Europe to focus on our hematology/oncology therapeutic area following the Gentium Acquisition and the decision to sell certain products acquired as part of the EUSA Acquisition. In the fourth quarter of 2014, we entered into a definitive agreement to sell these products and the related business for approximately $34 million in cash, subject to certain working capital adjustments. The sale, subject to certain closing conditions, is expected to close in the first half of 2015.

We did not recognize an impairment charge related to our intangible assets during 2013 and 2012. Please refer to the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for further information about our intangible assets and the remaining useful lives of our finite-lived intangible assets as of December 31, 2014.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between the financial statement carrying amount and the tax basis of assets and liabilities and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. We provide a valuation allowance when it is more-likely-than-not that deferred tax assets will not be realized.

Our most significant tax jurisdictions are Ireland, the United States, Italy and France. Significant estimates are required in determining our provision for income taxes. Some of these estimates are based on management’s interpretations of jurisdiction-specific tax laws or regulations and the likelihood of settlement related to tax audit issues. Various internal and external factors may have favorable or unfavorable effects on our future effective income tax rate. These factors include, but are not limited to, changes in tax laws, regulations and/or rates, changing interpretations of existing tax laws or regulations, changes in estimates of prior years’ items, the impact of accounting for share-based compensation, changes in our international organization, likelihood of settlement, and changes in overall levels of income before taxes.

Realization of our deferred tax assets is dependent upon the generation of future taxable income, the amount and timing of which are uncertain. In evaluating our ability to recover our deferred tax assets, we consider all available positive and negative evidence, including cumulative income in recent fiscal years, our forecast of future taxable income exclusive of reversing temporary differences and significant risks and uncertainties related to our business. In determining future taxable income, we are responsible for assumptions utilized including the amount of state, federal and international pre-tax operating income, the reversal of temporary differences and the implementation of feasible and prudent tax planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates that we are using to manage our underlying business.

Based on available objective evidence at December 31, 2012, we reversed the valuation allowance recorded against substantially all of our deferred tax assets in the United States, resulting in a tax benefit of $104.2 million. Management determined that a valuation allowance was no longer needed on these deferred tax assets based on an assessment of the relative impact of all positive and negative evidence that existed at December 31, 2012, including an evaluation of cumulative income in recent years, our forecast of future sources of taxable income exclusive of reversing temporary differences, and significant risks and uncertainties related to our business. We continue to maintain a valuation allowance against certain other deferred tax assets where realizability is not certain. We periodically evaluate the likelihood of the realization of deferred tax assets and reduce the carrying amount of these deferred tax assets by a valuation allowances to the extent we believe a portion will not be realized. This determination depends on a variety of factors, some of which are subjective, including our recent cumulative earnings experience by taxing jurisdiction, expectations of future taxable income, carryforward periods available to us for tax reporting purposes, various income tax strategies and other relevant factors. If we determine that the deferred tax assets are not realizable in a future period, we would record material changes to income tax expense in that period.

We have also provided for uncertain tax positions that we believe are not more-likely-than-not to be sustained upon examination by tax authorities. The evaluation of uncertain tax positions is based on factors that include, but are not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. We evaluate uncertain tax positions on a quarterly basis and adjust the level of the liability to reflect any subsequent changes in the relevant facts surrounding the uncertain positions. Our liabilities for uncertain tax positions can be relieved only if the contingency

becomes legally extinguished through either payment to the taxing authority or the expiration of the statute of limitations, the recognition of the benefits associated with the position meet the more-likely-than-not threshold or the liability becomes effectively settled through the examination process. We consider matters to be effectively settled once the taxing authority has completed all of its required or expected examination procedures, including all appeals and administrative reviews. We also accrue for potential interest and penalties related to unrecognized tax benefits in income tax provision (benefit).

Share-Based Compensation

We have elected to use the Black-Scholes option pricing model to calculate the fair value of share option grants under our equity incentive plans and grants under our employee stock purchase plan, or ESPP, and we are using the straight-line method to allocate compensation cost to reporting periods. The fair value of share options was estimated using the following assumptions:

	Year Ended December 31,		
	2014	2013	2012
Volatility	45%	58%	64%
Expected term (years)	4.3	4.4	4.6
Range of risk-free rates	1.1-1.4%	0.5-1.4%	0.5-1.1%
Expected dividend yield	—%	—%	—%

The two inputs which require the greatest judgment and have a large impact on fair values are expected term and volatility.

The expected term of share option grants represents the weighted-average period the awards are expected to remain outstanding. We estimated the weighted-average expected term based on historical exercise data.

We rely only on a blend of the historical and implied volatilities of our own ordinary shares to determine expected volatility for share option grants. In addition, we use a single volatility estimate for each share option grant. The weighted-average volatility is determined by calculating the weighted average of volatilities for all share options granted in a given year.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or the FASB, issued Accounting Standards Update, or ASU, No. 2014-09, “Revenue from Contracts with Customers”, or ASU No. 2014-09, which states that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve this, an entity will need to identify the contract with a customer; identify the separate performance obligations in the contract; determine the transaction price; allocate the transaction price to the separate performance obligations in the contract; and recognize revenue when (or as) the entity satisfies each performance obligation. ASU No. 2014-09 will be effective for us beginning January 1, 2017 and can be adopted on a full retrospective basis or on a modified retrospective basis. We are currently assessing our approach to the adoption of this standard and the impact on our results of operations and financial position.

In April 2014, the FASB issued ASU No. 2014-08, “Presentation of Financial Statements (Topic 205) and Property, Plant, and Equipment (Topic 360): Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity”, or ASU 2014-08. Under ASU 2014-08, only disposals representing a strategic shift in operations should be presented as discontinued operations. Those strategic shifts should have a major effect on the organization’s operations and financial results. Additionally, ASU 2014-08 requires expanded disclosures about discontinued operations that will provide financial statement users with more information about the assets, liabilities, income, and expenses of discontinued operations. ASU 2014-08 is effective for fiscal and interim periods beginning on or after December 15, 2014, with early adoption permitted. We early adopted ASU 2014-08 in 2014.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Related Parties

In 2014, certain holders of warrants to purchase 947,867 of our ordinary shares exercised the warrants in full for an aggregate cash purchase price payable to us of $3.8 million. The warrant holders are entities affiliated with one of our directors. In accordance with the terms of an existing investor rights agreement with the warrant holders, we registered the resale of the ordinary shares underlying the warrants and, pursuant to such agreement, we paid expenses of approximately $0.1 million in connection with the resale registration.

In 2013, we entered into an underwriting agreement with an underwriter and certain selling shareholders, pursuant to which the selling shareholders sold to the underwriter 5.4 million of our ordinary shares, resulting in aggregate gross proceeds to the selling shareholders of approximately $314.4 million, before deducting underwriting discounts, commissions and other offering expenses. The selling shareholders included entities affiliated with certain members of our board of directors and one of our directors. We did not receive any proceeds from the sale of our ordinary shares by the selling shareholders in the offering and, consistent with our obligations under existing registration rights agreements with those shareholders, we paid expenses of approximately $0.5 million in connection with the offering.

In 2012, in connection with the Azur Merger, we assumed a lease for office space in Dublin, Ireland. The lease agreement was with Seamus Mulligan, the former Chief Executive Officer of Azur Pharma, who is a member of our board of directors. Rentals paid on this lease amounted to $0.3 million in 2012. In November 2012, we terminated this lease at a cost of $1.2 million, which was the carrying value of our above market lease liability. There was no resulting gain or loss on the lease termination.

In 2012, we entered into an underwriting agreement with two underwriters and certain selling shareholders, pursuant to which the selling shareholders agreed to sell to the underwriters 7.9 million of our ordinary shares, resulting in aggregate gross proceeds to the selling shareholders of approximately $390.7 million. The selling shareholders included entities affiliated with certain members of our board of directors, four of our directors and four of our executive officers at the time of the agreement. We did not receive any proceeds from the sale of our ordinary shares by the selling shareholders in the offering, and we paid expenses of approximately $0.4 million in connection with the offering.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk. The primary objectives of our investment policy, in order of priority, are as follows: safety and preservation of principal and diversification of risk; liquidity of investments sufficient to meet cash flow requirements; and competitive yield. Although our investments are subject to market risk, our investment policy specifies credit quality standards for our investments and limits the amount of credit exposure from any single issue, issuer or certain types of investment. Our investment policy allows us to maintain a portfolio of cash equivalents and short-term investments in a variety of securities, including U.S. federal government and federal agency securities, corporate bonds or commercial paper issued by U.S. corporations, money market instruments, certain qualifying money market mutual funds, certain repurchase agreements, and tax-exempt obligations of states, agencies and municipalities in the United States. Our cash equivalents as of December 31, 2014 consisted of time deposits which are not subject to significant interest rate risk.

We are exposed to risks associated with changes in interest rates in connection with our term loans and borrowings under our revolving credit facility. Our indebtedness under our term loans is subject to LIBOR or base rate floors of 0.75% and 1.75%, respectively. We have elected to have the terms loans and borrowings under the revolving credit facility bear interest based on LIBOR (as opposed to the prime lending rate). Currently LIBOR is below the floor of 0.75%, and therefore an increase in interest rates would only impact our net interest expense on our term loans to the extent LIBOR exceeds the floor. Based on indebtedness under our term loans of $895.4 million as of December 31, 2014, a 1.0% change in interest rates, above the LIBOR floor, would increase net interest expense on our term loans for 2015 by approximately $9.0 million. As of December 31, 2014, there were no borrowings outstanding under our revolving credit facility.

In August 2014, we completed a private placement of $575.0 million aggregate principal amount of the 2021 Notes. The 2021 Notes have a fixed annual interest rate of 1.875% and we, therefore, do not have economic interest rate exposure on the 2021 Notes. However, the fair value of the 2021 Notes is exposed to interest rate risk. Generally, the fair value of the 2021 Notes will increase as interest rates fall and decrease as interest rates rise. The fair value of the 2021 Notes is also affected by volatility in our ordinary share price. As of December 31, 2014, the fair value of the 2021 Notes was estimated to be $654 million.

Foreign Exchange Risk. We have significant operations in Europe as well as in the United States. The functional currency of each foreign subsidiary is generally the local currency. We are exposed to foreign currency exchange risk as the functional currency financial statements of foreign subsidiaries are translated to U.S. dollars. The assets and liabilities of our foreign subsidiaries having a functional currency other than the U.S. dollar are translated into U.S. dollars at the exchange rate

prevailing at the balance sheet date, and at the average exchange rate for the reporting period for revenue and expense accounts. The cumulative foreign currency translation adjustment is recorded as a component of accumulated other comprehensive income (loss) in shareholders' equity. The reported results of our foreign subsidiaries will be influenced by their translation into U.S. dollars by currency movements against the U.S. dollar. Our primary currency translation exposures are related to our subsidiaries that have functional currencies denominated in the Euro and the British Pound. A 10% strengthening/(weakening) in the rates used to translate the results of our foreign subsidiaries would have increased/(decreased) net income for the year ended December 31, 2014 by approximately $8.5 million.

Transactional exposure arises where transactions occur in currencies other than the functional currency. Transactions in foreign currencies are recorded at the exchange rate prevailing at the date of the transaction. The resulting monetary assets and liabilities are translated into the appropriate functional currency at exchange rates prevailing at the balance sheet date and the resulting gains and losses are reported in foreign currency gain (loss) in the consolidated statements of income. At December 31, 2014, our primary exposure to transaction risk related to Euro net monetary liabilities held by subsidiaries with a U.S. dollar functional currency. At December 31, 2014, a 10% strengthening/(weakening) in the Euro against the U.S. dollar would have (decreased)/increased net income by approximately $1.4 million.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements as listed below are included in this Annual Report on Form 10-K as pages F-1 through F-45.

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

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures. We have carried out an evaluation under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2014.

Limitations on the Effectiveness of Controls. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues, if any, within an organization have been detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our principal executive officer and principal financial officer have concluded, based on their evaluation as of the end of the period covered by this report, that our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of our disclosure control system were met.

Changes in Internal Control over Financial Reporting. During the quarter ended December 31, 2014, there were no changes to our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting. The following report is provided by management in respect of our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act):

1. Our management is responsible for establishing and maintaining adequate internal control over financial reporting.
2. Our management used the Committee of Sponsoring Organizations of the Treadway Commission Internal Control - Integrated Framework (2013), or the COSO framework, to evaluate the effectiveness of internal control over financial reporting. Management believes that the COSO framework is a suitable framework for its evaluation of financial reporting because it is free from bias, permits reasonably consistent qualitative and quantitative measurements of our internal control over financial reporting, is sufficiently complete so that those relevant factors that would alter a conclusion about the effectiveness of our internal control over financial reporting are not omitted and is relevant to an evaluation of internal control over financial reporting.
3. Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2014 and has concluded that such internal control over financial reporting was effective. There were no material weaknesses in internal control over financial reporting identified by management.
4. KPMG, our independent registered public accounting firm, has audited the consolidated financial statements of Jazz Pharmaceuticals plc as of and for the year ended December 31, 2014, included herein, and has issued an audit report on our internal control over financial reporting, which is included below.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Jazz Pharmaceuticals plc

We have audited Jazz Pharmaceuticals plc's internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Jazz Pharmaceuticals plc's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, Jazz Pharmaceuticals plc maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Jazz Pharmaceuticals plc and subsidiaries as of December 31, 2014 and 2013, and the related consolidated statements of income, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2014, and the related financial statement schedule, and our report dated February 24, 2015 expressed an unqualified opinion on those consolidated financial statements and the related financial statement schedule.

/s/ KPMG

Dublin, Ireland
February 24, 2015

Item 9B. Other Information

Not applicable.

PART III

Certain information required by Part III is omitted from this Annual Report on Form 10-K and incorporated by reference to our definitive proxy statement for our 2015 annual general meeting of shareholders to be filed pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, or Exchange Act. If such definitive proxy statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, the omitted information will be included in an amendment to this Annual Report on Form 10-K filed not later than the end of such 120-day period.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item relating to our directors and nominees for director is to be included in the section entitled "Proposal 1—Election of Directors" in the proxy statement for our 2015 annual general meeting of shareholders. Such information is incorporated herein by reference. The information required by this item relating to our executive officers is to be included in the section entitled "Executive Officers" in the proxy statement for our 2015 annual general meeting of shareholders. Such information is incorporated herein by reference. The information required by this item relating to our audit committee, audit committee financial expert and procedures by which shareholders may recommend nominees to our board of directors is to be included in the section entitled "Corporate Governance and Board Matters" in the proxy statement for our 2015 annual general meeting of shareholders. Such information is incorporated herein by reference. Information regarding compliance with Section 16(a) of the Exchange Act is to be included in the section entitled "Section 16(a) Beneficial Ownership Reporting Compliance" in our proxy statement for our 2015 annual general meeting of shareholders. Such information is incorporated herein by reference.

Our Code of Conduct applies to all of our employees, directors and officers, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, and those of our subsidiaries. The Code of Conduct is available on our website at *www.jazzpharmaceuticals.com* under the section entitled "About Us" at "Corporate Responsibility." Shareholders may request a free copy of the Code of Conduct by submitting a written request to Jazz Pharmaceuticals plc, Attention: Investor Relations, Fourth Floor, Connaught House, One Burlington Road, Dublin 4, Ireland. We intend to satisfy the disclosure requirements under Item 5.05 of the SEC Form 8-K regarding an amendment to, or waiver from, a provision of our Code of Conduct by posting such information on our website at the website address and location specified above.

Item 11. Executive Compensation

The information required by this item is to be included in our proxy statement for our 2015 annual general meeting of shareholders under the sections entitled "Executive Compensation," "Director Compensation," "Corporate Governance and Board Matters—Compensation Committee Interlocks and Insider Participation" and "Corporate Governance and Board Matters—Compensation Committee Report" and is incorporated herein by reference.

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

The information required by this item with respect to equity compensation plans is to be included in our proxy statement for our 2015 annual general meeting of shareholders under the section entitled "Equity Compensation Plan Information" and is incorporated herein by reference. The information required by this item with respect to security ownership of certain beneficial owners and management is to be included in our proxy statement for our 2015 annual general meeting of shareholders under the section entitled "Security Ownership of Certain Beneficial Owners and Management" and is incorporated herein by reference.

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

The information required by this item is to be included in our proxy statement for our 2015 annual general meeting of shareholders under the sections entitled "Certain Relationships and Related Party Transactions" and "Corporate Governance and Board Matters—Independence of the Board of Directors" and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item is to be included in our proxy statement for our 2015 annual general meeting of shareholders under the section entitled "Proposal 2—Approve Appointment of Independent Auditors and Authorize the Audit Committee to Determine their Remuneration" and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this Annual Report on Form 10-K

1. Index to Financial Statements:

See Index to Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules:

The following financial statement schedule of Jazz Pharmaceuticals plc is filed as part of this Annual Report on Form 10-K on page F-46 and should be read in conjunction with the consolidated financial statements of Jazz Pharmaceuticals plc.

Schedule II: Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable, not required under the instructions, or the requested information is shown in the consolidated financial statements or related notes thereto.

(b) Exhibits—The following exhibits are included herein or incorporated herein by reference:

Exhibit Number	Description of Document
2.1	Agreement and Plan of Merger and Reorganization, dated as of September 19, 2011, by and among Azur Pharma Limited (now Jazz Pharmaceuticals plc), Jaguar Merger Sub Inc., Jazz Pharmaceuticals, Inc. and Seamus Mulligan, solely in his capacity as the Indemnitors' Representative (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500) filed with the SEC on September 19, 2011).
2.2	Letter Agreement, dated as of January 17, 2012, by and among Jazz Pharmaceuticals plc, Jaguar Merger Sub Inc. Jazz Pharmaceuticals, Inc. and Seamus Mulligan, solely in his capacity as the Indemnitors' Representative (incorporated by reference to Exhibit 2.2 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).
2.3	Agreement and Plan of Merger, dated as of April 26, 2012, by and among Jazz Pharmaceuticals plc, Jewel Merger Sub Inc., EUSA Pharma Inc., and Essex Woodlands Health Ventures, Inc., Mayflower L.P., and Bryan Morton, in their capacity as the representatives of the equity holders of EUSA Pharma Inc. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on April 27, 2012).
2.4	Assignment, dated as of June 11, 2012, by and among Jazz Pharmaceuticals plc and Jazz Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 2.1B in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 12, 2012).
2.5	Asset Purchase Agreement, dated as of September 5, 2012, by and among Jazz Pharmaceuticals plc, Jazz Pharmaceuticals International II Limited, Meda Pharmaceuticals Inc. and Meda Pharma, Sàrl (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on October 15, 2012).
2.6	Tender Offer Agreement, dated December 19, 2013, by and among Jazz Pharmaceuticals Public Limited Company, Jazz Pharmaceuticals Italy S.r.l. and Gentium S.p.A. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K/A (File No. 001-33500), as filed with the SEC on December 20, 2013).
2.7†	Asset Purchase Agreement, dated January 13, 2014, by and among Jazz Pharmaceuticals International III Limited, Aerial BioPharma, LLC and Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 13, 2014).

Exhibit Number	Description of Document
2.8†	Assignment Agreement, dated July 1, 2014, by and among Jazz Pharmaceuticals International II Limited, Sigma-Tau Pharmaceuticals, Inc., Jazz Pharmaceuticals plc and Gentium S.p.A. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 5, 2014).
3.1	Memorandum and Articles of Association of Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 3.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).
4.1	Reference is made to Exhibit 3.1.
4.2A	Investor Rights Agreement, dated July 7, 2009 by and between Jazz Pharmaceuticals, Inc. and the other parties named therein (incorporated herein by reference to Exhibit 10.88 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500), as filed with the SEC on July 7, 2009).
4.2B	Assignment, Assumption and Amendment Agreement, dated as of January 18, 2012, by and among Jazz Pharmaceuticals, Inc., Jazz Pharmaceuticals plc and the other parties named therein (incorporated herein by reference to Exhibit 4.7B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals, Inc. with the SEC on February 28, 2012).
4.3A	Indenture, dated as of August 13, 2014, by and among Jazz Pharmaceuticals plc, Jazz Investments I Limited and U.S. Bank National Association (incorporated herein by reference to Exhibit 4.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 13, 2014).
4.3B	Form of 1.875% Exchangeable Senior Note due 2021 (incorporated herein by reference to Exhibit 4.2 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 13, 2014).
10.1†	Xyrem Manufacturing Services and Supply Agreement, dated as of March 13, 2007, by and between Jazz Pharmaceuticals, Inc. and Patheon Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 10.50 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on May 31, 2007).
10.2†	Quality Agreement, dated as of March 13, 2007, by and between Jazz Pharmaceuticals, Inc. and Patheon Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 10.51 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on March 27, 2007).
10.3†	Supply Agreement, dated as of April 1, 2010, by and between Jazz Pharmaceuticals, Inc. and Siegfried (USA) Inc. (incorporated herein by reference to Exhibit 10.54 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2010, as filed with the SEC on May 6, 2010).
10.4†	Master Services Agreement, dated April 15, 2011, by and between Jazz Pharmaceuticals, Inc., CuraScript, Inc. and Express Scripts Specialty Distribution Services, Inc. (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2011, as filed with the SEC on May 9, 2011).
10.5†	Royalty Bearing License Agreement and Supply Agreement Re Erwinia-Derived Asparaginase, dated July 22, 2005, between Public Health England (formerly Health Protection Agency) and EUSA Pharma SAS (formerly OPi, S.A.), as amended on each of December 22, 2009, March 23, 2012 and August 8, 2012 (incorporated herein by reference to Exhibit 10.11 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q/A (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 9, 2012).
10.6A	Credit Agreement, dated as of June 12, 2012, by and among Jazz Pharmaceuticals plc, Jazz Pharmaceuticals, Inc., the Lenders and Barclays Bank PLC, as Administrative Agent, Collateral Agent, Swing Line Lender and L/C Issuer (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 12, 2012).
10.6B	Amendment No. 1, dated as of June 13, 2013, to the Credit Agreement and related Guaranty, by and among Jazz Pharmaceuticals, Inc., Jazz Financing I Limited and Jazz Pharmaceuticals Ireland Limited, as borrowers, Jazz Pharmaceuticals plc, as guarantor, the Lenders thereto and Barclays Bank PLC, as Administrative Agent, Collateral Agent, L/C Issuer and Swing Line Lender (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 13, 2013).
10.6C	Amendment No. 2, dated as of January 23, 2014, to the Credit Agreement, dated as of June 12, 2012, by and among Jazz Pharmaceuticals, Inc., Jazz Financing I Limited and Jazz Pharmaceuticals Ireland Limited, as borrowers, Jazz Pharmaceuticals Public Limited Company, as guarantor, the Lenders thereto and Barclays Bank PLC, as Administrative Agent, Collateral Agent, L/C Issuer and Swing Line Lender (incorporated herein by reference to Exhibit 10.32 in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2013, as filed with the SEC on February 25, 2014).

Exhibit Number	Description of Document
10.7	Amended and Restated Commitment Letter, dated as of January 6, 2014, by and between Jazz Pharmaceuticals plc, Barclays Bank PLC, J.P. Morgan Securities LLC, JPMorgan Chase Bank, N.A., Merrill Lynch Pierce, Fenner & Smith Incorporated, Bank of America, N.A., Citigroup Global Markets Inc., Morgan Stanley Senior Funding, Inc., Royal Bank of Canada, DNB Bank ASA and DNB Capital Markets, Inc. (incorporated herein by reference to Exhibit 99.(B)(1) in Jazz Pharmaceuticals plc's tender offer statement on Schedule TO, as amended, as filed with the SEC on January 7, 2014).
10.8A	Commercial Lease, dated as of June 2, 2004, by and between Jazz Pharmaceuticals, Inc. and The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.52 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on March 27, 2007).
10.8B	First Amendment of Lease, dated June 1, 2009, by and between Jazz Pharmaceuticals, Inc. and Wheatley-Fields, LLC, successor in interest to The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.86 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 4, 2009).
10.8C	Second Amendment of Lease, dated February 28, 2012, by and between Jazz Pharmaceuticals, Inc. and Wheatley-Fields, LLC, successor in interest to The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.31 in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals, Inc. with the SEC on February 28, 2012).
10.9	Lease, dated May 8, 2012, by and between John Ronan and Castle Cove Property Developments Limited and Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.10	Commercial Lease, dated as of January 7, 2015, by and between The Board of Trustees of the Leland Stanford Junior University and Jazz Pharmaceuticals, Inc.
10.11+	Form of Indemnification Agreement between Jazz Pharmaceuticals plc and its officers and directors (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).
10.12+	Offer Letter from Jazz Pharmaceuticals, Inc. to Jeffrey Tobias, M.D. (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2011, as filed with the SEC on November 8, 2011).
10.13+	Offer Letter from Jazz Pharmaceuticals, Inc. to Suzanne Sawochka Hooper (incorporated herein by reference to Exhibit 10.19 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2012, as filed with the SEC on May 8, 2012).
10.14+	Offer Letter from Jazz Pharmaceuticals, Inc. to Matthew Young (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).
10.15A+	Employment Agreement by and between EUSA Pharma Inc. and Iain McGill (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.15B+	Amendment to Employment Agreement by and between Iain McGill and EUSA Pharma (Europe) Limited.
10.16+	Offer Letter from Jazz Pharmaceuticals, Inc. to Michael Miller (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.17A+	Employment Agreement by and between Jazz Pharmaceuticals Ireland Limited and Paul Treacy (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.17B+	Amendment to Employment Agreement by and between Jazz Pharmaceuticals Ireland Limited and Paul Treacy.
10.18A+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 99.3 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.18B+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan Sub-Plan Governing Awards to Participants in the Republic of Ireland (incorporated herein by reference to Exhibit 10.3B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals Inc. with the SEC on February 28, 2012).

Exhibit Number	Description of Document
10.18C+	Form of Notice of Grant of Stock Options and Form of Option Agreement (U.S.) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27C in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18D+	Form of Notice of Grant of Stock Options and Form of Option Agreement (Irish) under Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27D in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18E+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (U.S.) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27E in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500), as filed with the SEC on February 26, 2013).
10.18F+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (Irish) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27F in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18G+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.18H+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan - Form of Non-U.S. Restricted Stock Unit Award Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19A+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 99.1 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.19B+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan Sub-Plan Governing Awards to Participants in the Republic of Ireland (incorporated herein by reference to Exhibit 10.39B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals Inc. with the SEC on February 28, 2012).
10.19C+	Form of Option Grant Notice and Form of Stock Option Agreement (U.S.) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.7 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19D+	Form of Stock Option Grant Notice and Form of Option Agreement (Irish) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.8 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19E+	Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.28E in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.19F+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (U.S.) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.9 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19G+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (Irish) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.10 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19H+	Form of Non-U.S. Restricted Stock Unit Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.28H in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.19I+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of U.S. Option Grant Notice and Form of U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).

Exhibit Number	Description of Document
10.19J+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of U.S. Restricted Stock Unit Award Grant Notice and Form of U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.4 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19K+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.5 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19L+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of Non-U.S. Restricted Stock Unit Award Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.20+	Jazz Pharmaceuticals plc Amended and Restated Directors Deferred Compensation Plan (incorporated herein by reference to Exhibit 99.6 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.21A+	Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan (incorporated herein by reference to Exhibit 99.4 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.21B+	Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement under the Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan (incorporated herein by reference to Exhibit 10.30B in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.21C+	Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved August 1, 2013) (incorporated herein by reference to Exhibit 10.7 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.22A+	Jazz Pharmaceuticals plc 2007 Employee Stock Purchase Plan, as amended and restated (incorporated herein by reference to Exhibit 10.31A in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.22B+	Jazz Pharmaceuticals plc 2007 Employee Stock Purchase Plan Sub-Plan Governing Purchase Rights to Participants in the Republic of Ireland (incorporated by reference herein to Exhibit 10.14C in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2012, as filed with the SEC on May 8, 2012).
10.23A+	Jazz Pharmaceuticals plc Cash Bonus Plan for U.S. Affiliates (incorporated herein by reference to Exhibit 10.32B in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.23B+	Jazz Pharmaceuticals Cash Bonus Plan for International Affiliates (2014) (incorporated herein by reference to Exhibit 10.24D in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2013, as filed with the SEC on February 25, 2014).
10.24+	Jazz Pharmaceuticals plc Amended and Restated Executive Change in Control and Severance Benefit Plan (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.8 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.25A+	Jazz Pharmaceuticals plc 2013 Executive Officer Compensation Arrangements (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2013, as filed with the SEC on May 7, 2013).
10.25B+	Jazz Pharmaceuticals plc 2014 Executive Officer Compensation Arrangements (incorporated herein by reference to Exhibit 10.4 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).
10.26A+	Jazz Pharmaceuticals plc Non-Employee Director Compensation Policy (approved August 1, 2013) (incorporated herein by reference to Exhibit 10.9 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.26B+	Jazz Pharmaceuticals plc Non-Employee Director Compensation Policy (approved May 1, 2014) (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).

Exhibit Number	Description of Document
10.27+	Named Officer 2015 Target Bonus Opportunity (incorporated herein by reference to Exhibit 10.1 in JazzPharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on February 18, 2015).
21.1	Subsidiaries of Jazz Pharmaceuticals plc.
23.1	Consent of KPMG, Independent Registered Public Accounting Firm.
24.1	Power of Attorney (included on the signature page hereto).
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1*	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

+ Indicates management contract or compensatory plan.

† Confidential treatment has been granted for portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

* The certifications attached as Exhibit 32.1 accompany this Annual Report on Form 10-K pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Registrant for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

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

Date: February 24, 2015

Jazz Pharmaceuticals Public Limited Company
(Registrant)

/s/ BRUCE C. COZADD

Bruce C. Cozadd
Chairman and Chief Executive Officer and Director
(Principal Executive Officer)

/s/ MATTHEW P. YOUNG

Matthew P. Young
Executive Vice President and Chief Financial Officer (Principal Financial Officer)

/s/ KAREN J. WILSON

Karen J. Wilson
Senior Vice President, Finance
(Principal Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Bruce C. Cozadd, Matthew P. Young, Suzanne Sawochka Hooper and Karen J. Wilson, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution for him or her, and in his or her name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with 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 therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, the following persons on behalf of the registrant and in the capacities and on the dates indicated have signed this report below:

Signature	Title	Date
/s/ BRUCE C. COZADD **Bruce C. Cozadd**	Chairman, Chief Executive Officer and Director *(Principal Executive Officer)*	February 24, 2015
/s/ MATTHEW P. YOUNG **Matthew P. Young**	Executive Vice President and Chief Financial Officer *(Principal Financial Officer)*	February 24, 2015
/s/ KAREN J. WILSON **Karen J. Wilson**	Senior Vice President, Finance *(Principal Accounting Officer)*	February 24, 2015
/s/ PAUL L. BERNS **Paul L. Berns**	Director	February 24, 2015
/s/ PATRICK G. ENRIGHT **Patrick G. Enright**	Director	February 24, 2015
/s/ PETER GRAY **Peter Gray**	Director	February 24, 2015
/s/ HEATHER ANN MCSHARRY **Heather Ann McSharry**	Director	February 24, 2015
/s/ SEAMUS C. MULLIGAN **Seamus C. Mulligan**	Director	February 24, 2015
/s/ KENNETH W. O'KEEFE **Kenneth W. O'Keefe**	Director	February 24, 2015
/s/ NORBERT G. RIEDEL, PH.D. **Norbert G. Riedel, Ph.D.**	Director	February 24, 2015
/s/ ELMAR SCHNEE **Elmar Schnee**	Director	February 24, 2015
/s/ CATHERINE A. SOHN, PHARM.D. **Catherine A. Sohn, Pharm.D.**	Director	February 24, 2015
/s/ RICK E WINNINGHAM **Rick E Winningham**	Director	February 24, 2015

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Jazz Pharmaceuticals plc

We have audited the accompanying consolidated balance sheets of Jazz Pharmaceuticals plc and subsidiaries (the Company) as of December 31, 2014 and 2013, and the related consolidated statements of income, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2014. In connection with our audit of the consolidated financial statements, we also have audited the financial statement schedule at Item 15(a)2 for the years ended December 31, 2014, 2013 and 2012. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Jazz Pharmaceuticals plc and subsidiaries as of December 31, 2014 and 2013, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule for the years ended December 31, 2014, 2013 and 2012, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Jazz Pharmaceuticals plc's internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 24, 2015 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG

Dublin, Ireland
February 24, 2015

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 31,	
	2014	2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 684,042	$ 636,504
Accounts receivable, net of allowances of $3,483 and $3,680 at December 31, 2014 and 2013, respectively	186,371	124,805
Inventories	30,037	28,669
Prepaid expenses	12,800	7,183
Deferred tax assets, net	48,440	33,613
Other current assets	21,322	33,843
Assets held for sale	32,833	—
Total current assets	1,015,845	864,617
Property and equipment, net	58,363	14,246
Intangible assets, net	1,437,435	812,396
Goodwill	702,713	450,456
Deferred tax assets, net, non-current	75,494	74,597
Deferred financing costs	33,174	14,605
Other non-current assets	15,931	7,304
Total assets	$ 3,338,955	$ 2,238,221
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 25,126	$ 21,005
Accrued liabilities	164,091	119,718
Current portion of long-term debt	9,428	5,572
Income taxes payable	7,588	336
Contingent consideration	—	50,000
Deferred tax liability, net	9,430	6,259
Deferred revenue	1,138	1,138
Total current liabilities	216,801	204,028
Deferred revenue, non-current	4,499	5,718
Long-term debt, less current portion	1,333,000	544,404
Deferred tax liability, net, non-current	375,054	168,497
Other non-current liabilities	38,393	20,040
Commitments and contingencies (Note 11)		
Shareholders' equity:		
Ordinary shares, nominal value $0.0001 per share; 300,000 shares authorized; 60,643 and 57,854 shares issued and outstanding at December 31, 2014 and 2013, respectively	6	6
Non-voting euro deferred shares, €0.01 par value per share; 4,000 shares authorized, issued and outstanding at both December 31, 2014 and 2013	55	55
Capital redemption reserve	471	471
Additional paid-in capital	1,458,005	1,220,317
Accumulated other comprehensive income (loss)	(122,097)	56,153
Retained earnings	34,704	18,532
Total Jazz Pharmaceuticals plc shareholders' equity	1,371,144	1,295,534
Noncontrolling interests	64	—
Total shareholders' equity	1,371,208	1,295,534
Total liabilities and shareholders' equity	$ 3,338,955	$ 2,238,221

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

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF INCOME

(In thousands, except per share amounts)

	Year Ended December 31,		
	2014	**2013**	**2012**
Revenues:			
Product sales, net	$ 1,162,716	$ 865,398	$ 580,527
Royalties and contract revenues	10,159	7,025	5,452
Total revenues	1,172,875	872,423	585,979
Operating expenses:			
Cost of product sales (excluding amortization of acquired developed technologies and intangible asset impairment)	117,418	102,146	78,425
Selling, general and administrative	406,114	304,303	223,882
Research and development	85,181	41,632	20,477
Acquired in-process research and development	202,626	4,988	—
Intangible asset amortization	126,584	79,042	65,351
Impairment charges	39,365	—	—
Total operating expenses	977,288	532,111	388,135
Income from operations	195,587	340,312	197,844
Interest expense, net	(52,713)	(26,916)	(16,869)
Foreign currency gain (loss)	8,683	(1,697)	(3,620)
Loss on extinguishment and modification of debt	—	(3,749)	—
Income from continuing operations before income tax provision (benefit)	151,557	307,950	177,355
Income tax provision (benefit)	94,231	91,638	(83,794)
Income from continuing operations	57,326	216,312	261,149
Income from discontinued operations, net of taxes	—	—	27,437
Net income	57,326	216,312	288,586
Net loss attributable to noncontrolling interests, net of tax	(1,061)	—	—
Net income attributable to Jazz Pharmaceuticals plc	$ 58,387	$ 216,312	$ 288,586
Net income per ordinary share attributable to Jazz Pharmaceuticals plc:			
Basic:			
Income from continuing operations	$ 0.98	$ 3.71	$ 4.61
Income from discontinued operations	—	—	0.48
Net income attributable to Jazz Pharmaceuticals plc	$ 0.98	$ 3.71	$ 5.09
Diluted:			
Income from continuing operations	$ 0.93	$ 3.51	$ 4.34
Income from discontinued operations	—	—	0.45
Net income attributable to Jazz Pharmaceuticals plc	$ 0.93	$ 3.51	$ 4.79
Weighted-average ordinary shares used in calculating net income per ordinary share attributable to Jazz Pharmaceuticals plc:			
Basic	59,746	58,298	56,643
Diluted	62,614	61,569	60,195

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

JAZZ PHARMACEUTICALS PLC
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Net income	$ 57,326	$ 216,312	$ 288,586
Other comprehensive income (loss):			
Foreign currency translation adjustments	(178,264)	25,107	31,046
Available-for-sale securities:			
Net unrealized gain on available-for-sale securities, net of income taxes	—	—	8
Reclassification adjustments for gains included in earnings, net of income taxes	—	—	23
Other comprehensive income (loss)	(178,264)	25,107	31,077
Total comprehensive income (loss)	(120,938)	241,419	319,663
Comprehensive loss attributable to noncontrolling interests, net of tax	(1,075)	—	—
Comprehensive income (loss) attributable to Jazz Pharmaceuticals plc	$ (119,863)	$ 241,419	$ 319,663
Total comprehensive income (loss) attributable to Jazz Pharmaceuticals plc arises from:			
Continuing operations	$ (119,863)	$ 241,419	$ 292,226
Discontinued operations	—	—	27,437
Total comprehensive income (loss) attributable to Jazz Pharmaceuticals plc	$ (119,863)	$ 241,419	$ 319,663

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

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)

	Ordinary Shares		Non-voting Euro Deferred								
	Shares	Amount	Shares	Amount	Capital Redemption Reserve	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)	Total Jazz Pharmaceuticals plc Shareholders' Equity	Non-controlling interest	Total Equity
Balance at December 31, 2011	42,468	$ 4	—	$ —	$ —	$ 542,697	$ (31)	$ (349,882)	$ 192,788	$ —	$ 192,788
Merger with Azur Pharma	12,360	2	4,000	55	471	575,936	—	—	576,464	—	576,464
Issuance costs related to Azur Merger	—	—	—	—	—	(241)	—	—	(241)	—	(241)
Shares issued under directors deferred compensation plan	45	—	—	—	—	—	—	—	—	—	—
Issuance of ordinary shares in conjunction with exercise of share options	1,951	—	—	—	—	14,212	—	—	14,212	—	14,212
Issuance of ordinary shares under employee stock purchase plan	151	—	—	—	—	3,707	—	—	3,707	—	3,707
Shares withheld for payment of employee's withholding tax liability	—	—	—	—	—	(25,299)	—	—	(25,299)	—	(25,299)
Issuance of ordinary shares in conjunction with exercise of warrants	1,039	—	—	—	—	7,084	—	—	7,084	—	7,084
Share-based compensation	—	—	—	—	—	23,129	—	—	23,129	—	23,129
Excess tax benefits from employee share options	—	—	—	—	—	9,785	—	—	9,785	—	9,785
Other comprehensive income	—	—	—	—	—	—	31,077	—	31,077	—	31,077
Net income	—	—	—	—	—	—	—	288,586	288,586	—	288,586
Balance at December 31, 2012	58,014	$ 6	4,000	$ 55	$ 471	$ 1,151,010	$ 31,046	$ (61,296)	$ 1,121,292	$ —	$ 1,121,292

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY—(Continued)
(In thousands)

	Ordinary Shares		Non-voting Euro Deferred								
	Shares	Amount	Shares	Amount	Capital Redemption Reserve	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)	Total Jazz Pharmaceuticals plc Shareholders' Equity	Non-controlling interest	Total Equity
Balance at December 31, 2012	58,014	$ 6	4,000	$ 55	$ 471	$ 1,151,010	$ 31,046	$ (61,296)	$ 1,121,292	$ —	$ 1,121,292
Issuance of ordinary shares in conjunction with exercise of share options	904	—	—	—	—	20,895	—	—	20,895	—	20,895
Issuance of ordinary shares under employee stock purchase plan	147	—	—	—	—	5,410	—	—	5,410	—	5,410
Issuance of ordinary shares in conjunction with vesting of restricted stock units	146	—	—	—	—	—	—	—	—	—	—
Shares withheld for payment of employee's withholding tax liability	—	—	—	—	—	(5,590)	—	—	(5,590)	—	(5,590)
Issuance of ordinary shares in conjunction with exercise of warrants	471	—	—	—	—	4,398	—	—	4,398	—	4,398
Share-based compensation	—	—	—	—	—	44,367	—	—	44,367	—	44,367
Excess tax benefits from employee share options	—	—	—	—	—	(173)	—	—	(173)	—	(173)
Shares repurchased	(1,828)	—	—	—	—	—	—	(136,484)	(136,484)	—	(136,484)
Other comprehensive income	—	—	—	—	—	—	25,107	—	25,107	—	25,107
Net income	—	—	—	—	—	—	—	216,312	216,312	—	216,312
Balance at December 31, 2013	57,854	$ 6	4,000	$ 55	$ 471	$ 1,220,317	$ 56,153	$ 18,532	$ 1,295,534	$ —	$ 1,295,534

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY—(Continued)
(In thousands)

	Ordinary Shares		Non-voting Euro Deferred								
	Shares	Amount	Shares	Amount	Capital Redemption Reserve	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)	Total Jazz Pharmaceuticals plc Shareholders' Equity	Non-controlling interest	Total Equity
Balance at December 31, 2013	57,854	$ 6	4,000	$ 55	$ 471	$ 1,220,317	$ 56,153	$ 18,532	$ 1,295,534	$ —	$ 1,295,534
Noncontrolling interest on Gentium Acquisition	—	—	—	—	—	—	—	—	—	136,578	136,578
Acquisition of noncontrolling interest	—	—	—	—	—	(1,530)	—	—	(1,530)	(135,439)	(136,969)
Issuance of exchangeable senior notes	—	—	—	—	—	126,863	—	—	126,863	—	126,863
Issuance of ordinary shares in conjunction with exercise of share options	1,185	—	—	—	—	43,043	—	—	43,043	—	43,043
Issuance of ordinary shares under employee stock purchase plan	117	—	—	—	—	7,197	—	—	7,197	—	7,197
Issuance of ordinary shares in conjunction with vesting of restricted stock units	222	—	—	—	—	—	—	—	—	—	—
Shares withheld for payment of employee's withholding tax liability	—	—	—	—	—	(18,030)	—	—	(18,030)	—	(18,030)
Issuance of ordinary shares in conjunction with exercise of warrants	1,552	—	—	—	—	8,247	—	—	8,247	—	8,247
Shares issued under directors deferred compensation plan	17	—	—	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	70,057	—	—	70,057	—	70,057
Excess tax benefits from employee share options	—	—	—	—	—	1,841	—	—	1,841	—	1,841
Shares repurchased	(304)	—	—	—	—	—	—	(42,215)	(42,215)	—	(42,215)
Other comprehensive loss	—	—	—	—	—	—	(178,250)	—	(178,250)	(14)	(178,264)
Net income	—	—	—	—	—	—	—	58,387	58,387	(1,061)	57,326
Balance at December 31, 2014	60,643	$ 6	4,000	$ 55	$ 471	$ 1,458,005	$ (122,097)	$ 34,704	$ 1,371,144	$ 64	$ 1,371,208

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

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Operating activities			
Net income	$ 57,326	$ 216,312	$ 288,586
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of intangible assets	126,584	79,042	72,922
Share-based compensation	69,638	44,551	23,006
Impairment charges	39,365	—	—
Depreciation	7,097	3,048	1,307
Acquired in-process research and development	202,626	4,988	—
Loss on disposal of property and equipment	24	46	163
Excess tax benefit from share-based compensation	(1,841)	173	(9,785)
Acquisition accounting inventory fair value step-up adjustments	10,477	3,826	19,939
Change in fair value of contingent consideration	—	15,200	(300)
Deferred income taxes	(43,423)	(10,097)	(113,862)
Gain on sale of business	—	—	(35,244)
Provision for losses on accounts receivable and inventory	2,493	2,446	4,654
Loss on extinguishment and modification of debt	—	3,749	—
Other non-cash transactions	1,739	6,278	3,523
Changes in assets and liabilities:			
Accounts receivable	(55,041)	(48,846)	(4,724)
Inventories	(7,630)	(8,516)	1,697
Prepaid expenses and other current assets	11,936	(13,871)	(13,091)
Other long-term assets	(8,891)	(4,306)	(3,491)
Accounts payable	(37,966)	5,089	(7,286)
Accrued liabilities	20,997	14,717	(11,428)
Income taxes payable	8,634	(38,984)	39,340
Deferred revenue	(1,203)	(1,061)	(1,205)
Contingent consideration	(14,900)	—	—
Other non-current liabilities	17,724	14,820	2,351
Liability under government settlement	—	—	(7,320)
Net cash provided by operating activities	405,765	288,604	249,752
Investing activities			
Acquisitions, net of cash acquired	(828,676)	—	(542,531)
Acquisition of in-process research and development	(202,626)	(4,988)	—
Purchases of property and equipment	(36,347)	(9,976)	(5,976)
Purchases of marketable securities	—	—	(37,443)
Net proceeds from sale of business	—	—	93,922
Proceeds from sale of marketable securities	—	—	81,246
Proceeds from maturities of marketable securities	—	—	31,988
Acquisition of intangible assets	—	(1,300)	—
Purchase of product rights	—	—	(16,500)
Net cash used in investing activities	(1,067,649)	(16,264)	(395,294)
Financing activities			
Net proceeds from issuance of debt	1,194,385	553,425	450,916
Proceeds from employee equity incentive and purchase plans and exercise of warrants	58,487	30,703	25,003
Share repurchases	(42,215)	(136,484)	—
Acquisition of noncontrolling interests	(136,969)	—	—
Payment of contingent consideration	(35,100)	—	—
Payment of employee withholding taxes related to share-based awards	(18,030)	(5,590)	(25,299)
Excess tax benefit from share-based compensation	1,841	(173)	9,785
Repayments of long-term debt	(9,524)	(465,910)	(11,875)
Repayments under revolving credit facility	(300,000)	—	—
Net cash provided by (used in) financing activities	712,875	(24,029)	448,530
Effect of exchange rates on cash and cash equivalents	(3,453)	997	2,132

Net increase in cash and cash equivalents	47,538	249,308	305,120
Cash and cash equivalents, at beginning of period	636,504	387,196	82,076
Cash and cash equivalents, at end of period	$ 684,042	$ 636,504	$ 387,196

JAZZ PHARMACEUTICALS PLC

CONSOLIDATED STATEMENTS OF CASH FLOWS—(Continued)
(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 31,978	$ 18,278	$ 14,192
Cash paid for income taxes	$ 108,189	$ 137,616	$ 9,143
Non-cash investing activities:			
Acquisition consideration for Azur Merger	$ —	$ —	$ 576,464

The consolidated statements of cash flows include the activities of discontinued operations.
The accompanying notes are an integral part of these consolidated financial statements.

JAZZ PHARMACEUTICALS PLC

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Description of Business

Jazz Pharmaceuticals plc, a public limited company formed under the laws of Ireland, is an international biopharmaceutical company focused on improving patients' lives by identifying, developing and commercializing meaningful products that address unmet medical needs. We have a diverse portfolio of products and product candidates with a focus in the areas of sleep and hematology/oncology. In these areas, we market Xyrem® (sodium oxybate) oral solution and Erwinaze® (asparaginase *Erwinia chrysanthemi*) in the United States, and market Erwinase® and Defitelio® (defibrotide) in Europe and other countries outside the United States. Our strategy is to create shareholder value by:

- Growing sales of the existing products in our portfolio, including by identifying new growth opportunities;
- Acquiring additional differentiated products that are on the market or product candidates that are in late-stage development; and
- Pursuing focused development of a pipeline of post-discovery differentiated product candidates.

On January 18, 2012, the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma Public Limited Company, or Azur Pharma, were combined in a merger transaction, or the Azur Merger, accounted for as a reverse acquisition under the acquisition method of accounting for business combinations, with Jazz Pharmaceuticals, Inc. treated as the acquiring company for accounting purposes. As part of the Azur Merger, a wholly-owned subsidiary of Azur Pharma merged with and into Jazz Pharmaceuticals, Inc., with Jazz Pharmaceuticals, Inc. surviving the Azur Merger as a wholly-owned subsidiary of Jazz Pharmaceuticals plc. Prior to the Azur Merger, Azur Pharma changed its name to Jazz Pharmaceuticals plc.

On June 12, 2012, we completed the acquisition of EUSA Pharma Inc., or EUSA Pharma, which we refer to as the EUSA Acquisition.

On January 23, 2014, pursuant to a tender offer, we became the indirect majority shareholder of Gentium S.p.A., or Gentium, thereby acquiring control of Gentium on that date. In February 2014, we completed a subsequent offering period of the tender offer, resulting in total purchases pursuant to the tender offer of approximately 98% of the fully diluted voting securities of Gentium. As of December 31, 2014, we had acquired a further 1.8% interest in Gentium, resulting in an aggregate acquisition cost to us of $994.1 million, comprising cash payments of $1,011.2 million, offset by proceeds from the exercise of Gentium share options of $17.1 million. Please see Note 3 for additional information regarding our acquisition of Gentium, which we refer to as the Gentium Acquisition.

Unless otherwise indicated or the context otherwise requires, references to "Jazz Pharmaceuticals," "the registrant," "we," "us," and "our" refer to Jazz Pharmaceuticals plc and its consolidated subsidiaries, including its predecessor, Jazz Pharmaceuticals, Inc., except that all such references prior to the effective time of the Azur Merger on January 18, 2012, are references to Jazz Pharmaceuticals, Inc. and its consolidated subsidiaries. All references to "ordinary shares" refer to Jazz Pharmaceuticals plc's ordinary shares.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Jazz Pharmaceuticals plc and our subsidiaries and intercompany transactions and balances have been eliminated. We record noncontrolling interests in our consolidated financial statements which represent the ownership interest of minority shareholders in the equity of Gentium. The results of operations of the acquired Azur Pharma, EUSA Pharma and Gentium businesses, along with the estimated fair values of the assets acquired and liabilities assumed in each transaction, are included in our consolidated financial statements since the effective dates of the Azur Merger, the EUSA Acquisition and the Gentium Acquisition, respectively.

Reclassifications

Certain prior period amounts presented in these consolidated financial statements and the accompanying footnotes have been reclassified to conform to the current period presentation. Upfront license fees, previously classified as research and development expense in 2013, have been reclassified to acquired in-process research and development, or IPR&D, in the consolidated statements of income and reclassified from operating activities to investing activities in the consolidated

statements of cash flows to conform to the current period presentation. Inventories of $1.4 million, previously classified as raw materials as of December 31, 2013, have been reclassified to work-in-process to conform to the current period presentation.

Significant Risks and Uncertainties

Our financial results are significantly influenced by sales of Xyrem. In 2014, net product sales of Xyrem were $778.6 million, which represented 67.0% of total net product sales. Our ability to maintain or increase sales of Xyrem in its approved indications is subject to a number of risks and uncertainties, including the potential introduction of generic competition, changed or increased regulatory restrictions and continued acceptance of Xyrem as safe and effective by physicians and patients. Five abbreviated new drug applications, or ANDAs, have been filed with the U.S. Food and Drug Administration, or FDA, by third parties seeking to market generic versions of Xyrem, including the most recent in the fourth quarter of 2014. We have initiated lawsuits against all five third parties, and the litigation proceedings are ongoing. We cannot predict the timing or outcome of these proceedings. Although no trial date has been set in any of the ANDA suits, we anticipate that trial on some of the patents in the case against the first ANDA filer, Roxane Laboratories, Inc., or Roxane, could occur as early as the third quarter of 2015. In addition, certain of the ANDA filers have sought to challenge the validity of our patents covering the distribution system for Xyrem by filing petitions for covered business method, or CBM, post-grant patent review and/or inter partes review, or IPR, by the Patent Trial and Appeal Board, or PTAB, of the U.S. Patent and Trademark Office, or USPTO. The PTAB has issued decisions denying institution of CBM review for all of the CBM petitions and has not yet determined whether to institute proceedings with respect to the petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings. We expect that the approval of an ANDA that results in the launch of a generic version of Xyrem, or the approval and launch of other sodium oxybate products that compete with Xyrem, would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In addition, we are continuing our efforts on various regulatory matters, including updating documents that we have submitted to the FDA on our risk management and controlled distribution system for Xyrem, which we refer to as the Xyrem Risk Management Program. We are engaged in ongoing communications with respect to our risk evaluation and mitigation strategies, or REMS, documents for Xyrem, but have not reached agreement with the FDA on certain significant terms. In late 2013, the FDA notified us that it would exercise its claimed authority to modify our REMS and that it would finalize the REMS as modified by the FDA unless we initiated dispute resolution procedures with respect to the modification of the Xyrem deemed REMS. Among other things, we disagree with the FDA's position in the late 2013 notice that, as part of the current REMS process, the Xyrem deemed REMS should be modified to enable the distribution of Xyrem through more than one pharmacy, or potentially through retail pharmacies and wholesalers, as well as with certain modifications proposed by the FDA that would, in the FDA's view, be sufficient to ensure that the REMS includes only those elements necessary to ensure that the benefits of Xyrem outweigh its risks, and that would, in the FDA's view, reduce the burden on the healthcare system. Given these circumstances, we initiated dispute resolution procedures with the FDA at the end of February 2014. We received the FDA's denial of our initial dispute resolution submission in the second quarter of 2014, and our dispute is currently subject to further supervisory review at the next administrative level of the FDA. We have received interim responses from the FDA, but the FDA has not yet communicated a decision on our further appeal to us. We expect to receive the FDA's decision in the first quarter of 2015. We cannot predict whether, or on what terms, we will reach agreement with the FDA on final REMS documents for Xyrem, the outcome or timing of the current dispute resolution procedure, whether we will initiate additional dispute resolution proceedings with the FDA or other legal proceedings prior to finalizing the REMS documents, or the outcome or timing of any such proceedings. We expect that final REMS documents for Xyrem will include modifications to, and/or requirements that are not currently implemented in, the Xyrem Risk Management Program. Any such modifications or additional requirements could potentially make it more difficult or expensive for us to distribute Xyrem, make it easier for future generic competitors, and/or negatively affect sales of Xyrem.

We also expect to face pressure to license or share our Xyrem Risk Management Program, which is the subject of multiple issued patents, or elements of it, with generic competitors. In January 2014, the FDA held an initial meeting with us and the then-current Xyrem ANDA applicants to facilitate the development of a single shared system REMS for Xyrem (sodium oxybate). The parties have had numerous interactions with respect to a single shared system REMS since the initial meeting, and we expect the interactions to continue. In addition, if we do not develop a single shared system REMS or license or share our REMS with a generic competitor within a time frame or on terms that the FDA considers acceptable, the FDA may assert that its waiver authority permits it to allow the generic competitor to market a generic drug with a REMS that does not include the same elements that are in our deemed REMS or, when Xyrem REMS documents are approved, with a separate REMS that includes different, but comparable, elements to assure safe use. Similarly, it is possible that, consistent with the

position that the FDA articulated in its December 2012 response denying a Citizen Petition we filed in July 2012, the FDA could approve an ANDA with a risk management plan that is separate from our Xyrem deemed REMS, rather than with a final REMS or a shared REMS for both the generic and Xyrem. We cannot predict the outcome or impact on our business of any future action that we may take with respect to the development of a single shared system REMS for Xyrem (sodium oxybate), licensing or sharing our REMS, or the FDA's response to a certification that a third party had been unable to obtain a license.

Sales of our second largest product, Erwinaze, continue to grow. In 2014, net product sales of Erwinaze/Erwinase were $199.7 million, which represented 17.2% of net product sales in 2014. We seek to maintain and increase sales of Erwinaze, as well as to make Erwinaze more widely available, through ongoing research and development activities. However, our ability to successfully and sustainably maintain or grow sales of Erwinaze is subject to a number of risks and uncertainties, including the limited population of patients with acute lymphoblastic leukemia, or ALL, and the incidence of hypersensitivity reactions to *E. coli*-derived asparaginase within that population, our ability to obtain clinical data on the use of Erwinaze in young adults age 18 to 39 with ALL who are hypersensitive to *E. coli*-derived asparaginase, as well as our need to apply for and receive marketing authorizations, through the European Union's, or EU's, mutual recognition procedure or otherwise, in certain additional countries so we can launch promotional efforts in those countries. Another significant challenge to our ability to maintain current sales levels and to increase sales is our need to avoid supply interruptions of Erwinaze due to capacity constraints, production delays, quality challenges or other manufacturing difficulties. We have limited inventory of Erwinaze, which puts us at significant risk of not being able to meet product demand. The current manufacturing capacity for Erwinaze is nearly completely absorbed by demand for the product. As a consequence of constrained manufacturing capacity, we have had an extremely limited ability to build an excess level of product inventory that could be used to absorb disruptions to supply resulting from any quality or other issues. If we continue to be subject to capacity constraints or experience quality or other manufacturing challenges in the future, we may be unable to build a desired excess level of product inventory, and our ability to supply the market may be compromised. Although we are taking steps to improve the Erwinaze manufacturing process, if our ongoing efforts are not successful, we could experience additional Erwinaze supply interruptions in the future, which could have a material adverse effect on our sales of and revenues from Erwinaze and limit our potential future maintenance and growth of the market for this product. In addition, while we continue to work with the manufacturer of Erwinaze to evaluate potential steps to expand production capacity to increase the supply of Erwinaze over the longer term to address worldwide demand, our ability to maintain or increase sales of Erwinaze may be limited by our ability to obtain a sufficient supply of the product.

In furtherance of our growth strategy, we have made a significant investment in Defitelio. We added the product to our portfolio as a result of the Gentium Acquisition and secured worldwide rights to the product by acquiring rights to defibrotide in the Americas in August 2014. Our ability to realize the anticipated benefits from this investment is subject to a number of risks and uncertainties, including our ability to successfully maintain or grow sales of Defitelio in Europe, or obtain marketing approval in other countries, including the United States, so that we can launch promotional efforts in those countries. During 2014, Defitelio was launched in a number of European countries. We expect to continue to launch Defitelio in additional European countries on a rolling basis in 2015. A key challenge to our success in maintaining or growing sales of Defitelio in Europe is our ability to obtain appropriate pricing and reimbursement approvals in those European countries where Defitelio is not yet launched. If we experience delays or unforeseen difficulties in obtaining favorable pricing and reimbursement approvals, planned launches in the affected countries would be delayed, or, if we are unable to ultimately obtain favorable pricing and reimbursement approvals in countries that represent significant markets, especially where a country's reimbursed price influences other countries, our growth prospects in Europe could be negatively affected.

We are also engaged in activities related to the potential approval of defibrotide in the United States. We initiated a rolling submission of a new drug application, or NDA, to the FDA for defibrotide for the treatment of severe hepatic veno-occlusive disease, or VOD, in December 2014 and expect to complete the submission in mid-2015. We do not expect to be required to complete any additional clinical trials prior to completion of the NDA submission. However, we may be unable to acquire and remediate key information to be included in the data package for the NDA in a timely manner or our analysis of such information may not support submission, which would delay or preclude the completion of our NDA submission, and we may be unable to otherwise obtain regulatory approval of defibrotide in the United States in a timely manner, if at all. We also face other challenges that could impact the anticipated value of Defitelio/defibrotide, including the limited size of the population of patients who undergo hematopoietic stem cell transplantation, or HSCT, therapy and develop severe VOD, the need to establish U.S. pricing and reimbursement support for the product in the event we are able to obtain U.S. marketing approval for defibrotide, the possibility that we may be required to conduct time-consuming and costly clinical trials as a condition of any U.S. marketing approval for the product, the lack of experience of U.S. physicians in diagnosing and treating VOD, and challenges to our ability to develop the product for indications in addition to the treatment of severe VOD. If sales of Defitelio/defibrotide do not reach the levels we expect, our anticipated revenue from the product would be negatively

affected, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In addition to risks specifically related to Xyrem, Erwinaze and Defitelio/defibrotide, we are subject to other challenges and risks specific to our business, as well as risks and uncertainties common to companies in the pharmaceutical industry with development and commercial operations, including: the challenges of protecting and enhancing our intellectual property rights; delays or problems in the supply or manufacture of our products, particularly with respect to certain products as to which we maintain limited inventories, including products for which our supply demands are growing, and our dependence on single source suppliers to continue to meet our ongoing commercial demand or our requirements for clinical trial supplies; the need to obtain and maintain appropriate pricing and reimbursement for our products in an increasingly challenging environment due to, among other things, the attention being paid to healthcare cost containment and other austerity measures in the United States and worldwide, including the need to obtain and maintain reimbursement for Xyrem in the United States in an environment in which we are subject to increasingly restrictive conditions for reimbursement required by third party payors; and the challenges of compliance with the requirements of the FDA, the U.S. Drug Enforcement Administration, or DEA, and non-U.S. regulatory agencies, including with respect to product labeling, requirements for distribution, obtaining sufficient DEA quotas where needed, marketing and promotional activities, adverse event reporting and product recalls or withdrawals.

Other risks and uncertainties related to our ability to execute on our strategy include: the challenges of achieving and maintaining commercial success of our products, such as obtaining sustained acceptance of our products by patients, physicians and payors; the risks associated with business combination or product or product candidate acquisition transactions, such as the challenges inherent in the integration of acquired businesses with our historic business, the increase in geographic dispersion among our centers of operation, taking on the operation of a manufacturing plant as a result of the Gentium Acquisition, and the risks that we may acquire unanticipated liabilities along with acquired businesses or otherwise fail to realize the anticipated benefits (commercial or otherwise) from such transactions; the difficulty and uncertainty of pharmaceutical product development, including the timing thereof, and the uncertainty of clinical success, such as the risk that results from preclinical studies and/or early clinical trials may not be predictive of results obtained in later and larger clinical trials planned or anticipated to be conducted for our product candidates; the inherent uncertainty associated with the regulatory approval process, especially as we continue to undertake increased activities and make growing investment in our product pipeline development projects; our ability to identify and acquire, in-license or develop additional products or product candidates to grow our business; and possible restrictions on our ability and flexibility to pursue certain future opportunities as a result of our substantial outstanding debt obligations, which increased significantly in 2014.

Business Acquisitions

Our consolidated financial statements include the results of operations of an acquired business from the date of acquisition. We account for acquired businesses using the acquisition method of accounting. The acquisition method of accounting for acquired businesses requires, among other things, that assets acquired, liabilities assumed and any noncontrolling interests in the acquired business be recognized at their estimated fair values as of the acquisition date, with limited exceptions, and that the fair value of acquired IPR&D be recorded on the balance sheet. Also, transaction costs are expensed as incurred. Any excess of the acquisition consideration over the assigned values of the net assets acquired is recorded as goodwill. Contingent consideration is included within the acquisition cost and is recognized at its fair value on the acquisition date. A liability resulting from contingent consideration is remeasured to fair value at each reporting date until the contingency is resolved and changes in fair value are recognized in earnings.

Concentrations of Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash, cash equivalents and marketable securities. Our investment policy permits investments in U.S. federal government and federal agency securities, corporate bonds or commercial paper issued by U.S. corporations, money market instruments, certain qualifying money market mutual funds, certain repurchase agreements, and tax-exempt obligations of U.S. states, agencies and municipalities and places restrictions on credit ratings, maturities, and concentration by type and issuer. We are exposed to credit risk in the event of a default by the financial institutions holding our cash, cash equivalents and marketable securities and issuers of investments to the extent recorded on the balance sheet.

We are also subject to credit risk from our accounts receivable related to our product sales. We monitor our exposure within accounts receivable and record a reserve against uncollectible accounts receivable as necessary. We extend credit to pharmaceutical wholesale distributors and specialty pharmaceutical distribution companies, primarily in the United States, and to other international distributors and hospitals. Customer creditworthiness is monitored and collateral is not required. We

monitor deteriorating economic conditions in certain European countries which may result in variability of the timing of cash receipts and an increase in the average length of time that it takes to collect accounts receivable outstanding. Historically, we have not experienced significant credit losses on our accounts receivable and we do not expect to have write-offs or adjustments to accounts receivable which would have a material adverse effect on our financial position, liquidity or results of operations. As of December 31, 2014, five customers accounted for 86% of gross accounts receivable including Express Scripts Specialty Distribution Services, Inc. and its affiliate CuraScript, Inc., or Express Scripts, which accounted for 66% of gross accounts receivable and IDIS Limited, which accounted for 11% of gross accounts receivable. As of December 31, 2013, five customers accounted for 85% of gross accounts receivable including Express Scripts which accounted for 69% of gross accounts receivable and Accredo Health Group, Inc. which accounted for 9% of gross accounts receivable.

We depend on single source suppliers and manufacturers for each of our products, product candidates and their active pharmaceutical ingredients.

Cash Equivalents and Marketable Securities

We consider all highly liquid investments, readily convertible to cash, that mature within three months or less from date of purchase to be cash equivalents.

Marketable securities are investments in debt securities with maturities of less than one year from the balance sheet date, or securities with maturities of greater than one year that are specifically identified to fund current operations. Collectively, cash equivalents and marketable securities are considered available-for-sale and are recorded at fair value. Unrealized gains and losses, net of tax, are recorded in accumulated other comprehensive income (loss) in shareholders' equity. We use the specific-identification method for calculating realized gains and losses on securities sold. Realized gains and losses and declines in value judged to be other than temporary on marketable securities are included in interest expense, net in the consolidated statements of income. Realized gains and losses on sales of marketable securities have not been significant.

Inventories

Inventories are valued at the lower of cost or market. Cost is determined using the first-in, first-out method for all inventories. Our policy is to write down inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value and inventory in excess of expected requirements. The estimate of excess quantities is subjective and primarily dependent on our estimates of future demand for a particular product. If our estimate of future demand changes, we consider the impact on the reserve for excess inventory and adjust the reserve as required. Increases in the reserve are recorded as charges in cost of product sales. For product candidates that have not been approved by the FDA, inventory used in clinical trials is expensed at the time of production and recorded as research and development expense. For products that have been approved by the FDA, inventory used in clinical trials is expensed at the time the inventory is packaged for the clinical trial. Prior to receiving FDA approval, costs related to purchases of the active pharmaceutical ingredient and the manufacturing of the product candidate are recorded as research and development expense. All direct manufacturing costs incurred after approval are capitalized into inventory. The fair value of inventories acquired included no step-up in the value of inventories and $0.2 million step-up in the value of inventories as of December 31, 2014 and 2013, respectively.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, which range from three to 10 years. Leasehold improvements are amortized over the shorter of the noncancelable term of our operating leases or their economic useful lives. Maintenance and repairs are expensed as incurred.

Goodwill

Goodwill represents the excess of the acquisition consideration over the fair value of assets acquired and liabilities assumed. We have determined that we operate in a single segment and have a single reporting unit associated with the development and commercialization of pharmaceutical products. The annual test for goodwill impairment is a two-step process. The first step is a comparison of the fair value of the reporting unit with its carrying amount, including goodwill. If this step indicates impairment, then, in the second step, the loss is measured as the excess of recorded goodwill over its implied fair value. Implied fair value is the excess of the fair value of the reporting unit over the fair value of all identified assets and liabilities. We test goodwill for impairment annually in October and when events or changes in circumstances indicate that the carrying value may not be recoverable.

Acquired In-Process Research and Development

The initial costs of rights to IPR&D projects acquired in an asset acquisition are expensed as IPR&D unless the project has an alternative future use. The fair value of IPR&D projects acquired in a business combination are capitalized and accounted for as indefinite-lived intangible assets until the underlying project receives regulatory approval, at which point the intangible asset will be accounted for as a finite-lived intangible asset, or discontinued, at which point the intangible asset will be written off. Development costs incurred after an acquisition are expensed as incurred.

Intangible Assets

Intangible assets with finite useful lives consist primarily of purchased developed technology and are amortized on a straight-line basis over their estimated useful lives, which range from two to 16 years. The estimated useful lives associated with finite-lived intangible assets are consistent with the estimated lives of the associated products and may be modified when circumstances warrant. Such assets are reviewed for impairment when events or circumstances indicate that the carrying value of an asset may not be recoverable. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of an asset and its eventual disposition are less than its carrying amount. The amount of any impairment is measured as the difference between the carrying amount and the fair value of the impaired asset.

Revenue Recognition

Revenues are recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable and collection is reasonably assured.

Product Sales, Net

Product sales revenue is recognized when title has transferred to the customer and the customer has assumed the risks and rewards of ownership, which is typically on delivery to the customer or, in the case of products that are subject to consignment agreements, when the customer removes product from our consigned inventory location for shipment directly to a patient.

Revenue from sales transactions where the buyer has the right to return the product is recognized at the time of sale only if (i) the seller's price to the buyer is substantially fixed or determinable at the date of sale, (ii) the buyer has paid the seller, or the buyer is obligated to pay the seller and the obligation is not contingent on resale of the product, (iii) the buyer's obligation to the seller would not be changed in the event of theft or physical destruction or damage of the product, (iv) the buyer acquiring the product for resale has economic substance apart from that provided by the seller, (v) the seller does not have significant obligations for future performance to directly bring about resale of the product by the buyer, and (vi) the amount of future returns can be reasonably estimated.

Revenues from sales of products are recorded net of estimated allowances for returns, specialty distributor fees, wholesaler fees, prompt payment discounts, government rebates, government chargebacks, coupon programs and rebates under managed care plans. Provisions for returns, specialty distributor fees, wholesaler fees, government rebates, coupon programs and rebates under managed care plans are included within current liabilities in our consolidated balance sheets. Provisions for government chargebacks and prompt payment discounts are generally shown as a reduction in accounts receivable. Calculating certain of these items involves estimates and judgments based on sales or invoice data, contractual terms, historical utilization rates, new information regarding changes in these programs' regulations and guidelines that would impact the amount of the actual rebates, our expectations regarding future utilization rates for these programs and channel inventory data. Adjustments to estimates for these allowances have not been material.

Royalties and Contract Revenues

We receive royalties from third parties based on sales of our products under licensing and distribution arrangements. For those arrangements where royalties are reasonably estimable, we recognize revenues based on estimates of royalties earned during the applicable period, and adjust for differences between the estimated and actual royalties in the following quarter. Historically, these adjustments have not been significant.

Our contract revenues consist of fees and milestone payments. Non-refundable fees where we have no continuing performance obligations are recognized as revenues when there is persuasive evidence of an arrangement and collection is reasonably assured. In situations where we have continuing performance obligations, non-refundable fees are deferred and are recognized ratably over our projected performance period. We recognize at-risk milestone payments, which are typically related to regulatory, commercial or other achievements by us or our licensees and distributors, as revenues when the milestone is accomplished and collection is reasonably assured. Sales-based milestone payments are typically payments made to us that are

triggered when aggregate net sales of a product by a collaborator for a specified period (for example, an annual period) reach an agreed upon threshold amount. We recognize sales-based milestone payments from a collaborator when the event which triggers the obligation of payment has occurred, there is no further obligation on our part in connection with the payment, and collection is reasonably assured. Refundable fees are deferred and recognized as revenues upon the later of when they become nonrefundable or when our performance obligations are completed.

Cost of Product Sales

Cost of product sales includes third party manufacturing and distribution costs, the cost of drug substance, royalties due to third parties on product sales, product liability and cargo insurance, FDA user fees, freight, shipping, handling and storage costs and salaries and related costs of employees involved with production. Cost of product sales in 2014 and 2013 included $10.5 million and $3.8 million, respectively, of inventory costs associated with the fair value step-up in acquired inventory. Excluded from cost of product sales, as shown on the consolidated statements of income, is amortization of acquired developed technology of $122.6 million, $78.8 million and $65.1 million in 2014, 2013 and 2012, respectively.

Research and Development

Research and development expenses consist primarily of personnel expenses, costs related to clinical studies and outside services, and other research and development costs. Personnel expenses relate primarily to salaries, benefits and share-based compensation. Clinical study and outside services costs relate primarily to services performed by clinical research organizations, clinical studies performed at clinical sites, materials and supplies, and other third-party fees. Other research and development expenses primarily include overhead allocations consisting of various support and facilities-related costs. Research and development costs are expensed as incurred. For product candidates that have not been approved by the FDA, inventory used in clinical trials is expensed at the time of production and recorded as research and development expense. For products that have been approved by the FDA, inventory used in clinical trials is expensed at the time the inventory is packaged for the trial.

Advertising Expenses

We expense the costs of advertising, including promotional expenses, as incurred. Advertising expenses for 2014, 2013 and 2012 were $1.0 million, $1.0 million and $0.7 million, respectively.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between the financial statement carrying amount and the tax basis of assets and liabilities and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is provided when it is more-likely-than-not that some portion or all of a deferred tax asset will not be realized. We account for uncertain tax positions using a “more-likely-than-not” threshold for recognizing and resolving uncertain tax positions. A recognized tax position is then measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon settlement. Interest and penalties related to uncertain tax positions are included in the income tax provision (benefit) and classified with the related liability on the consolidated balance sheets.

Foreign Currency

Our functional and reporting currency is the U.S. dollar. The assets and liabilities of our subsidiaries that have a functional currency other than the U.S. dollar are translated into U.S. dollars at the exchange rate prevailing at the balance sheet date with the results of operations of subsidiaries translated at the average exchange rate for the reporting period. The cumulative foreign currency translation adjustment is recorded as a component of accumulated other comprehensive income (loss) in shareholders’ equity.

Transactions in foreign currencies are translated into the functional currency of the relevant subsidiary at the rate of exchange prevailing at the date of the transaction. Any monetary assets and liabilities arising from these transactions are translated into the relevant functional currency at exchange rates prevailing at the balance sheet date or on settlement. Resulting gains and losses are recorded in foreign currency gain (loss) in our consolidated statements of income.

Financing Costs

Deferred financing costs are reported at cost, less accumulated amortization and the related amortization expense is included in interest expense, net in our consolidated statements of income. The carrying amount of debt includes any related unamortized original issue discount.

Contingencies

From time to time, we may become involved in claims and other legal matters arising in the ordinary course of business. We record accruals for loss contingencies to the extent that we conclude 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.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles, or GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures in the condensed consolidated financial statements and accompanying notes. Management bases its estimates on historical experience and on assumptions believed to be reasonable under the circumstances. Actual results could differ materially from those estimates.

Net Income per Ordinary Share

Basic net income per ordinary share attributable to Jazz Pharmaceuticals plc is based on the weighted-average number of ordinary shares outstanding. Diluted net income per ordinary share attributable to Jazz Pharmaceuticals plc is based on the weighted-average number of ordinary shares outstanding and potentially dilutive ordinary shares outstanding.

Basic and diluted net income per ordinary share attributable to Jazz Pharmaceuticals plc were computed as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2014	2013	2012
Numerator:			
Income from continuing operations	$ 57,326	$ 216,312	$ 261,149
Loss from continuing operations attributable to noncontrolling interests, net of tax	(1,061)	—	—
Income from continuing operations attributable to Jazz Pharmaceuticals plc	58,387	216,312	261,149
Income from discontinued operations	—	—	27,437
Net income attributable to Jazz Pharmaceuticals plc	$ 58,387	$ 216,312	$ 288,586
Denominator:			
Weighted-average ordinary shares used in calculating net income per ordinary share attributable to Jazz Pharmaceuticals plc - basic	59,746	58,298	56,643
Dilutive effect of employee equity incentive and purchase plans	2,402	1,772	1,536
Dilutive effect of warrants	466	1,499	2,016
Weighted-average ordinary shares used in calculating net income per ordinary share attributable to Jazz Pharmaceuticals plc - diluted	62,614	61,569	60,195
Net income per ordinary share attributable to Jazz Pharmaceuticals plc:			
Basic:			
Income from continuing operations	$ 0.98	$ 3.71	$ 4.61
Income from discontinued operations	—	—	0.48
Net income attributable to Jazz Pharmaceuticals plc	$ 0.98	$ 3.71	$ 5.09
Diluted:			
Income from continuing operations	$ 0.93	$ 3.51	$ 4.34
Income from discontinued operations	—	—	0.45
Net income attributable to Jazz Pharmaceuticals plc	$ 0.93	$ 3.51	$ 4.79

Potentially dilutive ordinary shares from our employee equity incentive and purchase plans, warrants and exchangeable senior notes are determined by applying the treasury stock method to the assumed exercise of share options and warrants, the assumed vesting of outstanding restricted stock units, or RSUs, the assumed issuance of ordinary shares under our employee stock purchase plan, or ESPP, and the assumed issuance of ordinary shares upon exchange of our exchangeable senior notes. The approximately 2.9 million ordinary shares issuable upon exchange of our exchangeable senior notes had no effect on diluted net income per ordinary share attributable to Jazz Pharmaceuticals plc because the average price of our ordinary shares for the year ended December 31, 2014 did not exceed the effective exchange price of $199.77 per ordinary share. For additional information relating to our exchangeable senior notes, see Note 9.

The following table represents the weighted-average ordinary shares that were excluded from the computation of diluted net income per ordinary share attributable to Jazz Pharmaceuticals plc for the periods presented because including them would have an anti-dilutive effect (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Options to purchase ordinary shares and RSUs	819	1,584	1,506
1.875% exchangeable senior notes due 2021	1,112	—	—

Share-Based Compensation

We account for compensation cost for all share-based awards at fair value on the date of grant. The fair value is recognized as expense over the service period, net of estimated forfeitures, using the straight-line method. The estimation of share-based awards that will ultimately vest requires judgment, and, to the extent actual results or updated estimates differ from

current estimates, such amounts will be recorded as a cumulative adjustment in the period estimates are revised. We primarily consider historical experience when estimating expected forfeitures.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or the FASB, issued Accounting Standards Update, or ASU, No. 2014-09, "Revenue from Contracts with Customers", or ASU No. 2014-09, which states that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve this, an entity will need to identify the contract with a customer; identify the separate performance obligations in the contract; determine the transaction price; allocate the transaction price to the separate performance obligations in the contract; and recognize revenue when (or as) the entity satisfies each performance obligation. ASU No. 2014-09 will be effective for us beginning January 1, 2017 and can be adopted on a full retrospective basis or on a modified retrospective basis. We are currently assessing our approach to the adoption of this standard and the impact on our results of operations and financial position.

In April 2014, the FASB issued ASU No. 2014-08, "Presentation of Financial Statements (Topic 205) and Property, Plant, and Equipment (Topic 360): Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity", or ASU 2014-08. Under ASU 2014-08, only disposals representing a strategic shift in operations should be presented as discontinued operations. Those strategic shifts should have a major effect on the organization's operations and financial results. Additionally, ASU 2014-08 requires expanded disclosures about discontinued operations that will provide financial statement users with more information about the assets, liabilities, income, and expenses of discontinued operations. ASU 2014-08 is effective for fiscal and interim periods beginning on or after December 15, 2014, with early adoption permitted. We early adopted ASU 2014-08 in 2014. Please see Note 18 for additional information.

3. Business Combination and Asset Acquisitions

Gentium Acquisition

On December 19, 2013, we entered into a definitive agreement with Gentium, or the Gentium tender offer agreement, pursuant to which we made a cash tender offer of $57.00 per share for all outstanding Gentium ordinary shares and American Depositary Shares, or ADSs. As of the expiration of the initial offering period on January 22, 2014, 12,244,156 Gentium ordinary shares and ADSs were properly tendered and not withdrawn in the tender offer. These ordinary shares and ADSs represented approximately 79% of Gentium's issued and outstanding ordinary shares and ADSs and 69% of the fully diluted number of ordinary shares and ADSs (in each case without duplication for ordinary shares underlying ADSs). All properly tendered ordinary shares and ADSs as of such date were accepted for payment, which was made in accordance with the terms of the tender offer.

Upon payment for the properly tendered ordinary shares and ADSs on January 23, 2014, we became the indirect majority shareholder of Gentium and acquired control of Gentium. Following the expiration of the initial offering period, and in accordance with the terms of the Gentium tender offer agreement, we commenced a subsequent offering period to acquire all remaining untendered ordinary shares and ADSs. The subsequent offering period expired on February 20, 2014. In total, pursuant to the tender offer agreement, we purchased approximately 98% of Gentium's fully diluted ordinary shares and ADSs. Later in 2014, we acquired additional Gentium ordinary shares, representing a further 1.8% interest in Gentium, for aggregate cash consideration of $17.8 million. As of December 31, 2014, the aggregate acquisition cost of the Gentium ordinary shares and ADSs was $994.1 million, comprising cash payments of $1,011.2 million, offset by proceeds from the exercise of Gentium share options of $17.1 million. $857.1 million of the acquisition consideration is attributable to the 12,244,156 Gentium ordinary shares and ADSs purchased on the closing date of the Gentium Acquisition, 1,345,023 ADSs committed to tender in accordance with the guaranteed delivery procedures contemplated by the tender offer and options to acquire 1,666,608 ordinary shares of Gentium subject to support agreements requiring that such options be exercised and the underlying ordinary shares be tendered in a subsequent offering period. These ADSs and ordinary shares represented in the aggregate approximately 86% of the fully diluted number of ordinary shares and ADSs of Gentium. The remaining $137.0 million of the acquisition cost is attributable to the acquisition of an additional 12% of the fully diluted Gentium ordinary shares and ADSs during the subsequent offering period of the tender offer and the acquisition of an additional 1.8% interest in Gentium later in 2014, which are accounted for as an acquisition of noncontrolling interests.

We believe the Gentium Acquisition provided us with an opportunity to diversify our development and commercial portfolio and complement our clinical experience in hematology/oncology and our expertise in reaching targeted physicians who treat serious medical conditions.

The Gentium Acquisition was accounted for using the acquisition method of accounting under which assets and liabilities of Gentium were recorded at their respective estimated fair values as of the closing date of the Gentium Acquisition and added to the assets and liabilities of Jazz Pharmaceuticals plc, including an amount for goodwill representing the difference between the acquisition consideration and the estimated fair value of the identifiable net assets. The results of operations of Gentium and the estimated fair values of the assets acquired and liabilities assumed have been included in our consolidated financial statements since the closing of the Gentium Acquisition on January 23, 2014.

In 2014, we incurred $11.9 million in acquisition-related costs related to the Gentium Acquisition, which primarily consisted of banking, legal, accounting and valuation-related expenses. In addition, we incurred $5.4 million related to change in control obligations associated with the Gentium Acquisition. These expenses were recorded in selling, general and administrative expense in the accompanying consolidated statements of income. In 2014, our consolidated statements of income included revenues of $78.2 million from the acquired Gentium business, as measured from the closing date of the Gentium Acquisition. The portion of total expenses and net income associated with the acquired Gentium business was not separately identifiable due to the integration of Gentium operations with our historic operations.

The acquisition consideration (not including the acquisition cost of $119.2 million to acquire the 12% noncontrolling interests in the subsequent offering period of the tender offer and the acquisition cost of $17.8 million to acquire the 1.8% noncontrolling interests later in 2014) was comprised of (in thousands):

Cash consideration for shares acquired in initial tender offer period	$	697,917
Liability for shares committed under guaranteed delivery procedures		76,666
Liability for options committed for exercise		82,503
Total acquisition consideration	$	857,086

The fair values of assets acquired and liabilities assumed at the closing date of the Gentium Acquisition, and the fair value of the noncontrolling interests in Gentium at the dates they were acquired, are summarized below (in thousands):

Cash and cash equivalents	$	28,410
Short-term deposit		5,418
Accounts receivable (1)		13,855
Inventories		13,525
Prepaid and other current assets		1,383
Intangible assets		960,350
Goodwill		308,642
Deferred tax assets		22,999
Property, plant and equipment		10,201
Other long-term assets		431
Accounts payable		(11,778)
Accrued expenses		(51,477)
Income taxes payable		(502)
Other long-term liabilities		(654)
Debt (current and long-term)		(2,351)
Deferred tax liabilities		(304,788)
Noncontrolling interests		(136,578)
Total acquisition consideration	$	857,086

(1) The estimated fair value of trade receivables acquired was $13.9 million and the gross contractual amount was $14.9 million, of which we expect that $1.0 million will be uncollectible.

The intangible assets as of the closing date of the Gentium Acquisition included (in thousands):

Finite-lived intangible assets:		
Currently marketed product:		
Defibrotide VOD (Non Americas)	$	719,500
Manufacturing contracts		14,500
Tradename		350
Total finite-lived intangible assets		734,350
IPR&D:		
Defibrotide VOD Prophylaxis		168,000
Defibrotide VOD (Americas)		58,000
Total IPR&D		226,000
Total intangible assets	$	960,350

The fair value of the currently marketed product was determined using the 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 costs for each product line. Indications of value were developed by discounting these benefits to their present worth at a discount rate that reflects the current return requirements of the market. The fair value of the currently marketed product was capitalized as of the closing date of the Gentium Acquisition and subsequently will be amortized over the estimated remaining life of the product of approximately 16 years.

Gentium produces active pharmaceutical ingredients, or APIs, including the defibrotide compound, urokinase, sodium heparin and sulglicotide. Other than defibrotide, these APIs are subsequently used to make the finished forms of various drugs and are distributed via supply contracts. The fair value of these supply contracts was determined using the income approach based on the expected cash flows from the projected net earnings of each API. The fair value of the API supply contracts was capitalized as of the closing date of the Gentium Acquisition and subsequently will be amortized over four years which approximates the remaining contractual term and reasonably expected renewal periods.

The fair value of IPR&D was determined using the income approach, including the application of probability factors related to the likelihood of success of the respective products reaching final development and commercialization. This approach also took into consideration information and certain program-related documents and forecasts prepared by management. The fair value of IPR&D was capitalized as of the closing date of the Gentium Acquisition and is subsequently accounted for as an indefinite-lived intangible asset until completion or abandonment of the associated research and development efforts. Accordingly, during the development period after the closing of the Gentium Acquisition, these assets will not be amortized into earnings; instead, these assets will be subject to periodic impairment testing. Upon successful completion of the development process for an acquired IPR&D project, determination as to the useful life of the asset will be made. The asset would then be considered a finite-lived intangible asset and amortization of the asset into earnings would begin over the remaining estimated useful life of the asset.

The excess of the total acquisition consideration over the fair value amounts assigned to the assets acquired and the liabilities assumed represents the goodwill amount resulting from the Gentium Acquisition. We believe that the factors that contributed to goodwill included the Gentium workforce, which will complement our clinical experience in hematology/oncology and our expertise in reaching targeted physicians who treat serious medical conditions, and the deferred tax consequences of intangible assets recorded for financial statement purposes. We do not expect any portion of this goodwill to be deductible for tax purposes.

The noncontrolling interests at the closing date of the Gentium Acquisition comprised 2,007,452 of Gentium’s issued and outstanding ordinary shares and ADSs and options to acquire 484,097 ordinary shares of Gentium that were not subject to support agreements. The fair value of the noncontrolling interests was estimated using Gentium’s closing market price quoted on The NASDAQ Global Market on January 22, 2014.

Pro Forma Financial Information (Unaudited)

The following unaudited supplemental pro forma information presents our combined historical results of operations with adjustments to reflect one-time charges and amortization of fair value adjustments in the appropriate pro forma periods as if the Gentium Acquisition had been completed on January 1, 2013. These adjustments include:

- An increase in amortization expense related to the fair value of acquired identifiable intangible assets of $2.7 million in 2014 and $48.9 million in 2013.
- The exclusion of acquisition-related expenses of $43.0 million in 2014 and $4.8 million in 2013.
- An increase in interest expense of $1.3 million in 2014 and $22.5 million in 2013, incurred on additional borrowings made to fund the Gentium Acquisition as if the borrowings had occurred on January 1, 2013.
- The exclusion of other non-recurring expenses of $40.7 million in 2014 and the inclusion of $18.6 million in 2013 primarily related to Gentium transaction bonus costs, the fair value step-up to acquired inventory, costs of change in control obligations and share-based compensation incurred from the acceleration of stock option vesting upon the closing date of the Gentium Acquisition.

The unaudited pro forma results do not assume any operating efficiencies as a result of the consolidation of operations and are as follows (in thousands, except per share data):

	Year Ended December 31,	
	2014	2013
Revenues	$ 1,176,178	$ 925,185
Net income attributable to Jazz Pharmaceuticals plc	$ 82,802	$ 181,318
Net income per ordinary share attributable to Jazz Pharmaceuticals plc - basic	$ 1.39	$ 3.11
Net income per ordinary share attributable to Jazz Pharmaceuticals plc - diluted	$ 1.32	$ 2.94

Acquisition of Rights to Defibrotide in the Americas

As a result of the Gentium Acquisition, we acquired defibrotide, which is marketed under the name Defitelio in Europe. In 2013, the European Commission granted marketing authorization under exceptional circumstances for Defitelio for the treatment of severe VOD in adults and children undergoing HSCT therapy. In March 2014, we commenced the launch of Defitelio on a rolling basis in Europe. At the time of the Gentium Acquisition, Gentium had licensed to Sigma-Tau Pharmaceuticals, Inc., or Sigma-Tau, the rights to defibrotide for the treatment and prevention of VOD in North America, Central America and South America. In July 2014, we entered into a definitive agreement to acquire the rights to defibrotide in the Americas from Sigma-Tau. Pursuant to the agreement, upon the closing of the transaction in August 2014, we paid Sigma-Tau an upfront payment of $75.0 million. This transaction was accounted for as a purchase of IPR&D assets with no alternative future use. Accordingly, the $75.0 million upfront payment was charged to acquired IPR&D expense upon closing of the transaction. Sigma-Tau is also eligible to receive milestone payments of $25.0 million upon the acceptance for filing by the FDA of the first NDA for defibrotide for VOD and up to an additional $150.0 million based on the timing of potential FDA approval of defibrotide for VOD. We funded the upfront payment with cash on hand.

Acquisition of Rights to JZP-110 (formerly known as ADX-N05)

On January 13, 2014, we entered into a definitive agreement with Aerial BioPharma, LLC, or Aerial, under which we acquired certain assets related to JZP-110, a novel compound in clinical development for the treatment of excessive daytime sleepiness in patients with narcolepsy. Under the agreement, and in exchange for an upfront initial payment from us totaling $125.0 million, we acquired worldwide development, manufacturing and commercial rights to JZP-110, other than in certain jurisdictions in Asia where SK Biopharmaceuticals Co., Ltd, or SK, retains rights. Aerial and SK are eligible to receive milestone payments, in an aggregate amount of up $270.0 million, based on development, regulatory and sales milestones and tiered royalties from high single digits to mid-teens based on potential future sales. This acquisition was accounted for as a purchase of IPR&D assets with no alternative future use. Accordingly, the $125.0 million upfront payment was charged to acquired IPR&D expense in the year ended December 31, 2014. The assignment of the JZP-110 rights from Aerial to us triggered a milestone payment of $2.0 million to SK, which was also charged to acquired IPR&D expense in the year ended December 31, 2014.

4. Fair Value Measurement

Cash and cash equivalents consisted of the following (in thousands):

	December 31, 2014				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents
Cash	$ 338,262	$ —	$ —	$ 338,262	$ 338,262
Time deposits	345,780	—	—	345,780	345,780
Totals	$ 684,042	$ —	$ —	$ 684,042	$ 684,042

	December 31, 2013				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents
Cash	$ 495,990	$ —	$ —	$ 495,990	$ 495,990
Time deposits	140,514	—	—	140,514	140,514
Totals	$ 636,504	$ —	$ —	$ 636,504	$ 636,504

Cash equivalents are considered available-for-sale securities. We use the specific-identification method for calculating realized gains and losses on securities sold and include them in interest expense, net in the consolidated statements of income.

The following table summarizes, by major security type, our available-for-sale securities and liabilities that were measured at fair value on a recurring basis and were categorized using the fair value hierarchy (in thousands):

	December 31, 2014		December 31, 2013	
	Significant Other Observable Inputs (Level 2)	Total Estimated Fair Value	Significant Other Observable Inputs (Level 2)	Total Estimated Fair Value
Assets:				
Available-for-sale securities				
Time deposits	$ 345,780	$ 345,780	$ 140,514	$ 140,514
Liabilities:				
Contingent consideration	$ —	$ —	$ 50,000	$ 50,000

As of December 31, 2014, our available-for-sale securities included 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 other observable market data. There were no transfers between the different levels of the fair value hierarchy in 2014 or in 2013.

In connection with the EUSA Acquisition in 2012, we agreed to make a contingent payment of $50.0 million in cash if Erwinaze achieved net sales in the United States of $124.5 million or greater in 2013. This net sales milestone was achieved in the fourth quarter of 2013, and as a result we made the contingent payment in the first quarter of 2014.

As of December 31, 2014, the estimated fair value of the $895.4 million principal amount of our term loans was $881.9 million and the carrying amount was $890.5 million. The fair value was determined using quotes from the administrative agent of our credit facility that are based on the bid/ask prices of our term loans (Level 2). As of December 31, 2014, the estimated fair value of our exchangeable senior notes was $653.8 million. The fair value of the exchangeable senior notes was estimated using quoted market prices obtained from brokers (Level 2). The fair value of other borrowings approximates book value based on the borrowing rates currently available for variable rate loans (Level 2).

As of December 31, 2014, assets measured at fair value on a non-recurring basis subsequent to initial recognition included assets classified as held for sale on the consolidated balance sheet. These assets are associated with certain products

we acquired as part of the EUSA Acquisition that we expect to sell in the first half of 2015. See Note 18 for additional information. The carrying amount of $32.8 million for assets held for sale is equal to estimated fair value,which is based on the sales price agreed less costs to sell, and represents a Level 3 input.

5. Inventories

Inventories consisted of the following (in thousands):

	December 31,	
	2014	2013
Raw materials	$ 3,570	$ 3,506
Work in process	9,870	10,301
Finished goods	16,597	14,862
Total inventories	$ 30,037	$ 28,669

Inventories included no step-up in fair value and $0.2 million in acquisition accounting inventory fair value step-ups as of December 31, 2014 and 2013, respectively.

6. Property and Equipment

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

	December 31,	
	2014	2013
Construction-in-progress	$ 37,145	$ 4,388
Computer software	10,634	7,960
Leasehold improvements	7,931	4,587
Computer equipment	7,670	5,610
Machinery and equipment	6,408	417
Furniture and fixtures	2,220	1,897
Land and buildings	1,547	—
Subtotal	73,555	24,859
Less accumulated depreciation and amortization	(15,192)	(10,613)
Property and equipment, net	$ 58,363	$ 14,246

7. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31,	
	2014	2013
Rebates and other sales deductions	$ 51,899	$ 38,772
Employee compensation and benefits	46,143	31,829
Sales returns reserve	14,039	21,110
Accrued interest	10,327	4,150
Royalties	7,964	6,082
Accrued construction-in-progress	4,931	450
Professional fees	3,295	5,225
Other	25,493	12,100
Total accrued liabilities	$ 164,091	$ 119,718

8. Goodwill and Intangible Assets

The gross carrying amount of goodwill was as follows (in thousands):

Balance at December 31, 2013	$	450,456
Goodwill arising from the Gentium Acquisition		308,642
Goodwill allocated to assets held for sale (1)		(1,686)
Foreign exchange		(54,699)
Balance at December 31, 2014	$	702,713

(1) In December 2014, we entered into a definitive agreement to sell certain products and related assets. See Note 18 for information regarding assets held for sale.

The gross carrying amounts and net book values of our intangible assets were as follows (in thousands):

		December 31, 2014			December 31, 2013		
	Remaining Weighted-Average Useful Life (In years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Acquired developed technologies	12.9	$ 1,450,606	$ (259,889)	$ 1,190,717	$ 957,089	$ (179,225)	$ 777,864
Manufacturing contracts	3.1	13,012	(3,060)	9,952	—	—	—
Trademarks	0.1	2,914	(2,896)	18	2,600	(2,327)	273
Total finite-lived intangible assets		1,466,532	(265,845)	1,200,687	959,689	(181,552)	778,137
Acquired IPR&D assets		236,748	—	236,748	34,259	—	34,259
Total intangible assets		$ 1,703,280	$ (265,845)	$ 1,437,435	$ 993,948	$ (181,552)	$ 812,396

The increase in the gross carrying amount of intangible assets as of December 31, 2014 compared to December 31, 2013 reflected the acquisition of the Gentium intangible assets as described in Note 3, offset by the negative impact of foreign currency exchange which was primarily due to the strengthening of the U.S. dollar against the Euro, the impairment charge discussed below and the reclassification of certain intangible assets to assets held for sale as described in Note 18.

The assumptions and estimates used to determine future cash flows and remaining useful lives of our intangible and other long-lived assets are complex and subjective. They can be affected by various factors, including external factors, such as industry and economic trends, and internal factors such as changes in our business strategy and our forecasts for specific product lines.

In the second quarter of 2014, we recorded an impairment charge of $32.8 million on acquired developed technologies related to certain products we acquired as part of the EUSA Acquisition in June 2012. We report sales of these products under “Other” products. The impairment charge resulted from the reorganization of our operations in Europe to focus on our hematology/oncology therapeutic area following the Gentium Acquisition. In the fourth quarter of 2014, we entered into a definitive agreement to sell these products and the related business, and reclassified intangible assets associated with these products with a net book value of $27.5 million as assets held for sale. See Note 18 for information regarding assets held for sale.

Based on finite-lived intangible assets recorded as of December 31, 2014, and assuming the underlying assets will not be further impaired and that we will not change the expected lives of the assets, future amortization expenses were estimated as follows (in thousands):

Year Ending December 31,	Estimated Amortization Expense
2015	$ 102,508
2016	99,167
2017	99,167
2018	95,313
2019	95,071
Thereafter	709,461
Total	$ 1,200,687

In 2012, we sold the women's health business, a component of the acquired Azur Pharma business. Intangible assets related to the women's health business had a net book value of $41.4 million. Please see Note 20 for information regarding discontinued operations.

9. Debt

The following table summarizes the carrying amount of our indebtedness (in thousands):

	December 31,	
	2014	2013
1.875% exchangeable senior notes due 2021	$ 575,000	$ —
Unamortized discount on 1.875% exchangeable senior notes due 2021	(124,735)	—
1.875% exchangeable senior notes due 2021, net	450,265	—
Term loans	890,479	549,976
Other borrowings	1,684	—
Total debt	1,342,428	549,976
Less current portion	9,428	5,572
Total long-term debt	$ 1,333,000	$ 544,404

Exchangeable Senior Notes

In August 2014, we completed a private placement of $575.0 million principal amount of 1.875% exchangeable senior notes due 2021, or the 2021 Notes, resulting in net proceeds to us, after debt issuance costs, of $558.9 million. Interest on the 2021 Notes is payable semi-annually in cash in arrears on February 15 and August 15 of each year, beginning on February 15, 2015, at a rate of 1.875% per year. In certain circumstances, we may be required to pay additional amounts as a result of any applicable tax withholding or deductions required in respect of payments on the 2021 Notes. The 2021 Notes mature on August 15, 2021, unless earlier exchanged, repurchased or redeemed.

The holders of the 2021 Notes have the ability to require us to repurchase all or a portion of their 2021 Notes for cash in the event Jazz Pharmaceuticals plc undergoes certain fundamental changes. Prior to August 15, 2021, we may redeem the 2021 Notes, in whole but not in part, subject to compliance with certain conditions, if we have, or on the next interest payment date would, become obligated to pay to the holder of any 2021 Note additional amounts as a result of certain tax-related events. We also may redeem the 2021 Notes on or after August 20, 2018, in whole or in part, if the last reported sale price per ordinary share has been at least 130% of the exchange price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide the notice of redemption.

The 2021 Notes are exchangeable at an initial exchange rate of 5.0057 ordinary shares per $1,000 principal amount of 2021 Notes, which is equivalent to an initial exchange price of approximately $199.77 per ordinary share. Upon exchange, the 2021 Notes may be settled in cash, ordinary shares or a combination of cash and ordinary shares, at our election. Our intent and policy is to settle the principal amount of the 2021 Notes in cash upon exchange. 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 make-

whole fundamental changes occurring prior to the maturity date of the 2021 Notes or upon our issuance of a notice of redemption, we will in certain circumstances increase the exchange rate for holders of the 2021 Notes who elect to exchange their 2021 Notes in connection with that make-whole fundamental change or during the related redemption period. Prior to February 15, 2021, the 2021 Notes will be exchangeable only upon satisfaction of certain conditions and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the maturity date.

The 2021 Notes were issued by Jazz Investments I Limited, or the Issuer, a 100%-owned finance subsidiary of Jazz Pharmaceuticals plc. The Issuer's obligations under the 2021 Notes are fully and unconditionally guaranteed on a senior unsecured basis by Jazz Pharmaceuticals plc. No subsidiary of Jazz Pharmaceuticals plc guaranteed the 2021 Notes. Subject to certain local law restrictions on payment of dividends, among other things, and potential negative tax consequences, we are not aware of any significant restrictions on the ability of Jazz Pharmaceuticals plc to obtain funds from the Issuer or Jazz Pharmaceuticals plc's other subsidiaries by dividend or loan, or any legal or economic restrictions on the ability of the Issuer or Jazz Pharmaceuticals plc's other subsidiaries to transfer funds to Jazz Pharmaceuticals plc in the form of cash dividends, loans or advances. There is no assurance that in the future such restrictions will not be adopted.

In accounting for the issuance of the 2021 Notes, we separated the 2021 Notes into liability and equity components. The carrying amount of the liability component was calculated by measuring the estimated fair value of a similar liability that does not have an associated exchange feature. The carrying amount of the equity component representing the exchange option was determined by deducting the fair value of the liability component from the face value of the 2021 Notes as a whole. The excess of the principal amount of the liability component over its carrying amount will be amortized to interest expense over the expected life of the 2021 Notes using the effective interest method with an effective interest rate of 6.4% per annum. We have determined the expected life of the 2021 Notes to be equal to the original seven-year term. The equity component is not remeasured as long as it continues to meet the conditions for equity classification. As of December 31, 2014, the "if-converted value" did not exceed the principal amount of the 2021 Notes.

We allocated the total issuance costs incurred of $16.1 million to the liability and equity components based on their relative values. Issuance costs attributable to the liability component will be amortized to expense over the term of the 2021 Notes, and issuance costs attributable to the equity component were included with the equity component in our shareholders' equity.

For the year ended December 31, 2014, we recognized $9.9 million in interest expense related to the contractual coupon rate and amortization of the debt discount on the 2021 Notes.

As of December 31, 2014, the carrying value of the equity component related to the 2021 Notes, net of equity issuance costs, was $126.9 million.

Amendment of Credit Facility and Term Loan Refinancing

In June 2012, Jazz Pharmaceuticals plc, as guarantor, and certain of its wholly owned subsidiaries, as borrowers, entered into a credit agreement that provided for $475.0 million principal amount of term loans and a $100.0 million revolving credit facility. On June 13, 2013, we amended the credit agreement to provide for $557.2 million principal amount of term loans and a $200.0 million revolving credit facility that replaced the $100.0 million revolving credit facility. We used a portion of the proceeds from the term loans to refinance in full the $457.2 million principal amount of term loans outstanding under the credit agreement prior to the amendment. As a result of the June 2013 amendment, interest rate margins on the term loans and the revolving loans were reduced by 150 basis points.

On January 23, 2014, we entered into a second amendment to the credit agreement to provide for (i) a tranche of incremental term loans in the aggregate principal amount of $350.0 million, (ii) a tranche of term loans that refinanced the $554.4 million principal amount of term loans previously outstanding under the amended credit agreement, or the prior term loans, in their entirety, and (iii) a $425.0 million revolving credit facility that replaced the $200.0 million revolving credit facility. We used the proceeds from the incremental term loans and $300.0 million of loans under the revolving credit facility, together with cash on hand, to purchase the Gentium ordinary shares and ADSs properly tendered and accepted for payment on the January 22, 2014 expiration of the initial tender offer period relating to the Gentium Acquisition. The January 2014 amendment also reduced the interest rate margins on the terms loans by 25 basis points. In August 2014, we used a portion of the net proceeds from the issuance of the 2021 Notes to repay all outstanding borrowings under the revolving credit facility.

The term loans under the credit agreement mature on June 12, 2018 and the revolving credit facility terminates, and any loans outstanding thereunder become due and payable, on June 12, 2017.

The term loans under the credit agreement, as amended in January 2014, bear interest, at our option, at a rate equal to either the LIBOR, plus an applicable margin of 2.50% per annum (subject to a 0.75% LIBOR floor), or the prime lending rate, plus an applicable margin equal to 1.50% per annum (subject to a 1.75% prime rate floor). Borrowings under the current

revolving credit facility bear interest, at our option, at a rate equal to either the LIBOR, plus an applicable margin of 2.50% per annum, or the prime lending rate, plus an applicable margin equal to 1.50% per annum, subject to reduction by 0.25% or 0.50% based upon our secured leverage ratio. The revolving credit facility has a commitment fee payable on the undrawn amount ranging from 0.25% to 0.50% per annum based upon our secured leverage ratio.

The borrowers' obligations under the credit agreement and any hedging or cash management obligations entered into with a lender or an affiliate of a lender are guaranteed on a senior secured basis by Jazz Pharmaceuticals plc and certain of its subsidiaries (including the Issuer) and are secured by substantially all of Jazz Pharmaceuticals plc's, the borrowers' and the subsidiary guarantors' assets.

We may make voluntary prepayments of principal at any time without payment of a premium. We are required to make mandatory prepayments of the term loans (without payment of a premium) with (1) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (2) net cash proceeds from issuances of debt (other than certain permitted debt), (3) 50% of our excess cash flow as defined in the current credit agreement (subject to decrease to 25% if our total leverage ratio is equal to or less than 2.25 to 1.00 and greater than 1.25 to 1.00 or 0% if our total leverage ratio is equal to or less than 1.25 to 1.00), and (4) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions).

Principal repayments of the term loans, which are due quarterly, began in March 2014 and are equal to 1.0% per annum of the original principal amount of $904.4 million, with any remaining balance payable on the final maturity date.

The credit agreement contains customary representations and warranties and customary affirmative and negative covenants applicable to Jazz Pharmaceuticals plc and its restricted subsidiaries, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness and dividends and other distributions. The credit agreement also contains a financial covenant that requires Jazz Pharmaceuticals plc and its restricted subsidiaries to maintain a maximum secured leverage ratio. We were, as of December 31, 2014, and are currently in compliance with this financial covenant.

The refinancing of the term loans involved multiple lenders who were considered members of a loan syndicate. In determining whether the refinancing was to be accounted for as a debt extinguishment or modification, we considered whether the lenders remained the same or changed and whether the change in debt terms was substantial. The debt terms would be considered substantially different if the present value of the cash inflows and outflows of the new term loans, including all principal increases and lender fees on the refinancing date, was at least 10% different from the present value of the remaining cash inflows and outflows of the original term loans, or the 10% Test. We performed a separate 10% Test for each individual lender participating in the loan syndication. For existing lenders who participated in the new term loans as part of the new loan syndicate, the refinancing was accounted for as a modification as the change in debt terms was determined to not be substantial using the 10% Test.

Deferred financing costs of $21.7 million and an original issue discount of $6.1 million were associated with modified and new debt and will be amortized to interest expense using the interest method over the life of the term loans. As of December 31, 2014, the interest rate on the term loans was 3.25% and the effective interest rate was 4.1%.

As the borrowing capacity relating to each creditor under the revolving credit facility was greater than that under the original revolving credit facility, deferred financing costs totaling $5.4 million were associated with the new arrangement and are being amortized to interest expense on a straight-line basis over the life of the facility. As of December 31, 2014, there were no borrowings outstanding under the revolving credit facility.

Scheduled maturities with respect to our long-term debt are as follows (in thousands):

Year Ending December 31,	Scheduled Long-Term Debt Maturities
2015	$ 9,428
2016	9,433
2017	9,438
2018	868,479
2019	114
Thereafter	575,150
Total	$ 1,472,042

10. Deferred Revenue

We have an agreement with UCB Pharma Limited, or UCB, under which UCB has the right to market Xyrem for certain indications in various countries outside of the United States. We recognized contract revenues of $1.1 million during each of 2014, 2013, and 2012 relating to two upfront payments received from UCB in 2006 totaling $15.0 million. As of December 31, 2014, $5.6 million was recorded as deferred revenues related to this agreement, of which $1.1 million is a current liability. The deferred revenue balance is being recognized ratably through 2019.

11. Commitments and Contingencies

Indemnification

In the normal course of business, we enter into agreements that contain a variety of representations and warranties and provide for general indemnification, including indemnification associated with product liability or infringement of intellectual property rights. Our exposure under these agreements is unknown because it involves future claims that may be made but have not yet been made against us. To date, we have not paid any claims or been required to defend any action related to these indemnification obligations.

We have agreed to indemnify our officers, directors and certain other employees for losses and costs incurred in connection with certain events or occurrences, including advancing money to cover certain costs, subject to certain limitations. The maximum potential amount of future payments we could be required to make under the indemnification obligations is unlimited; however, we maintain insurance policies that may limit our exposure and may enable us to recover a portion of any future amounts paid. Assuming the applicability of coverage, the willingness of the insurer to assume coverage, and subject to certain retention, loss limits and other policy provisions, we believe the fair value of these indemnification obligations is not significant. Accordingly, we have not recognized any liabilities relating to these obligations as of December 31, 2014 and December 31, 2013. No assurances can be given that the covering insurers will not attempt to dispute the validity, applicability, or amount of coverage without expensive litigation against these insurers, in which case we may incur substantial liabilities as a result of these indemnification obligations.

Lease and Other Commitments

We have noncancelable operating leases for our office buildings and we are obligated to make payments under noncancelable operating leases for automobiles used by our sales force.

Lease expense under our operating leases was as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Lease expense	$ 10,678	$ 9,114	$ 5,303

Future minimum lease payments under our noncancelable operating leases at December 31, 2014, were as follows (in thousands):

Year ending December 31,	Lease Payments
2015	$ 10,165
2016	7,852
2017	4,915
2018	1,443
2019	671
Thereafter	—
Total	$ 25,046

In January 2015, we entered into an agreement to lease approximately 100,000 square feet of office space in Palo Alto, California. We expect to occupy this office space by the end of 2017. This lease has a term of 12 years from commencement and we have an option to extend the term of the lease twice for a period of five years each. As a result, we are obligated to make lease payments over the initial term of the lease totaling approximately $96 million in addition to estimated operating expenses totaling $25 million. We also have an option to terminate this lease 10 years from commencement, with no less than

one year prior written notice and the payment of a termination fee. The costs associated with this lease are not included in the above table.

As of December 31, 2014, we had $34.6 million of noncancelable purchase commitments due within one year, primarily related to agreements with third party manufacturers.

Legal Proceedings

We are involved in several legal proceedings, including the following matters:

Xyrem ANDA Matters: On October 18, 2010, we received a notice of Paragraph IV Patent Certification, or Paragraph IV Certification, from Roxane that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem (sodium oxybate) oral solution. Roxane's initial notice alleged that all five patents then listed for Xyrem in the FDA's publication "Approved Drug Products with Therapeutic Equivalence Evaluations," or Orange Book, on the date of the notice are invalid, unenforceable or not infringed by Roxane's proposed generic product. On November 22, 2010, we filed a lawsuit against Roxane in response to Roxane's initial notice in the U.S. District Court for the District of New Jersey, or the District Court, seeking a permanent injunction to prevent Roxane from introducing a generic version of Xyrem that would infringe our patents. In accordance with the Drug Price Competition and Patent Term Restoration Act of 1984, or Hatch-Waxman Act, as a result of our having filed a timely lawsuit against Roxane, FDA approval of Roxane's ANDA was stayed for 30 months, or until April 18, 2013. That stay has expired. Additional patents covering Xyrem were issued between December 2010 and December 2012, and, after receiving Paragraph IV Certification notices from Roxane, we filed additional lawsuits against Roxane on February 4, 2011, May 2, 2011, October 26, 2012 and December 5, 2012 to include these additional patents in the litigation. All of the lawsuits filed against Roxane between 2010 and 2012 have been consolidated by the District Court into a single case, or the Roxane consolidated case, alleging that 10 of our patents covering Xyrem are or will be infringed by Roxane's ANDA and seeking a permanent injunction to prevent Roxane from launching a generic version of Xyrem that would infringe these patents.

In December 2013, the District Court permitted Roxane to amend its answer in the Roxane consolidated case to allege additional equitable defenses, and the parties were given additional time for discovery on those new defenses. In addition, in March 2014, the District Court granted our motion to bifurcate and stay the portion of the Roxane consolidated case regarding patents related to the distribution system for Xyrem. Although no trial date has been scheduled, based on the District Court's current schedule, we anticipate that trial on the patents in the Roxane consolidated case that are not subject to the stay could occur as early as the third quarter of 2015. We do not have any estimate of a possible trial date for trial on the patents in the Roxane consolidated case that are currently subject to the stay. The actual timing of events in this litigation may be significantly earlier or later than we currently anticipate, and we cannot predict the specific timing or outcome of events in this litigation.

On April 1, 2014 and January 15, 2015, we received additional notices of Paragraph IV Certification from Roxane regarding newly issued patents for Xyrem listed in the Orange Book. On February 20, 2015, we filed a new lawsuit against Roxane in the District Court, alleging that three of our patents covering Xyrem are infringed or will be infringed by Roxane's ANDA and seeking a permanent injunction to prevent Roxane from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in this matter or its impact on the Roxane consolidated case.

On December 10, 2012, December 12, 2012 and August 8, 2013, we received notices of Paragraph IV Certification from Amneal Pharmaceuticals, LLC, or Amneal, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On January 18, 2013 and September 12, 2013, we filed lawsuits against Amneal in the District Court, alleging that nine of our patents covering Xyrem are infringed or will be infringed by Amneal's ANDA and seeking a permanent injunction to prevent Amneal from introducing a generic version of Xyrem that would infringe these patents. These lawsuits against Amneal were consolidated by the District Court on November 6, 2013.

On November 21, 2013 and November 24, 2013, we received notices of Paragraph IV Certification from Par Pharmaceutical, Inc., or Par, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On December 27, 2013, we filed a lawsuit against Par in the District Court, alleging that 13 of our patents covering Xyrem are infringed or will be infringed by Par's ANDA and seeking a permanent injunction to prevent Par from introducing a generic version of Xyrem that would infringe these patents.

In April 2014, Amneal asked the District Court to consolidate its case with the Par case, stating that both cases would proceed on the schedule for the Par case. The District Court granted this request in May 2014. The order consolidating the cases provides that Amneal's 30-month stay period will be extended to coincide with the date of Par's 30-month stay period. As a result, FDA's approval of both Amneal's and Par's ANDAs is stayed until the earlier of (i) May 20, 2016, or (ii) a District

Court decision finding that the identified patents are invalid, unenforceable or not infringed. We cannot predict the timing or outcome of events in the Amneal/Par consolidated case or their impact on other ongoing proceedings with Amneal or Par.

On April 7, 2014 and January 19, 2015, we received additional notices of Paragraph IV Certification from Amneal regarding newly issued patents for Xyrem listed in the Orange Book. On May 20, 2014 and February 6, 2015, we filed additional lawsuits against Amneal in the District Court, alleging that four of our patents covering Xyrem are infringed or will be infringed by Amneal's ANDA and seeking a permanent injunction to prevent Amneal from introducing a generic version of Xyrem that would infringe these patents. These additional lawsuits have not been consolidated with the Amneal/Par consolidated case. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Amneal.

On July 3, 2014, August 6, 2014 and November 25, 2014, we received additional notices of Paragraph IV Certification from Par regarding newly issued patents for Xyrem listed in the Orange Book. We filed additional lawsuits against Par in the District Court on August 15, 2014, October 2, 2014 and January 8, 2015, alleging that three of our patents covering Xyrem are infringed or will be infringed by Par's ANDA and seeking a permanent injunction to prevent Par from introducing a generic version of Xyrem that would infringe these patents. These additional lawsuits have not been consolidated with the Amneal/Par consolidated case. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Par.

On June 4, 2014, we received a notice of Paragraph IV Certification from Ranbaxy Laboratories Limited, or Ranbaxy, that it had submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On June 6, 2014, we received a notice of an amended Paragraph IV Certification from Ranbaxy. On July 15, 2014, we filed a lawsuit against Ranbaxy in the District Court, alleging that 14 of our patents covering Xyrem are infringed or will be infringed by Ranbaxy's ANDA and seeking a permanent injunction to prevent Ranbaxy from introducing a generic version of Xyrem that will infringe these patents. On August 20, 2014 and December 1, 2014, we received additional notices of Paragraph IV Certification from Ranbaxy regarding newly issued patents for Xyrem listed in the Orange Book. On October 2, 2014 and January 9, 2015, we filed additional lawsuits against Ranbaxy in the District Court, alleging that two of our patents covering Xyrem are infringed or will be infringed by Ranbaxy's ANDA and seeking a permanent injunction to prevent Ranbaxy from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in these matters or their impact on other ongoing proceedings with Ranbaxy.

On October 30, 2014, we received a notice of Paragraph IV Certification from Watson Laboratories, Inc., or Watson, that it has submitted an ANDA to the FDA requesting approval to market a generic version of Xyrem. On December 11, 2014, we filed a lawsuit against Watson in the District Court, alleging that 15 of our patents covering Xyrem are or will be infringed by Watson's ANDA and seeking a permanent injunction to prevent Watson from introducing a generic version of Xyrem that would infringe these patents. We cannot predict the timing or outcome of events in this litigation.

In January 2015, Amneal, Ranbaxy and Watson proposed the consolidation of their respective cases and a consolidated schedule to the District Court. Under the proposed consolidated schedule, the District Court would hold a Markman hearing no earlier than January 2016. Par is currently seeking its own proposed schedule. Under Par's proposed schedule, the District Court would hold a Markman hearing in the Par case no earlier than September 2015. We cannot predict the timing or outcome of events in these proceedings, including what cases, if any, the District Court will consolidate and what cases, if any, the District Court will permit to go forward separately.

Between June and August 2014, petitions seeking covered business method, or CBM, post-grant patent review by the Patent Trial and Appeal Board, or PTAB, of the U.S. Patent and Trademark Office, or USPTO, were filed by certain of the ANDA filers with respect to the validity of six of our patents related to the distribution system for Xyrem. In the fall of 2014, we filed preliminary responses to the petitions in which, among other things, we asserted that the challenged patents should not be subject to CBM review. In early 2015, the PTAB issued decisions denying institution of CBM review for all of these petitions.

In January 2015, petitions for IPR were filed by certain of the ANDA filers with respect to the validity of six of our patents related to the distribution system for Xyrem. The PTAB has not yet determined whether to institute proceedings with respect to these petitions for IPR. We cannot predict whether PTAB will institute any of the petitioned IPR proceedings, whether additional post-grant patent review challenges will be filed, the outcome of any IPR or other proceeding if instituted, or the impact any IPR or other proceeding might have on ongoing ANDA litigation proceedings.

FazaClo ANDA Matters: Azur Pharma received notices of Paragraph IV Certifications from three generics manufacturers, Barr Laboratories, Inc., or Barr, Novel Laboratories, Inc., or Novel, and Mylan Pharmaceuticals, Inc., or Mylan, indicating that ANDAs had been filed with the FDA requesting approval to market generic versions of FazaClo® (clozapine, USP) LD orally disintegrating clozapine tablets. Azur Pharma and CIMA Labs Inc., or CIMA, a subsidiary of Teva Pharmaceutical Industries

Limited, or Teva, our licensor and the entity whose drug-delivery technology is incorporated into FazaClo LD, filed a lawsuit in response to each certification claiming infringement based on such certification against Barr on August 21, 2008, against Novel on November 25, 2008 and against Mylan on July 23, 2010. Each case was filed in the U.S. District Court for the District of Delaware, or the Delaware Court. On July 6, 2011, CIMA, Azur Pharma and Teva, which had acquired Barr, entered into an agreement settling the patent litigation and Azur Pharma granted a sublicense to an affiliate of Teva of Azur Pharma's rights to have manufactured, market and sell a generic version of both FazaClo LD and FazaClo HD, as well as an option for supply of authorized generic product. The sublicense for FazaClo LD commenced in July 2012, and the sublicense for FazaClo HD will commence in May 2015. Teva exercised its option for supply of an authorized generic product for FazaClo LD and launched the authorized generic product at the end of August 2012. Teva has also exercised its option for supply of an authorized generic product for FazaClo HD. The Novel and Mylan matters had been stayed pending reexamination of the patents in the lawsuits. In September 2013 and January 2014, reexamination certificates were issued for the two patents-in-suit, and the patentability of the claims of the patents confirmed. The Delaware Court lifted the stay of litigation in the two cases in March 2014. On December 19, 2014, we and CIMA entered into an agreement with Novel settling the patent litigation against Novel and we granted Novel a sublicense to manufacture, market and sell a generic version of FazaClo LD and, if applicable, FazaClo HD. The sublicense will commence on May 1, 2017, or earlier upon the occurrence of certain events. Trial in the Mylan case is currently set for the third quarter of 2015, but we cannot predict the specific timing or outcome of this litigation.

Cutler Matter: On October 19, 2011, Dr. Neal Cutler, one of the original owners of FazaClo, filed a complaint against Azur Pharma and one of its subsidiaries, as well as Avanir Pharmaceuticals, Inc., or Avanir, in the California Superior Court in the County of Los Angeles, or the Superior Court. The complaint alleges that Azur Pharma and its subsidiary breached certain contractual obligations. Azur Pharma acquired rights to FazaClo from Avanir in 2007. The complaint alleges that as part of the acquisition of FazaClo, Azur Pharma's subsidiary agreed to assume certain contingent payment obligations to Dr. Cutler. The complaint further alleges that certain contingent payments are due because revenue thresholds have been achieved, entitling Dr. Cutler to a $10.5 million and an additional $25.0 million contingent payment, plus unspecified punitive damages and attorneys' fees. In March 2012, the Superior Court granted our petition to compel arbitration of the dispute in New York and stayed the Superior Court litigation. In July 2012, the arbitrator dismissed the arbitration on the grounds that the parties' dispute falls outside of the scope of the arbitration clause in the applicable contract. That ruling was affirmed by the California Court of Appeal in January 2014, and the case was remanded to Superior Court for discovery and trial. Trial has been scheduled for October 2015. We cannot predict the specific timing or outcome of this litigation.

Shareholder Litigation Matter: In January 2014, we became aware of a purported class action lawsuit filed in the U.S. District Court for the Southern District of New York in connection with the Gentium Acquisition. The lawsuit named Gentium, each of the Gentium's directors, us and our Italian subsidiary as defendants. The lawsuit alleged, among other things, that Gentium's directors breached their fiduciary duties to Gentium's shareholders in connection with the Gentium tender offer agreement that Gentium entered into with us and our Italian subsidiary valuing Gentium ordinary shares and ADSs at $57.00 per share, and that we and our Italian subsidiary violated Sections 14(e) and 20(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, by allegedly overseeing Gentium's preparation of an allegedly false and misleading Section 14D-9 Solicitation/Recommendation Statement. On November 19, 2014, the plaintiff dismissed us and our Italian subsidiary from the lawsuit. On January 22, 2015, the entire lawsuit was dismissed with prejudice by the court.

From time to time we are involved in legal proceedings arising in the ordinary course of business. We believe there is no other litigation pending that could have, individually or in the aggregate, a material adverse effect on our results of operations or financial condition.

Other Contingencies

We have not previously submitted pricing data for two radiopharmaceutical products, ProstaScint® (capromab pendetide) and Quadramet® (samarium sm 153 lexidronam injection), for Medicaid and the Public Health Service's 340B drug pricing discount program. We engaged in interactions with the Centers for Medicare and Medicaid Services, or CMS, and a trade group, the Council on Radionuclides and Radiopharmaceuticals, or CORAR, regarding the reporting of Medicaid pricing data and paying Medicaid rebates for radiopharmaceutical products. For ProstaScint, we plan to begin making any required reports when CMS issues guidance on any requirements and reporting methodologies. We sold Quadramet to a third party in December 2013, but have retained any liabilities related to sales of the product during prior periods. In addition to the discussions with CMS as part of CORAR, we have had separate discussions with CMS directly regarding Quadramet. We are currently unable to predict whether price reporting and rebates will be required for ProstaScint and Quadramet and, if so, for what period they will be required. The initiation of any reporting of Medicaid pricing data for ProstaScint and Quadramet could result in retroactive 340B ceiling price liability for these two products as well as prospective 340B ceiling price obligations for ProstaScint. We are currently unable to reasonably estimate an amount or range of a potential contingent loss. Any material liability resulting from radiopharmaceutical price reporting would negatively impact our financial results.

12. Shareholders' Equity

Share Repurchase Program

In May 2013, our board of directors authorized a share repurchase program pursuant to which we may repurchase a number of ordinary shares having an aggregate repurchase price of up to $200 million, exclusive of any brokerage commissions. The authorization became effective immediately and has no set expiration date. Under this authorization, we may repurchase our ordinary shares through open market purchases, privately negotiated purchases or a combination of these transactions. The timing and amount of repurchases will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, restrictions under our credit agreement, corporate and regulatory requirements and market conditions. Share repurchases may be suspended or discontinued at any time without prior notice. We initiated purchases under this program in May 2013. In 2014, we spent a total of $42.2 million to repurchase 0.3 million of our ordinary shares under the share repurchase program at an average total purchase price, including brokerage commissions, of $138.64 per share. All ordinary shares repurchased were canceled. As of December 31, 2014, the remaining amount authorized under the share repurchase program was $21.3 million.

Authorized But Unissued Ordinary Shares

We had reserved the following shares of authorized but unissued ordinary shares (in thousands):

	December 31, 2014
2011 Equity Incentive Plan	10,143
2007 Equity Incentive Plan	962
2007 Employee Stock Purchase Plan	587
Amended and Restated 2007 Non-Employee Directors Stock Option Plan	419
Amended and Restated Directors Deferred Compensation Plan	178
Total	12,289

13. Comprehensive Income (Loss)

Comprehensive income (loss) includes net income and all changes in shareholders' equity during a period, except for those changes resulting from investments by shareholders or distributions to shareholders.

Accumulated Other Comprehensive Income (Loss)

The components of accumulated other comprehensive income (loss) attributable to Jazz Pharmaceuticals plc at December 31, 2014 and December 31, 2013 were as follows (in thousands):

	Foreign Currency Translation Adjustments	Total Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2013	$ 56,153	$ 56,153
Other comprehensive loss	(178,250)	(178,250)
Balance at December 31, 2014	$ (122,097)	$ (122,097)

In 2014, other comprehensive loss included foreign currency translation adjustments which were primarily due to the strengthening of the U.S. dollar against the Euro.

14. Share-Based Compensation

2011 Equity Incentive Plan

In connection with the Azur Merger, Jazz Pharmaceuticals, Inc.'s board of directors adopted the 2011 Equity Incentive Plan, or the 2011 Plan, in October 2011 and its stockholders approved the 2011 Plan at the special meeting of the stockholders held in December 2011 in connection with the Azur Merger. The 2011 Plan became effective immediately before the consummation of the Azur Merger and was assumed and adopted by us upon the consummation of the Azur Merger. The terms of the 2011 Plan provide for the grant of stock options, stock appreciation rights, restricted stock awards, RSUs, other stock awards, and performance awards that may be settled in cash, shares, or other property. All of the grants under the 2011 Plan were granted to employees and vest ratably over service periods of four years and expire no more than 10 years after the date of grant. As of December 31, 2014, a total of 13,549,336 of our ordinary shares had been authorized for issuance under the 2011 Plan. In addition, the share reserve under the 2011 Plan will automatically increase on January 1 of each year through January 1, 2022, by the least of (a) 4.5% of the total number of ordinary shares outstanding on December 31 of the preceding calendar year, (b) 5,000,000 shares, or (c) such lesser number of ordinary shares as determined by our board of directors. On January 1, 2015, the share reserve under the 2011 Plan automatically increased by 2,728,927 ordinary shares pursuant to this provision.

2007 Equity Incentive Plan

The 2007 Equity Incentive Plan, or the 2007 Plan, which was initially adopted by the Jazz Pharmaceuticals, Inc. board of directors and approved by the Jazz Pharmaceuticals, Inc. stockholders in connection with its initial public offering, was continued and assumed by us upon consummation of the Azur Merger. The 2007 Plan provided for the grant of incentive stock options, nonstatutory stock options, restricted stock awards, RSUs, stock appreciation rights, performance stock awards and other forms of equity compensation to employees, including officers, non-employee directors and consultants. Prior to the consummation of the Azur Merger, all of the grants under the 2007 Plan were granted to employees and vest ratably over

service periods of three to five years and expire no more than 10 years after the date of grant. Effective as of the closing of the Azur Merger on January 18, 2012, the number of shares reserved for issuance under the 2007 Plan was set to 1,000,000 ordinary shares. The share reserve under the 2007 Plan will not automatically increase. Since the Azur Merger, all of the new grants under the 2007 Plan were granted to non-employee directors and vest ratably over service periods of one to three years and expire no more than 10 years after the date of grant.

2007 Employee Stock Purchase Plan

In 2007, Jazz Pharmaceuticals, Inc.'s employees became eligible to participate in the Employee Stock Purchase Plan, or ESPP. The ESPP was amended and restated by Jazz Pharmaceuticals, Inc.'s board of directors in October 2011 and approved by its stockholders in December 2011. The amended and restated ESPP became effective immediately prior to the effective time of the Azur Merger and was assumed by us upon the consummation of the Azur Merger. The amended and restated ESPP allows our eligible employee participants (including employees of any of a parent or subsidiary company if our board of directors designates such company as eligible to participate) to purchase our ordinary shares at a discount of 15% through payroll deductions. The ESPP consists of a fixed offering period of 24 months with four purchase periods within each offering period. The number of shares available for issuance under our ESPP during any six-month purchase period is 175,000 shares. As of December 31, 2014, a total of 2,660,000 of our ordinary shares had been authorized for issuance under the ESPP. The share reserve under the ESPP will automatically increase on January 1 of each year through January 1, 2022, by the least of (a) 1.5% of the total number of ordinary shares outstanding on December 31 of the preceding calendar year, (b) 1,000,000 shares, or (c) such lesser number of ordinary shares as determined by our board of directors. Our compensation committee determined not to automatically increase the share reserve under the ESPP on January 1, 2015.

Amended and Restated 2007 Non-Employee Directors Stock Option Plan

The Amended and Restated 2007 Non-Employee Directors Stock Option Plan, or the 2007 Directors Option Plan, which was initially adopted by the Jazz Pharmaceuticals, Inc. board of directors and approved by the Jazz Pharmaceuticals, Inc. stockholders in connection with its initial public offering, was continued and assumed by us upon the consummation of the Azur Merger. Until October 2011, the 2007 Directors Option Plan provided for the automatic grant of nonstatutory stock options to purchase shares of Jazz Pharmaceuticals, Inc.'s common stock to its non-employee directors initially at the time any individual first became a non-employee director, which vest over three years, and then annually over their period of service on its board of directors, which vest over one year. On October 24, 2011, Jazz Pharmaceuticals, Inc.'s board of directors amended the 2007 Directors Option Plan to eliminate all future initial and annual automatic grants so that future automatic grants would not be made that would be subject to the excise tax imposed by Section 4985 of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, in connection with the Azur Merger. Accordingly, all future stock option grants under the 2007 Directors Option Plan will be at the discretion of our board of directors. Since the Azur Merger, all of the new grants under the 2007 Directors Option Plan were granted to non-employee directors and vest ratably over service periods of one to three years and expire no more than 10 years after the date of grant. In addition, the 2007 Directors Option Plan provides the source of shares to fund distributions made prior to August 15, 2010 under the Directors Deferred Compensation Plan described below. As of December 31, 2014, a total of 837,713 of our ordinary shares had been authorized for issuance under the 2007 Directors Option Plan. The number of shares reserved for issuance under the 2007 Directors Plan automatically increases on each January 1, from January 1, 2008 through (and including) January 1, 2017, by the excess of (a) the number of shares subject to options granted, over (b) the number of shares added back to the share reserve, in each case, during the preceding calendar year under the 2007 Directors Plan; provided, that, for any year, the automatic increase may not exceed 200,000 shares and the board of directors may approve a lesser, or no, automatic increase. On January 1, 2015, the share reserve under the 2007 Directors Option Plan automatically increased by 32,075 ordinary shares pursuant to this provision.

Amended and Restated Directors Deferred Compensation Plan

In May 2007, the Jazz Pharmaceuticals, Inc. board of directors adopted the Directors Deferred Compensation Plan, or the Directors Deferred Plan, which was amended in December 2008 and was then amended and restated in August 2010, and which was continued and assumed by us upon consummation of the Azur Merger. The Directors Deferred Plan allows each non-employee director to elect to defer receipt of all or a portion of his or her annual retainer fees to a future date or dates. Amounts deferred under the Directors Deferred Plan are credited as shares of Jazz Pharmaceuticals, Inc.'s common stock (or our ordinary shares following the Azur Merger) to a phantom stock account, the number of which are based on the amount of the retainer fees deferred divided by the market value of Jazz Pharmaceuticals, Inc.'s common stock (or our ordinary shares following the Azur Merger) on the first trading day of the first open window period following the date the retainer fees are deemed earned. On the 10th business day following the day of separation from the board of directors or the occurrence of a change in control, or as soon thereafter as practical once the non-employee director has provided the necessary information for electronic deposit

of the deferred shares, each non-employee director will receive (or commence receiving, depending upon whether the director has elected to receive distributions from his or her phantom stock account in a lump sum or in installments over time) a distribution of his or her phantom stock account, in our ordinary shares (i) reserved under the 2007 Directors Option Plan prior to August 15, 2010 and (ii) from a new reserve of 200,000 shares set up under the Directors Deferred Plan on August 15, 2010. Although we continue to maintain the Directors Deferred Plan, since the consummation of the Azur Merger we have not permitted and will not permit the non-employee directors to defer any annual retainer fees under the Directors Deferred Plan. We recorded no expense in 2014, 2013 and 2012 related to retainer fees earned and deferred. As of December 31, 2014, 14,499 of our ordinary shares that were unissued related to retainer fees that were deferred under the Directors Deferred Plan.

Share-Based Compensation

The table below shows, for all share option grants, the weighted-average assumptions used in the Black-Scholes option pricing model and the resulting weighted-average grant date fair value of share options granted in each of the past three years:

	Year Ended December 31,		
	2014	2013	2012
Grant date fair value	$ 60.29	$ 29.09	$ 25.28
Volatility	45%	58%	64%
Expected term (years)	4.3	4.4	4.6
Range of risk-free rates	1.1-1.4%	0.5-1.4%	0.5-1.1%
Expected dividend yield	—%	—%	—%

Since 2012, we rely on a blend of the historical and implied volatilities of our own ordinary shares to determine expected volatility for share option grants because our trading history exceeds the expected term of the share options. In addition, we use a single volatility estimate for each share option grant. The weighted-average volatility is determined by calculating the weighted average of volatilities for all share options granted in a given year.

The expected term of share option grants represents the weighted-average period the awards are expected to remain outstanding and our estimates were based on historical exercise data. The risk-free interest rate assumption was based on zero coupon U.S. Treasury instruments whose term was consistent with the expected term of our share option grants. The expected dividend yield assumption was based on our history and expectation of dividend payouts.

Share-based compensation expense in continuing operations related to share options, RSUs and grants under our ESPP was as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Selling, general and administrative	$ 55,083	$ 35,674	$ 18,950
Research and development	12,179	6,673	2,640
Cost of product sales	2,376	2,204	1,416
Total share-based compensation expense, pre-tax	69,638	44,551	23,006
Tax benefit from share-based compensation expense	(20,795)	(13,822)	(7,499)
Total share-based compensation expense, net of tax	$ 48,843	$ 30,729	$ 15,507

We realized tax benefits related to share option exercises of $11.8 million, $6.7 million and $18.3 million in 2014, 2013 and 2012, respectively.

Share Options

The following table summarizes information as of December 31, 2014 and activity during 2014 related to our share option plans:

	Shares Subject to Outstanding Options (In thousands)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In thousands)
Outstanding at January 1, 2014	4,306	$ 42.54		
Options granted	1,000	160.40		
Options exercised	(1,185)	36.33		
Options forfeited	(251)	75.08		
Options expired	—	—		
Outstanding at December 31, 2014	3,870	72.77	7.6	$ 354,050
Vested and expected to vest at December 31, 2014	3,632	70.29	7.5	341,118
Exercisable at December 31, 2014	1,639	36.61	6.5	208,339

Aggregate intrinsic value shown in the table above is equal to the difference between the exercise price of the underlying share options and the fair value of our ordinary shares for share options that were in the money. The aggregate intrinsic value changes based on the fair market value of our ordinary shares. The aggregate intrinsic value of share options exercised was $138.2 million, $46.0 million and $106.5 million, during 2014, 2013 and 2012, respectively. We issued new ordinary shares upon exercise of share options.

As of December 31, 2014, total compensation cost not yet recognized related to unvested share options was $68.8 million, which is expected to be recognized over a weighted-average period of 2.3 years.

As of December 31, 2014, total compensation cost not yet recognized related to grants under the ESPP was $2.3 million, which is expected to be recognized over a weighted-average period of less than one year.

Restricted Stock Units

In 2014, we granted RSUs covering an equal number of our ordinary shares to employees with a weighted-average grant date fair value of $160.45. The fair value of RSUs is determined on the date of grant based on the market price of our ordinary shares as of that date. The fair value of the RSUs is recognized as expense ratably over the vesting period of four years. In 2014, 344,000 RSUs were released with 222,000 ordinary shares issued and 122,000 ordinary shares withheld for tax purposes. The total fair value of shares vested was $50.9 million, $16.1 million and none during 2014, 2013 and 2012, respectively.

As of December 31, 2014, total compensation cost not yet recognized related to unvested RSUs was $74.1 million, which is expected to be recognized over a weighted-average period of 2.4 years.

The following table summarizes information as of December 31, 2014 and activity during 2014 related to our RSUs:

	Number of RSUs (in thousands)	Weighted-Average Grant-Date Fair Value	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In thousands)
Outstanding at January 1, 2014	1,164	$ 55.28		
RSUs granted	488	160.45		
RSUs released	(344)	55.30		
RSUs forfeited	(120)	75.43		
RSUs expired	—	—		
Outstanding at December 31, 2014	1,188	96.41	1.3	$ 194,546

15. Segment and Other Information

Our operating segment is reported in a manner consistent with the internal reporting provided to the chief operating decision maker or, CODM. Our CODM has been identified as our chief executive officer. We have determined that we operate in one business segment, which is the development and commercialization of meaningful products that address unmet medical needs. The following table presents a summary of total revenues (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Xyrem	$ 778,584	$ 569,113	$ 378,663
Erwinaze/Erwinase	199,665	174,251	72,083
Defitelio/defibrotide	70,537	—	—
Prialt® (ziconotide) intrathecal infusion	26,421	27,103	26,360
Psychiatry	40,879	49,226	76,489
Other	46,630	45,705	26,932
Product sales, net	1,162,716	865,398	580,527
Royalties and contract revenues	10,159	7,025	5,452
Total revenues	$ 1,172,875	$ 872,423	$ 585,979

The following table presents a summary of total revenues attributed to geographic sources (in thousands):

	Year Ended December 31,		
	2014	2013	2012
United States	$ 1,007,396	$ 792,518	$ 538,219
Europe	126,715	61,843	38,590
All other	38,764	18,062	9,170
Total revenues	$ 1,172,875	$ 872,423	$ 585,979

The following table presents a summary of the percentage of total revenues from customers that represented more than 10% of our total revenues:

	Year Ended December 31,		
	2014	2013	2012
Express Scripts	66%	65%	64%
Accredo	14%	16%	N/A

The following table presents total long-lived assets by location (in thousands):

	December 31,	
	2014	2013
Ireland	$ 37,775	$ 5,799
United States	9,795	7,734
Italy	8,462	—
Other	2,331	713
Total long-lived assets	$ 58,363	$ 14,246

(1) Long-lived assets consist of property and equipment.

16. Income Taxes

The components of income from continuing operations before the income tax provision (benefit) were as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Republic of Ireland	$ 238,351	$ 186,903	$ (73,949)
United States	222,328	132,855	250,348
Other	(309,122)	(11,808)	956
Total	$ 151,557	$ 307,950	$ 177,355

The following table sets forth the details of the income tax provision (benefit) (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Current			
Republic of Ireland	$ 23,506	$ 17,089	$ (10,733)
United States	97,679	71,964	33,387
Other	16,469	12,682	7,414
Total current income tax	137,654	101,735	30,068
Deferred			
Republic of Ireland	2,323	8,353	(315)
United States	(15,003)	(3,513)	(103,932)
Other	(30,743)	(14,937)	(9,615)
Total deferred income tax benefit	(43,423)	(10,097)	(113,862)
Total income tax provision (benefit)	$ 94,231	$ 91,638	$ (83,794)

During 2014, we recognized an income tax provision of $94.2 million related to tax arising on income in Ireland, the United States and certain other foreign jurisdictions, certain uncertain tax positions and various expenses not deductible for tax purposes. During 2013, we recognized an income tax provision of $91.6 million related to tax arising on income in Ireland, the United States and certain other foreign jurisdictions, certain uncertain tax positions and various expenses not deductible for tax purposes. During 2012, we recognized an income tax benefit of $83.8 million which resulted primarily from our reversal of a valuation allowance on most of our U.S. federal and state deferred tax assets as described below. As discussed in Note 1, in January 2012, the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma were combined in a merger transaction accounted for as a reverse acquisition and the combined company changed its domicile from the United States to Ireland.

The effective tax rate for 2014 was 62.2%. After adjusting the income before income tax provision for the year ended December 31, 2014 by excluding a total of $202.0 million in upfront and milestone payments for rights to JZP-110 and to defibrotide in the Americas, which were acquired by our subsidiaries in a non-taxable jurisdiction, the effective tax rate on the resulting income before income tax provision for 2014 was 26.7%. The effective tax rate for 2014 was higher than the Irish statutory rate of 12.5%, primarily due to income taxable at a rate higher than the Irish statutory rate, uncertain tax positions, current year losses in some jurisdictions for which no tax benefit is available and various expenses not deductible for tax purposes, partially offset by changes in U.S. state valuation allowances and benefits from certain originating income tax credits. The effective tax rate for 2013 of 29.8% was higher than the Irish statutory rate of 12.5%, primarily due to income taxable at a rate higher than the Irish statutory rate, certain uncertain tax positions, current year losses in some jurisdictions for which no tax benefit is available, and various expenses not deductible for tax purposes, partially offset by benefits from certain originating income tax credits. In 2012, following the Azur Merger and the change in the combined company’s domicile, the statutory income tax rate changed from the U.S. rate of 35.0% to the Irish rate of 12.5%. In June 2012, we completed the EUSA Acquisition, which further expanded our global operations. The 2012 effective income tax rate on continuing activities before utilization of net operating losses, or NOLs, and tax credit carryforwards and release in valuation allowance in 2012 of 42.5% was higher than the Irish statutory rate of 12.5% due to a number of factors, including income taxable at a rate higher than the

Irish statutory rate, losses in certain tax jurisdictions for which no tax benefit is available and various expenses not deductible for tax purposes. The decrease in the effective tax rate, after excluding the upfront and milestone payments, for 2014 compared to 2013 was primarily due to changes in income mix among the various jurisdictions in which we operate, changes in U.S. state valuation allowances and benefits from certain originating income tax credits. The decrease in the effective tax rate in 2013 compared to 2012 was primarily due to changes in income mix among the various jurisdictions in which we operate as well as higher taxes in 2012 relating to acquisition restructuring. We are currently paying taxes in Ireland, the United States and certain other foreign jurisdictions where we have operations and either all NOLs have been utilized, or are restricted as a result of the Azur Merger.

A reconciliation of income taxes at the statutory income tax rate to our effective income tax rate was as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Statutory income tax rate	12.5%	12.5%	12.5 %
Income tax provision at statutory rate	$ 18,945	$ 38,494	$ 22,169
Acquisition-related costs	4,703	—	763
Research and other tax credits	(14,234)	(5,957)	(100)
Non-deductible share-based compensation	4,203	2,497	873
Foreign income tax rate differential	75,780	31,651	52,066
Change in unrecognized tax benefits	9,447	8,685	2,249
Prior period adjustments	(5,522)	3,375	(2,524)
Change in valuation allowance	9,006	3,220	(159,158)
Non-deductible contingent consideration	—	5,320	—
Non-deductible financing costs	1,088	—	—
Deduction on subsidiary equity	(11,403)	—	—
Non-deductible officers' compensation	2,715	1,528	—
Other	(497)	2,825	(132)
Income tax provision (benefit)	$ 94,231	$ 91,638	$ (83,794)
Effective income tax rate	62.2%	29.8%	(47.2)%

In 2014, the change in valuation allowance was $9.0 million. In 2013, the change in valuation allowance was $3.2 million. In 2012, the change in valuation allowance of $159.2 million was comprised of NOLs and tax credit carryforwards of $55.0 million and a release in valuation allowance of $104.2 million.

Deferred income taxes reflect the tax effects of NOLs and tax credit carryforwards and the net temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes using currently enacted tax rates and regulations that are expected to be in effect when the differences are expected to be recovered or settled.

Significant components of our net deferred tax assets/(liabilities) were as follows (in thousands):

	December 31,	
	2014	2013
Deferred tax assets:		
Net operating loss carryforwards	$ 74,057	$ 71,364
Tax credit carryforwards	23,946	11,374
Intangible assets	19,507	10,733
Share-based compensation	14,033	8,116
Accruals	36,157	30,730
Deferred revenue and other	5,038	9,252
Total deferred tax assets	172,738	141,569
Valuation allowance	(29,697)	(20,691)
Net deferred tax assets	143,041	120,878
Deferred tax liabilities:		
Acquired intangible assets	(395,651)	(176,576)
Other	(7,940)	(10,848)
Total deferred tax liabilities	(403,591)	(187,424)
Net deferred tax liabilities	$ (260,550)	$ (66,546)

The following table presents the breakdown between current and non-current deferred tax assets/(liabilities) (in thousands):

	Year Ended December 31,	
	2014	2013
Current deferred tax assets	$ 48,440	$ 33,613
Current deferred tax liabilities	(9,430)	(6,259)
Non-current deferred tax assets	75,494	74,597
Non-current deferred tax liabilities	(375,054)	(168,497)
Net deferred tax liabilities	$ (260,550)	$ (66,546)

As of December 31, 2014, we had NOL carryforwards and tax credit carryforwards for U.S. federal income tax purposes of approximately $264.9 million and $29.2 million, respectively, available to reduce future income subject to income taxes. The NOL carryforwards are inclusive of $117.2 million from the EUSA Acquisition in 2012. The federal NOL carryforwards will expire, if not utilized, in the tax years 2016 to 2034, and the federal tax credits will expire, if not utilized, in the tax years 2016 to 2034. In addition, we had approximately $267.4 million of NOL carryforwards and $4.2 million of tax credit carryforwards as of December 31, 2014 available to reduce future taxable income for state income tax purposes. The state NOL carryforwards will expire, if not utilized, in the tax years 2015 to 2033. The state tax credits have no expiration date. In addition, as of December 31, 2014, there were NOL carryforwards for income tax purposes of approximately $56.1 million and $74.2 million available to reduce future income subject to income taxes in the United Kingdom and Italy, respectively. The NOLs generated in the United Kingdom and Italy have no expiration period. We also had excess foreign tax credits, as of December 31, 2014, of $4.7 million, which may only be utilized against certain sources of income. The excess foreign tax credits have no expiration period.

Utilization of certain of our NOL and tax credit carryforwards in the United States is subject to annual limitation due to the ownership change limitations provided by Sections 382 and 383 of the Internal Revenue Code and similar state provisions. Such an annual limitation may result in the expiration of certain NOLs and tax credits before future utilization. We currently estimate that we have an annual limitation on the utilization of certain acquired federal NOLs of $28.8 million for 2015, $28.9 million for 2016, $15.0 million for 2017, $1.4 million for 2018 and a combined total of $4.9 million for 2019 to 2026. In addition, as a result of the Azur Merger, until 2022 we are subject to certain limitations under the Internal Revenue Code in relation to the utilization of U.S. NOLs to offset U.S. taxable income resulting from certain transactions.

Approximately $191.7 million of both the U.S. federal and state NOL carryforwards as of December 31, 2014 resulted from exercises of employee share options and certain sales by employees of shares issued under other employee equity

compensation plans. We have not recorded the tax benefit of the deduction related to these exercises and sales as deferred tax assets on our balance sheet. When we realize the tax benefit as a reduction to taxable income in our tax returns, we will account for the tax benefit as a credit to shareholders' equity rather than as a reduction of our income tax provision in our financial statements.

Valuation allowances require an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. Such assessment is required on a jurisdiction-by-jurisdiction basis. Our valuation allowance was $29.7 million and $20.7 million as of December 31, 2014 and 2013, respectively, for certain U.S. state and foreign deferred tax assets which we maintain until sufficient positive evidence exists to support reversal. During 2014, as part of the overall change in valuation allowance, we recognized an income tax benefit of $7.7 million relating to the net reversal of a valuation allowance against certain deferred tax assets associated with NOLs and tax credit carryforwards. During 2013, as part of the overall change in valuation allowance, we recognized an income tax expense of $2.3 million relating to the creation of a valuation allowance against certain U.S. state deferred tax assets associated with tax credit carryforwards. During the fourth quarter of 2012, we recognized an income tax benefit of $104.2 million relating to the reversal of a valuation allowance against substantially all of our U.S. federal and state deferred tax assets. Management determined that a valuation allowance was no longer needed on these deferred tax assets based on an assessment of the relative impact of all positive and negative evidence that existed at December 31, 2012, including an evaluation of cumulative income in recent years, future sources of taxable income exclusive of reversing temporary differences, and significant risks and uncertainties related to our business. We periodically evaluate the likelihood of the realization of deferred tax assets and will adjust such amounts in light of changing facts and circumstances including, but not limited to, future projections of taxable income, tax legislation, rulings by relevant tax authorities, the progress of tax audits and the regulatory approval of products currently under development. Realization of substantially all the deferred tax assets are dependent on future book income.

Temporary differences related to investments in foreign subsidiaries totaled approximately $736.9 million and $664.3 million as of December 31, 2014 and 2013, respectively. In the event of the distribution of those earnings in the form of dividends, a sale of the subsidiaries, or certain other transactions, we may be liable for income taxes, subject to an adjustment, if any, for foreign tax credits and foreign withholding taxes payable to certain foreign tax authorities. As of December 31, 2014, it was not practicable to determine the amount of the income tax liability related to these investments.

We are 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. As a result, we have established a liability for certain tax benefits which we judge may not be sustained upon examination. A reconciliation of our unrecognized tax benefits follows (in thousands):

	December 31,		
	2014	2013	2012
Balance at the beginning of the year	$ 21,637	$ 7,288	$ 3,764
Increases related to current year tax positions	19,837	14,308	3,492
Increases related to prior year tax positions	—	183	40
Decreases related to prior year tax positions	(672)	(142)	(8)
Balance at the end of the year	$ 40,802	$ 21,637	$ 7,288

The unrecognized tax benefits were included in other non-current liabilities and deferred tax assets, net, non-current in our consolidated balance sheet. Interest related to our unrecognized tax benefits is recorded in income tax provision (benefit) in our consolidated statements of income. As of December 31, 2014 and 2013, our accrued interest and penalties related to uncertain tax positions were not significant. Included in the balance of unrecognized tax benefits were potential benefits of $29.7 million and $16.3 million at December 31, 2014 and 2013, respectively, that, if recognized, would affect the effective tax rate on income. We do not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next 12 months.

Our most significant tax jurisdictions are Ireland, the United States, Italy and France. Because of our NOL and tax credit carryforwards, substantially all of our tax positions remain open to federal and state examination in the United States. In France, tax periods open to examination include all periods from 2012. In Ireland, tax periods open to examination include all periods from 2010. As of December 31, 2014, certain of our subsidiaries were under examination by the U.S. Internal Revenue Service, or IRS, for 2010. However, we subsequently received written confirmation from the IRS that no adjustment would be made for that year and the audit is now closed. As of December 31, 2014, certain of our subsidiaries were under examination by the French tax authorities for 2012 and 2013. Subsequent to December 31, 2014, certain of our Italian subsidiaries were notified of the commencement of an examination by the Italian tax authorities for 2012.

17. Related Party Transactions

In 2014, certain holders of warrants to purchase 947,867 of our ordinary shares exercised the warrants in full for an aggregate cash purchase price payable to us of $3.8 million. The warrant holders are entities affiliated with one of our directors. In accordance with the terms of an existing investor rights agreement with the warrant holders, we registered the resale of the ordinary shares underlying the warrants and, pursuant to such agreement, we paid expenses of approximately $0.1 million in connection with the resale registration.

In 2013, we entered into an underwriting agreement with an underwriter and certain selling shareholders, pursuant to which the selling shareholders sold to the underwriter 5.4 million of our ordinary shares, resulting in aggregate gross proceeds to the selling shareholders of approximately $314.4 million, before deducting underwriting discounts, commissions and other offering expenses. The selling shareholders included entities affiliated with certain members of our board of directors and one of our directors. We did not receive any proceeds from the sale of our ordinary shares by the selling shareholders in the offering and, consistent with our obligations under existing registration rights agreements with those shareholders, we paid expenses of approximately $0.5 million in connection with the offering.

In 2012, in connection with the Azur Merger, we assumed a lease for office space in Dublin, Ireland. The lease agreement was with Seamus Mulligan, the former Chief Executive Officer of Azur Pharma, who is a member of our board of directors. Rentals paid on this lease amounted to $0.3 million in 2012. In November 2012, we terminated this lease at a cost of $1.2 million, which was the carrying value of our above market lease liability. There was no resulting gain or loss on the lease termination.

In 2012, we entered into an underwriting agreement with two underwriters and certain selling shareholders, pursuant to which the selling shareholders agreed to sell to the underwriters 7.9 million of our ordinary shares, resulting in aggregate gross proceeds to the selling shareholders of approximately $390.7 million. The selling shareholders included entities affiliated with certain members of our board of directors, four of our directors and four of our executive officers at the time of the agreement. We did not receive any proceeds from the sale of our ordinary shares by the selling shareholders in the offering, and we paid expenses of approximately $0.4 million in connection with this offering.

18. Assets Held for Sale

In 2014, we reorganized our operations in Europe to focus our commercial efforts on our hematology/oncology therapeutic area following the Gentium Acquisition. As a result, we are selling certain products acquired as part of the EUSA Acquisition. In the fourth quarter of 2014, we entered into a definitive agreement to sell these products and the related business for approximately $34 million in cash, subject to certain working capital adjustments. The sale, subject to certain closing conditions, is expected to close in the first half of 2015. The related assets met the assets held for sale criteria and were reclassified to assets held for sale as of December 31, 2014. Goodwill was allocated to these assets using the relative fair value method.

In the fourth quarter of 2014, we adjusted the carrying value of the held for sale assets to fair value less costs to sell which resulted in a $6.6 million impairment charge. The impairment charge was recorded in impairment charges on the consolidated statements of income. This charge was in addition to the $32.8 million intangible asset impairment charge recorded during the second quarter of 2014 related to the assets now classified as held for sale.

We have determined that the expected disposition of these assets does not qualify for reporting as a discontinued operation since the expected sale does not represent a strategic shift that has or will have a major effect on our operations and financial results.

The following assets were segregated and classified as assets held for sale in the consolidated balance sheet as of December 31, 2014 (in thousands):

	December 31, 2014
Inventories	$ 4,693
Accounts receivable	4,880
Intangible assets, net	27,479
Goodwill	1,686
Other	654
Valuation allowance	(6,559)
Assets held for sale	$ 32,833

19. Restructuring

In the fourth quarter of 2014, we incurred severance costs for terminated employees in connection with our decision to discontinue sales representative-led promotion of our psychiatry products starting in 2015. In addition, we initiated a restructuring plan related to the consolidation of our UK office locations and incurred costs of severance for terminated employees and facility closure costs in connection with this plan. The one-time termination benefits were recorded over the remaining service period where employees were required to stay through their termination date to receive the benefits. We recorded costs related to these one-time termination benefits of $1.8 million in the year ended December 31, 2014 within selling, general and administrative expenses in our consolidated statements of income. We expect to incur additional one-time termination benefit costs of $0.3 million in 2015. Facility closure costs of $0.1 million incurred in the year ended December 31, 2014 were recorded within selling, general and administrative expenses in our consolidated statements of income. We expect to incur additional facility closure costs of $0.1 million in 2015.

In June 2012, we initiated a restructuring plan to re-align certain support functions across the company following the Azur Merger and the EUSA Acquisition. In connection with this restructuring plan, we incurred restructuring costs of $1.5 million and $2.8 million in the years ended December 31, 2013 and 2012 respectively, within selling, general and administrative expenses in our consolidated statements of income. We do not expect to incur any additional restructuring costs in connection with this plan.

The following table summarizes the amounts related to restructuring through December 31, 2014 (in thousands):

	Termination Benefits	Facility Closure Costs	Total
Balance at December 31, 2011	$ —	$ —	$ —
Costs incurred during the period	2,789	—	2,789
Cash payments	(1,562)	—	(1,562)
Balance at December 31, 2012	1,227	—	1,227
Costs incurred during the period	1,045	412	1,457
Cash payments	(2,272)	(160)	(2,432)
Balance at December 31, 2013	—	252	252
Costs incurred during the period	1,823	118	1,941
Cash payments	—	(252)	(252)
Balance at December 31, 2014	$ 1,823	$ 118	$ 1,941

The balances as of December 31, 2014, 2013 and 2012 were included within accrued liabilities in our consolidated balance sheets.

20. Discontinued Operations

In 2012, we sold the women's health business, a component of the acquired Azur Pharma business, to Meda Pharmaceuticals Inc. and Meda Pharma, Sàrl, or collectively, Meda, for $97.6 million, including $2.6 million for certain inventory transferred to Meda upon the closing of the sale, less transaction costs of $3.7 million. As part of the transaction, Meda purchased six women's health products from us and offered positions to approximately 60 of our employees who directly supported the women's health business. In 2012, we recorded a non-recurring gain on the sale of $35.2 million.

We decided to sell our women's health business to concentrate our commercial efforts on our core products in our target therapeutic areas. The results of the women's health business are included in income from discontinued operations in 2012. Goodwill was allocated to the divested women's health business using the relative fair value method.

Net revenue and income from discontinued operations were as follows (in thousands):

	Year Ended December 31, 2012
Product sales, net	$ 20,873
Loss from discontinued operations before income taxes (1)	$ (5,787)
Income tax expense (1)	(2,020)
Loss from discontinued operations, net of taxes	(7,807)
Gain on sale of discontinued operations (2)	35,244
Income from discontinued operations, net of taxes	$ 27,437

(1) The income tax expense related to profits generated by the women's health business in 2012 which were attributable to the United States.

(2) The gain on sale of discontinued operations was not impacted by income taxes as the value attributable to the women's health business was held in a non-taxable jurisdiction.

21. Employee Benefit Plans

We operate a number of defined contribution retirement plans. The costs of these plans are charged to the income statement in the period they are incurred. We recorded expense related to our defined contribution plans of $2.0 million, $1.1 million and $0.3 million in the years ended December 31, 2014, 2013 and 2012, respectively. In Ireland, we operate a defined contribution plan in which we contribute up to 8% of an employee's eligible earnings. We recorded expense of $0.5 million and $0.3 million in the years ended December 31, 2014 and 2013, respectively, and none in 2012 in connection with the contributions we made under the Irish defined contribution plan. In the United States, we provide a qualified 401(k) savings plan for our U.S.-based employees. All U.S.-based employees are eligible to participate, provided they meet the requirements of the plan. In 2013, we elected to match employee contributions under the 401(k) savings plan and recorded expense of $1.0 million and $0.4 million in the years ended December 31, 2014 and 2013, respectively. No such matching contributions were made prior to 2013. In the United Kingdom, we operate a defined contribution plan in which we contribute up to 12% of an employee's eligible earnings. We recorded expense of $0.5 million, $0.4 million and $0.2 million in the years ended December 31, 2014, 2013 and 2012, respectively, in connection with contributions we made under the U.K. defined contribution plan. In France, we accrue for a potential liability which is payable if an employee retires. The accrued liability for France was $0.4 million, $0.3 million and $0.3 million as of December 31, 2014, 2013 and 2012, respectively. In Italy, we accrue for a potential liability which is payable if an employee leaves employment. The accrued liability for Italy was $0.4 million as of December 31, 2014.

22. Quarterly Financial Data (Unaudited)

The following interim financial information presents our 2014 and 2013 results of operations on a quarterly basis (in thousands, except per share amounts):

	2014			
	March 31	June 30	September 30	December 31
Revenues	$ 246,919	$ 291,230	$ 306,584	$ 328,142
Gross margin (1)	214,062	258,408	277,413	295,415
Net income (loss) attributable to Jazz Pharmaceuticals plc	(92,650)	43,659	25,766	81,612
Net income (loss) per ordinary share attributable to Jazz Pharmaceuticals plc, basic	(1.58)	0.73	0.43	1.35
Net income (loss) per ordinary share attributable to Jazz Pharmaceuticals plc, diluted	(1.58)	0.70	0.41	1.30

	2013			
	March 31	June 30	September 30	December 31
Revenues	$ 196,237	$ 208,252	$ 232,160	$ 235,774
Gross margin (1)	167,432	181,533	206,134	208,153
Net income	43,425	42,185	75,409	55,293
Net income per share, basic	0.74	0.72	1.30	0.96
Net income per share, diluted	0.71	0.69	1.23	0.90

(1) Gross margin excludes amortization of acquired developed technology of $30.3 million, $31.7 million, $29.6 million and $31.0 million in the first, second, third and fourth quarters of 2014, respectively, and $19.5 million, $19.3 million, $19.5 million and $20.5 million in the first, second, third and fourth quarters of 2013, respectively.

The tables above include the following unusual or infrequently occurring items:

- Upfront and milestone payments of $127.0 million, $75.0 million and $0.6 million in the first, third and fourth quarters of 2014, respectively, and $4.0 million and $1.0 million in the first and third quarters of 2013, respectively.
- Impairment charges of $32.8 million and $6.6 million in the second and fourth quarters of 2014, respectively, associated with certain products and related assets acquired as part of the EUSA Acquisition. We report sales of these products under “Other” products. The second quarter impairment charge resulted from the reorganization of our operations in Europe to focus on our hematology/oncology therapeutic area following the Gentium Acquisition. The fourth quarter impairment charge represented the adjustment made to reduce the carrying value of the assets held for sale to fair value less cost to sell;
- Revenues of $13.5 million, $22.4 million, $21.1 million and $21.2 million in the first, second, third and fourth quarters of 2014, respectively, resulting from the Gentium Acquisition as measured from the date of acquisition of January 24, 2014. The portion of gross margin and net income associated with the acquired Gentium business was not separately identifiable due to the integration with our operations.
- Acquisition accounting inventory value step-up adjustments of $8.0 million and $2.5 million in the first and second quarters of 2014, respectively, and $1.5 million, $1.1 million, $0.5 million and $0.7 million in the first, second, third and fourth quarters of 2013, respectively;
- Transaction costs of $17.1 million, $4.4 million, $0.7 million and $5.2 million in the first, second, third and fourth quarters of 2014, respectively, and $0.4 million and $4.4 million in the second and fourth quarters of 2013, respectively;
- The change in fair value of the contingent consideration payable of $4.5 million, $3.4 million, $5.0 million and $2.3 million in the first, second, third and fourth quarters of 2013, respectively, for an additional contingent payment of $50.0 million in cash that we agreed to make as part of the EUSA Acquisition if Erwinaze achieved U.S. net sales of $124.5 million or greater in 2013. In 2013, Erwinaze U.S. net sales were greater than $124.5 million and as a result, we made the payment of $50.0 million in the first quarter of 2014; and
- A loss on extinguishment and modification of debt of $3.7 million in the second quarter of 2013.

Schedule II

Valuation and Qualifying Accounts
(In thousands)

		Balance at beginning of period	Additions charged to costs and expenses	Other Additions	Deductions	Balance at end of period
For the year ended December 31, 2014						
Allowance for doubtful accounts	(1)	$ 594	$ —	$ —	$ (64)	$ 530
Allowance for sales discounts	(1)	378	3,794	—	(3,934)	238
Allowance for chargebacks	(1)	2,708	28,614	—	(28,607)	2,715
Deferred tax asset valuation allowance	(2)(4)	20,691	18,971	—	(9,965)	29,697
For the year ended December 31, 2013						
Allowance for doubtful accounts	(1)	$ 715	$ (4)	$ —	$ (117)	$ 594
Allowance for sales discounts	(1)	528	5,267	—	(5,417)	378
Allowance for chargebacks	(1)	2,536	21,047	—	(20,875)	2,708
Deferred tax asset valuation allowance	(2)	17,471	3,220	—	—	20,691
For the year ended December 31, 2012						
Allowance for doubtful accounts	(1)	$ 50	$ 678	$ —	$ (13)	$ 715
Allowance for sales discounts	(1)	296	6,022	—	(5,790)	528
Allowance for chargebacks	(1)	20	13,072	—	(10,556)	2,536
Deferred tax asset valuation allowance	(3)(4)	111,188	3,421	62,971	(160,109)	17,471

(1) Shown as a reduction of accounts receivable. Charges related to sales discounts and chargebacks are reflected as a reduction of revenue.
(2) Additions to the deferred tax asset valuation allowance relate to movements on certain U.S. state and other foreign deferred tax assets where we continue to maintain a valuation allowance until sufficient positive evidence exists to support reversal.
(3) Other additions to the deferred income tax asset valuation allowance resulted from the Azur Merger and the EUSA Acquisition.
(4) Deductions to the deferred tax asset valuation allowance include movements relating to utilization of NOLs and tax credit carryforwards, release in valuation allowance and other movements including adjustments following finalization of tax returns.

EXHIBIT INDEX

Exhibit Number	Description of Document
2.1	Agreement and Plan of Merger and Reorganization, dated as of September 19, 2011, by and among Azur Pharma Limited (now Jazz Pharmaceuticals plc), Jaguar Merger Sub Inc., Jazz Pharmaceuticals, Inc. and Seamus Mulligan, solely in his capacity as the Indemnitors' Representative (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500) filed with the SEC on September 19, 2011).
2.2	Letter Agreement, dated as of January 17, 2012, by and among Jazz Pharmaceuticals plc, Jaguar Merger Sub Inc. Jazz Pharmaceuticals, Inc. and Seamus Mulligan, solely in his capacity as the Indemnitors' Representative (incorporated by reference to Exhibit 2.2 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).
2.3	Agreement and Plan of Merger, dated as of April 26, 2012, by and among Jazz Pharmaceuticals plc, Jewel Merger Sub Inc., EUSA Pharma Inc., and Essex Woodlands Health Ventures, Inc., Mayflower L.P., and Bryan Morton, in their capacity as the representatives of the equity holders of EUSA Pharma Inc. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on April 27, 2012).
2.4	Assignment, dated as of June 11, 2012, by and among Jazz Pharmaceuticals plc and Jazz Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 2.1B in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 12, 2012).
2.5	Asset Purchase Agreement, dated as of September 5, 2012, by and among Jazz Pharmaceuticals plc, Jazz Pharmaceuticals International II Limited, Meda Pharmaceuticals Inc. and Meda Pharma, Sàrl (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on October 15, 2012).
2.6	Tender Offer Agreement, dated December 19, 2013, by and among Jazz Pharmaceuticals Public Limited Company, Jazz Pharmaceuticals Italy S.r.l. and Gentium S.p.A. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K/A (File No. 001-33500), as filed with the SEC on December 20, 2013).
2.7†	Asset Purchase Agreement, dated January 13, 2014, by and among Jazz Pharmaceuticals International III Limited, Aerial BioPharma, LLC and Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 13, 2014).
2.8†	Assignment Agreement, dated July 1, 2014, by and among Jazz Pharmaceuticals International II Limited, Sigma-Tau Pharmaceuticals, Inc., Jazz Pharmaceuticals plc and Gentium S.p.A. (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 5, 2014).
3.1	Memorandum and Articles of Association of Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 3.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).
4.1	Reference is made to Exhibit 3.1.
4.2A	Investor Rights Agreement, dated July 7, 2009 by and between Jazz Pharmaceuticals, Inc. and the other parties named therein (incorporated herein by reference to Exhibit 10.88 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500), as filed with the SEC on July 7, 2009).
4.2B	Assignment, Assumption and Amendment Agreement, dated as of January 18, 2012, by and among Jazz Pharmaceuticals, Inc., Jazz Pharmaceuticals plc and the other parties named therein (incorporated herein by reference to Exhibit 4.7B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals, Inc. with the SEC on February 28, 2012).
4.3A	Indenture, dated as of August 13, 2014, by and among Jazz Pharmaceuticals plc, Jazz Investments I Limited and U.S. Bank National Association (incorporated herein by reference to Exhibit 4.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 13, 2014).
4.3B	Form of 1.875% Exchangeable Senior Note due 2021 (incorporated herein by reference to Exhibit 4.2 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on August 13, 2014).
10.1†	Xyrem Manufacturing Services and Supply Agreement, dated as of March 13, 2007, by and between Jazz Pharmaceuticals, Inc. and Patheon Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 10.50 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on May 31, 2007).

Exhibit Number	Description of Document
10.2†	Quality Agreement, dated as of March 13, 2007, by and between Jazz Pharmaceuticals, Inc. and Patheon Pharmaceuticals, Inc. (incorporated herein by reference to Exhibit 10.51 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on March 27, 2007).
10.3†	Supply Agreement, dated as of April 1, 2010, by and between Jazz Pharmaceuticals, Inc. and Siegfried (USA) Inc. (incorporated herein by reference to Exhibit 10.54 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2010, as filed with the SEC on May 6, 2010).
10.4†	Master Services Agreement, dated April 15, 2011, by and between Jazz Pharmaceuticals, Inc., CuraScript, Inc. and Express Scripts Specialty Distribution Services, Inc. (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2011, as filed with the SEC on May 9, 2011).
10.5†	Royalty Bearing License Agreement and Supply Agreement Re Erwinia-Derived Asparaginase, dated July 22, 2005, between Public Health England (formerly Health Protection Agency) and EUSA Pharma SAS (formerly OPi, S.A.), as amended on each of December 22, 2009, March 23, 2012 and August 8, 2012 (incorporated herein by reference to Exhibit 10.11 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q/A (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 9, 2012).
10.6A	Credit Agreement, dated as of June 12, 2012, by and among Jazz Pharmaceuticals plc, Jazz Pharmaceuticals, Inc., the Lenders and Barclays Bank PLC, as Administrative Agent, Collateral Agent, Swing Line Lender and L/C Issuer (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 12, 2012).
10.6B	Amendment No. 1, dated as of June 13, 2013, to the Credit Agreement and related Guaranty, by and among Jazz Pharmaceuticals, Inc., Jazz Financing I Limited and Jazz Pharmaceuticals Ireland Limited, as borrowers, Jazz Pharmaceuticals plc, as guarantor, the Lenders thereto and Barclays Bank PLC, as Administrative Agent, Collateral Agent, L/C Issuer and Swing Line Lender (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 13, 2013).
10.6C	Amendment No. 2, dated as of January 23, 2014, to the Credit Agreement, dated as of June 12, 2012, by and among Jazz Pharmaceuticals, Inc., Jazz Financing I Limited and Jazz Pharmaceuticals Ireland Limited, as borrowers, Jazz Pharmaceuticals Public Limited Company, as guarantor, the Lenders thereto and Barclays Bank PLC, as Administrative Agent, Collateral Agent, L/C Issuer and Swing Line Lender (incorporated herein by reference to Exhibit 10.32 in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2013, as filed with the SEC on February 25, 2014).
10.7	Amended and Restated Commitment Letter, dated as of January 6, 2014, by and between Jazz Pharmaceuticals plc, Barclays Bank PLC, J.P. Morgan Securities LLC, JPMorgan Chase Bank, N.A., Merrill Lynch Pierce, Fenner & Smith Incorporated, Bank of America, N.A., Citigroup Global Markets Inc., Morgan Stanley Senior Funding, Inc., Royal Bank of Canada, DNB Bank ASA and DNB Capital Markets, Inc. (incorporated herein by reference to Exhibit 99.(B)(1) in Jazz Pharmaceuticals plc's tender offer statement on Schedule TO, as amended, as filed with the SEC on January 7, 2014).
10.8A	Commercial Lease, dated as of June 2, 2004, by and between Jazz Pharmaceuticals, Inc. and The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.52 in Jazz Pharmaceuticals, Inc.'s registration statement on Form S-1, as amended (File No. 333-141164), as filed with the SEC on March 27, 2007).
10.8B	First Amendment of Lease, dated June 1, 2009, by and between Jazz Pharmaceuticals, Inc. and Wheatley-Fields, LLC, successor in interest to The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.86 in Jazz Pharmaceuticals, Inc.'s current report on Form 8-K (File No. 001-33500), as filed with the SEC on June 4, 2009).
10.8C	Second Amendment of Lease, dated February 28, 2012, by and between Jazz Pharmaceuticals, Inc. and Wheatley-Fields, LLC, successor in interest to The Board of Trustees of the Leland Stanford Junior University (incorporated herein by reference to Exhibit 10.31 in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals, Inc. with the SEC on February 28, 2012).
10.9	Lease, dated May 8, 2012, by and between John Ronan and Castle Cove Property Developments Limited and Jazz Pharmaceuticals plc (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.10	Commercial Lease, dated as of January 7, 2015, by and between The Board of Trustees of the Leland Stanford Junior University and Jazz Pharmaceuticals, Inc.
10.11+	Form of Indemnification Agreement between Jazz Pharmaceuticals plc and its officers and directors (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on January 18, 2012).

Exhibit Number	Description of Document
10.12+	Offer Letter from Jazz Pharmaceuticals, Inc. to Jeffrey Tobias, M.D. (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals, Inc.'s quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2011, as filed with the SEC on November 8, 2011).
10.13+	Offer Letter from Jazz Pharmaceuticals, Inc. to Suzanne Sawochka Hooper (incorporated herein by reference to Exhibit 10.19 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2012, as filed with the SEC on May 8, 2012).
10.14+	Offer Letter from Jazz Pharmaceuticals, Inc. to Matthew Young (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).
10.15A+	Employment Agreement by and between EUSA Pharma Inc. and Iain McGill (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.15B+	Amendment to Employment Agreement by and between Iain McGill and EUSA Pharma (Europe) Limited.
10.16+	Offer Letter from Jazz Pharmaceuticals, Inc. to Michael Miller (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.17A+	Employment Agreement by and between Jazz Pharmaceuticals Ireland Limited and Paul Treacy (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2014, as filed with the SEC on November 4, 2014).
10.17B+	Amendment to Employment Agreement by and between Jazz Pharmaceuticals Ireland Limited and Paul Treacy.
10.18A+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 99.3 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.18B+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan Sub-Plan Governing Awards to Participants in the Republic of Ireland (incorporated herein by reference to Exhibit 10.3B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals Inc. with the SEC on February 28, 2012).
10.18C+	Form of Notice of Grant of Stock Options and Form of Option Agreement (U.S.) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27C in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18D+	Form of Notice of Grant of Stock Options and Form of Option Agreement (Irish) under Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27D in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18E+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (U.S.) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27E in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500), as filed with the SEC on February 26, 2013).
10.18F+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (Irish) under the Jazz Pharmaceuticals plc 2007 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.27F in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.18G+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.1 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.18H+	Jazz Pharmaceuticals plc 2007 Equity Incentive Plan - Form of Non-U.S. Restricted Stock Unit Award Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.2 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19A+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 99.1 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).

Exhibit Number	Description of Document
10.19B+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan Sub-Plan Governing Awards to Participants in the Republic of Ireland (incorporated herein by reference to Exhibit 10.39B in the annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2011, as filed by Jazz Pharmaceuticals plc on behalf of and as successor to Jazz Pharmaceuticals Inc. with the SEC on February 28, 2012).
10.19C+	Form of Option Grant Notice and Form of Stock Option Agreement (U.S.) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.7 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19D+	Form of Stock Option Grant Notice and Form of Option Agreement (Irish) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.8 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19E+	Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.28E in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.19F+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (U.S.) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.9 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19G+	Form of Restricted Stock Unit Grant Notice and Form of Restricted Stock Unit Award Agreement (Irish) under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.10 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2012, as filed with the SEC on August 7, 2012).
10.19H+	Form of Non-U.S. Restricted Stock Unit Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement under the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.28H in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.19I+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of U.S. Option Grant Notice and Form of U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.3 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19J+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of U.S. Restricted Stock Unit Award Grant Notice and Form of U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.4 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19K+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.5 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.19L+	Jazz Pharmaceuticals plc 2011 Equity Incentive Plan - Form of Non-U.S. Restricted Stock Unit Award Grant Notice and Form of Non-U.S. Restricted Stock Unit Award Agreement (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.20+	Jazz Pharmaceuticals plc Amended and Restated Directors Deferred Compensation Plan (incorporated herein by reference to Exhibit 99.6 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.21A+	Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan (incorporated herein by reference to Exhibit 99.4 in Jazz Pharmaceuticals plc's registration statement on Form S-8 (File No. 333-179075), as filed with the SEC on January 18, 2012).
10.21B+	Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement under the Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan (incorporated herein by reference to Exhibit 10.30B in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.21C+	Jazz Pharmaceuticals plc Amended and Restated 2007 Non-Employee Directors Stock Option Plan - Form of Non-U.S. Option Grant Notice and Form of Non-U.S. Option Agreement (approved August 1, 2013) (incorporated herein by reference to Exhibit 10.7 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).

Exhibit Number	Description of Document
10.22A+	Jazz Pharmaceuticals plc 2007 Employee Stock Purchase Plan, as amended and restated (incorporated herein by reference to Exhibit 10.31A in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.22B+	Jazz Pharmaceuticals plc 2007 Employee Stock Purchase Plan Sub-Plan Governing Purchase Rights to Participants in the Republic of Ireland (incorporated by reference herein to Exhibit 10.14C in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2012, as filed with the SEC on May 8, 2012).
10.23A+	Jazz Pharmaceuticals plc Cash Bonus Plan for U.S. Affiliates (incorporated herein by reference to Exhibit 10.32B in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2012, as filed with the SEC on February 26, 2013).
10.23B+	Jazz Pharmaceuticals Cash Bonus Plan for International Affiliates (2014) (incorporated herein by reference to Exhibit 10.24D in Jazz Pharmaceuticals plc's annual report on Form 10-K (File No. 001-33500) for the period ended December 31, 2013, as filed with the SEC on February 25, 2014).
10.24+	Jazz Pharmaceuticals plc Amended and Restated Executive Change in Control and Severance Benefit Plan (approved July 31, 2013) (incorporated herein by reference to Exhibit 10.8 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.25A+	Jazz Pharmaceuticals plc 2013 Executive Officer Compensation Arrangements (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2013, as filed with the SEC on May 7, 2013).
10.25B+	Jazz Pharmaceuticals plc 2014 Executive Officer Compensation Arrangements (incorporated herein by reference to Exhibit 10.4 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).
10.26A+	Jazz Pharmaceuticals plc Non-Employee Director Compensation Policy (approved August 1, 2013) (incorporated herein by reference to Exhibit 10.9 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended September 30, 2013, as filed with the SEC on November 5, 2013).
10.26B+	Jazz Pharmaceuticals plc Non-Employee Director Compensation Policy (approved May 1, 2014) (incorporated herein by reference to Exhibit 10.6 in Jazz Pharmaceuticals plc's quarterly report on Form 10-Q (File No. 001-33500) for the period ended March 31, 2014, as filed with the SEC on May 8, 2014).
10.27+	Named Officer 2015 Target Bonus Opportunity (incorporated herein by reference to Exhibit 10.1 in JazzPharmaceuticals plc's current report on Form 8-K (File No. 001-33500), as filed with the SEC on February 18, 2015).
21.1	Subsidiaries of Jazz Pharmaceuticals plc.
23.1	Consent of KPMG, Independent Registered Public Accounting Firm.
24.1	Power of Attorney (included on the signature page hereto).
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1*	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

+ Indicates management contract or compensatory plan.

† Confidential treatment has been granted for portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

* The certifications attached as Exhibit 32.1 accompany this Annual Report on Form 10-K pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed “filed” by the Registrant for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

Exhibit 10.10

COMMERCIAL LEASE

THIS LEASE is entered into as of January 7, 2015 (the ***"Effective Date"***), by and between THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, a body having corporate powers under the laws of the State of California (***"Landlord"***), and JAZZ PHARMACEUTICALS, INC., a Delaware corporation (***"Tenant"***).

1. BASIC LEASE INFORMATION. The following is a summary of basic lease information. Each item in this Article 1 incorporates all of the terms set forth in this Lease pertaining to such item and to the extent there is any conflict between the provisions of this Article 1 and any other provisions of this Lease, the other provisions shall control. Any capitalized term not defined in this Lease shall have the meaning set forth in the Glossary that appears at the end of this Lease.

Premises:	That certain space within a two-story building to be constructed by Landlord, consisting of a minimum of 95,000 square feet of Rentable Area and a maximum of 105,000 square feet of Rentable Area, and located on the property commonly known as 3170 Porter Drive, Palo Alto, California, as particularly described on the attached **Exhibit A**
Scheduled Access Date:	February 23, 2017
Term:	Twelve (12) years, commencing as of the Commencement Date, but subject to Section 5.4
Commencement Date:	The earlier of (a) Tenant's occupancy of the Premises for the conduct of business, and (b) one hundred eighty (180) days after the Actual Access Date, as may be extended by any Tenant Unavoidable Delays, but in no event earlier than the date on which Landlord achieves Substantial Completion of the Base Building Work (as such terms are defined in **Exhibit D**)
Expiration Date:	The day before the twelfth (12th) anniversary of the Commencement Date, subject to Section 5.4
Base Rent:	$5.50 per square foot of Rentable Area per calendar month, subject to adjustment pursuant to Section 6.1
Abated Rent:	Base Rent (but not Additional Rent) shall be abated for a total of three (3) full calendar months after the Commencement Date, which is estimated to be the sum of $1,596,375 (subject to adjustment based on actual Rentable Area)

Letter of Credit Amount:	Initially, $1,100,000, to be increased to $2,200,000 no later than the date Landlord commences construction of the Base Building Work, and subject to reduction as provided in Section 6.5(a)
Parking:	One (1) parking space per 300 square feet of Rentable Area (excluding any spaces considered by the City to be amenity space, such as an on-site cafeteria or fitness center), and including those parking spaces located in the garage
Permitted Use:	Research and development, including pharmaceutical and biotech research and development, and ancillary general office uses, and including laboratories, warehousing and full service kitchen/cafeteria, to the extent permitted under City ordinances and subject to Landlord's reasonable approval
Tenant Improvement Allowance:	$50 per square foot of Rentable Area, based on the actual Rentable Area of Premises, as certified by Landlord's architect and as determined in accordance with Section 2.4
Addresses for Notice:	
Landlord:	The Board of Trustees of the Leland Stanford Junior University Office of Land, Buildings and Real Estate 3160 Porter Drive, Suite 200 Palo Alto, CA 94304 Attention: Managing Director, Real Estate E-Mail: stanfordresearchpark@stanford.edu
with a copy to:	Carol K. Dillon, Esq. Morgan Lewis & Bockius LLP 3000 El Camino Real, Suite 7002 Palo Alto, CA 94306 E-Mail: carol.dillon@morganlewis.com

Tenant:	
before the Commencement Date:	3180 Porter Drive Palo Alto, CA 94304 Attention: Ron Malouf E-mail: ronald.malouf@jazzpharma.com
with a copy to:	3180 Porter Drive Palo Alto, CA 94304 Attention: Legal Department E-mail: Jazz_Notices@jazzpharma.com
after the Commencement Date:	At the Premises Attention: Ron Malouf E-mail: ronald.malouf@jazzpharma.com
with a copy to:	At the Premises Attention: Legal Department E-mail: Jazz_Notices@jazzpharma.com
Landlord's Lockbox Instructions:	Hines AAF Stanford University Bank: Bank of America – Global Account No.: 3751996680 ACH ABA: 111000012 Fed Wire ABA: 026009593
Brokers:	Landlord's Broker: None Tenant's Broker: CBRE

2. PREMISES.

2.1 Premises. Subject to the terms, covenants and conditions set forth in this Lease, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The building in which the Premises will be located is sometimes referred to in this Lease as the "***Building***". The Building, which will include a below-grade parking garage, and certain improvements in the Common Area will be constructed by Landlord in accordance with the provisions of Article 1 above and the Work Letter attached to this Lease as **Exhibit D**. Together, the Premises, the Building, and the Common Area are sometimes referred to in this Lease as the ***"Property"***, and the construction of the Building and related improvements in the Common Area is sometimes referred to as the ***"Project"***.

2.2 Common Area. Landlord hereby grants to Tenant and its officers, employees, agents, contractors, invitees, permitted subtenants and any other permitted occupants of the Premises (collectively, ***"Tenant's Agents"***) a license to reasonably use the exterior areas, sidewalks, driveways, Parking Area and other public amenities that Landlord will construct on the Property (the ***"Common Area"***) during the Term. Tenant's rights to the Common Area shall be subject to the Rules and Regulations described in Section 24.1, to Landlord's reserved rights described in Article 17 and to other applicable provisions of this Lease. Tenant acknowledges that the driveways providing access from the Premises to Porter Drive are also the access routes for the property commonly known as 3160 Porter Drive and Tenant shall not permit any interference with such access routes by pedestrians or vehicles traveling to that property.

2.3 Parking. Tenant and Tenant's Agents shall have the exclusive right to all underground parking within the Building and all other parking areas on the Property (the ***"Parking Area"***) for parking operable motor vehicles and for ingress to and egress from the Property in connection with Tenant's use of the Premises. Tenant's right to use the Parking Area shall be subject to the following terms and conditions:

(a) Tenant agrees that neither Tenant nor Tenant's Agents shall park in areas not designated as parking spaces, or in parking spaces on other properties owned by Landlord or its affiliates.

(b) Tenant's parking license shall not be assigned, sublet or otherwise transferred separately from the Premises.

(c) Tenant shall not at any time park, or permit the parking of commercial trucks or vehicles of Tenant or Tenant's Agents in any portion of the Common Area not designated by Landlord for such use by Tenant. Tenant shall not park nor permit to be parked any inoperative vehicles or store any materials or equipment on any portion of the Parking Area or other areas of the Common Area other than temporary storage in connection with moving and remodeling.

(d) Tenant agrees to assume responsibility for compliance by Tenant's Agents with the parking provisions contained in this Section. Tenant hereby authorizes Landlord at Tenant's expense to attach violation stickers or notices to such vehicles not parked in compliance with this Section, and, following reasonable notice to Tenant, to tow away any such vehicles. In addition, one or more specific sections of the Parking Area may be set aside by Landlord from time to time for visitor parking for the Property, for loading purposes, for car or van pool parking for the Property, or for other specific uses for the Property as designated by Landlord.

(e) Once Tenant has commenced occupancy of the Premises, and upon written request from Tenant, Landlord agrees to specify by signage or other means twenty (20) parking spaces for exclusive use by Tenant, its employees and visitors. Such exclusive parking spaces shall be as close to the main entrance of the Premises as is reasonably feasible.

2.4 Rentable Area. Upon Substantial Completion of the Base Building Plans, Landlord shall provide Tenant in writing Landlord's architect's good faith and reasonable estimate of the Rentable Area of the Premises ("***Landlord's Estimate"***), together with reasonable and appropriate documentation for the estimated Rentable Area. Tenant shall have ten (10) Business Days to object to Landlord's Estimate in which case Tenant shall provide Landlord with its good faith and reasonable basis for objecting, together with reasonable and appropriate documentation for the estimated Rentable Area. If Landlord's architect disagrees with Tenant's estimate, Landlord's architect and Tenant's architect shall meet and confer regarding the dispute, but Landlord's architect's final determination of the Rentable Area shall be binding on both parties.

3. ACCEPTANCE.

3.1 Lease Subject to Certain Matters. This Lease shall be subject to (a) all Applicable Laws and all zoning and other governmental regulations, requirements and conditions of approval now or hereafter in effect; (b) all liens, assessments, encumbrances, restrictions, rights and conditions of law or of record existing as of the Commencement Date; (c) any access and easement agreements and/or other agreements relating to the Pre-Existing Environmental

Condition that have been entered into by Landlord, or that Landlord is required by prior agreement or governmental requirements to enter into during the Term, provided Tenant is given written notice of such agreements or requirements by Landlord; and (d) all other matters affecting title to or use of the Premises either known to Tenant or ascertainable by survey or investigation, including without limitation the access rights described in Section 2.2.

3.2 Acceptance; AS-IS. The Premises as furnished by Landlord will consist of the Base Building Work (as defined in **Exhibit D**) to be provided by Landlord pursuant to **Exhibit D**, and Landlord shall have no obligation for any other construction work or improvement on or to the Property. Prior to entering into this Lease, Tenant has made a thorough and independent examination of all matters related to Tenant's decision to enter into this Lease. Except as expressly set forth in this Lease, Tenant does not rely on, and Landlord does not make, any express or implied representations or warranties as to any matters including, without limitation, (a) the physical condition of the Property, (b) the quality or adequacy of utilities serving the Property, (c) the size of the Premises, the Building or the Property (d) the use, habitability, merchantability, fitness or suitability of the Premises for the Permitted Use, (e) the likelihood of deriving business from Tenant's location or the economic feasibility of Tenant's business, (f) Hazardous Substances in the Premises, or on, in, under or around the Property, (g) zoning, entitlements or any Applicable Laws which may apply to Tenant's use of the Premises or business operations, or the Property's compliance with Applicable Laws, or (h) any other matter. Tenant has satisfied itself as to such suitability and other pertinent matters by Tenant's own inquiries and tests into all matters relevant in determining whether to enter into this Lease. Upon Substantial Completion of the Base Building Work (as defined in **Exhibit D**), Tenant shall accept the physical condition of the Premises and the Building in their then-existing "as-is" condition subject to any punch-list items as provided in **Exhibit D,** and Landlord's delivery, maintenance and restoration obligations set forth in this Lease. Further, it is understood that the acceptance of the Premises by Tenant in its then-existing "as-is" condition shall not limit Landlord's obligation to complete any Base Building Work and to enforce all third-party warranties pertaining to the Base Building Work as provided in **Exhibit D**.

3.3 Access. Without limiting the foregoing provisions of this Article 3, in accordance with California Civil Code Section 1938, Landlord notifies Tenant that neither the Premises nor the Property have been inspected by a Certified Access Specialist.

3.4 Energy. Landlord and Tenant acknowledge that, notwithstanding California Public Resources Code Section 25402.10, because the Building is not yet constructed and Tenant will be its first occupant, Landlord will be unable to provide Tenant with electricity and gas usage benchmarking data and ratings for the Premises. After the Commencement Date, if Tenant is billed directly by a utility company with respect to Tenant's electricity and gas usage at the Premises, then, promptly upon request, Tenant shall provide monthly electricity and gas usage data for the Premises to Landlord for the period of time requested by Landlord (in electronic or paper format) or, at Landlord's option, provide any written authorization or other documentation required for Landlord to request information regarding Tenant's electricity and gas usage data with respect to the Premises directly from the utility company. Tenant acknowledges and consents to Landlord's use and disclosure of such information to the extent required to comply with California Public Resources Code Section 25402.10.

4. CONTINGENCIES.

4.1 Landlord Termination Right. Notwithstanding any other terms or conditions of this Lease, the continued effectiveness of this Lease is contingent upon Landlord's successful acquisition of all necessary entitlements, permits and approvals (and the expiration of all applicable appeal periods) from the City and any other governmental authorities with jurisdiction to construct the Building on terms acceptable to Landlord in its sole discretion. Landlord shall diligently prosecute the design, approval and construction of the Base Building Work and use commercially reasonable efforts to achieve Substantial Completion of the Base Building Work as quickly as reasonably practicable, subject to Landlord's Unavoidable Delays (as defined in **Exhibit D**). Landlord shall have the right to terminate this Lease upon written notice to Tenant if, despite Landlord's commercially reasonable efforts, Landlord determines by March 1, 2016 that the City will cause the design of the Building to be materially altered from the Preliminary Plan (as defined in **Exhibit D**), or if Landlord determines that the Project will be cost-prohibitive.

4.2 Failure to Allow Access. If for any reason Landlord cannot grant access to the Premises to Tenant on or prior to the Scheduled Access Date so that Tenant may commence and proceed with the construction of the Tenant Improvement Work (as further defined and described in **Exhibit D**), or achieve Substantial Completion of all Base Building Work by the Outside Completion Date (as described below), then (a) the validity of this Lease and the obligations of Tenant under this Lease shall not be affected by any such delay in delivery, (b) Tenant shall have no claim against Landlord arising out of Landlord's failure to grant access or achieve Substantial Completion, and (c) Tenant's sole remedy shall be as provided in Section 4.3 and **Exhibit D**.

4.3 Failure to Achieve Substantial Completion. If Landlord has not achieved Substantial Completion of all Base Building Work by July 1, 2018 (the ***"Outside Completion Date"***), as such date is extended due to Landlord's Unavoidable Delay (as defined in **Exhibit D**), Tenant, as its sole remedy, shall have the right to terminate this Lease by delivering to Landlord a termination notice within ten (10) days after the Outside Completion Date, which shall be effective thirty (30) days after receipt by Landlord; provided, however, that this Lease shall not terminate if within such 30-day period the Base Building Work is Substantially Completed.

4.4 Meet and Confer. Prior to either party exercising its right to terminate this Lease, the parties shall meet and confer together in good faith in order to determine if the issue(s) underlying either party's desire to terminate the Lease can be managed and the Project developed in time and manner reasonably acceptable to the parties.

4.5 Tenant Delay. Notwithstanding the foregoing, (a) if Landlord is delayed in the delivery of access beyond the Scheduled Access Date because of Tenant Delays (as defined in **Exhibit D**), then the Actual Access Date shall be deemed to have occurred on the date on which Landlord could have delivered access to the Premises to Tenant but for such Tenant Delays, (b) the time period for the determination of the Commencement Date shall commence, and (c) to the extent Landlord is delayed in achieving Substantial Completion of the Base Building Work due to any Tenant Delays, the Outside Completion Date shall be delayed by one day for each day of delay caused by Tenant Delays.

4.6 Effect of Termination. In the event of termination of this Lease pursuant to any of the foregoing sections of this Article 4, neither party shall have any further rights, obligations or liabilities to the other, and Landlord shall promptly return the L-C to Tenant.

5. TERM.

5.1 Term. Subject to the contingencies set forth in Article 4, the Premises are leased for a term (the ***"Term"***) commencing on the Commencement Date and ending on the Expiration Date, unless it is earlier terminated in accordance with this Lease. As of the Effective Date, the parties anticipate that the Premises will be delivered to Tenant for the construction of the Tenant Improvement Work on or before the Scheduled Access Date set forth in Article 1. The Term shall end on the Expiration Date, or such earlier date on which this Lease terminates pursuant to its terms. The date upon which this Lease actually terminates, whether by expiration of the Term or earlier termination pursuant to the terms of this Lease, is sometimes referred to in this Lease as the ***"Termination Date"***. After the Commencement Date has been determined, Landlord shall specify in a written notice to Tenant, substantially in the form of **Exhibit B**, the Commencement Date and Expiration Date of this Lease, the actual Rentable Area and the Base Rent and Tenant Improvement Allowance, and other terms herein based upon Rentable Area (based on the actual Rentable Area of the Premises as determined in accordance with Section 2.4). Such notice shall be delivered promptly after all of the information set forth in the notice has been determined; provided that Landlord's failure to do so shall not in any way affect either party's rights or obligations under this Lease.

5.2 Renewal Option. Tenant shall have two (2) options (each, a ***"Renewal Option"***) to extend the Term of the Lease for the entire Premises then being leased to Tenant for terms of five (5) years each (each, a ***"Renewal Term"***). If the first Renewal Option is exercised, the first Renewal Term shall commence on the day after the Expiration Date. If the second renewal term is exercised, the second Renewal Term shall commence on the day after the Expiration Date of the first Renewal Term. Each Renewal Option shall be void if an Event of Default by Tenant exists, either at the time of exercise of such Renewal Option or the time of commencement of such Renewal Term. The second Renewal Term shall be void if Tenant fails to exercise the first Renewal Option. Each Renewal Option must be exercised, if at all, by written notice from Tenant to Landlord given not more than eighteen (18) months and not less than twelve (12) months prior to the expiration of the Term (as previously extended, if applicable). Each Renewal Term shall be upon the same terms and conditions as the original Term, except that (a) the Base Rent payable pursuant to Section 6.1 with respect to each Renewal Term shall be equal to ninety-five percent (95%) of the Prevailing Market Rent as of the commencement of the Renewal Term, as determined pursuant to **Exhibit C**, (b) Tenant shall not be entitled to any Tenant Improvement Allowance during the Renewal Term, (c) the L-C Amount shall remain as the amount determined in accordance with Section 6.5(a) below; and (d) from and after the exercise of a Renewal Option, (i) all references to "Expiration Date" shall be deemed to refer to the last day of the Renewal Term, and (ii) all references to "Term" shall be deemed to include the Renewal Term. The Renewal Options are personal to Tenant and shall be inapplicable and null and void if Tenant assigns its interest under this Lease to any Transferee other than a Permitted Transferee. Landlord shall not be responsible for any commissions or fees related to Tenant's exercise of the Renewal Option.

5.3 Right of First Offer. Commencing on the Effective Date, Tenant shall have an on-going right of first offer (the ***"ROFO"***) to lease all or any portion of the building located at 3160 Porter Drive, Palo Alto, California, which consists of 96,025 square feet of Rentable Area (the ***"ROFO Premises"***). In the event Landlord intends to market all or any portion of the ROFO Premises for lease to a third party other than a Landlord affiliate (e.g., schools or departments of Landlord, its subsidiaries and other affiliates), Landlord shall provide written notice thereof to Tenant (the ***"Offer Notice"***), which shall describe the portion of the ROFO Premises being offered for

lease, the parking spaces available to the ROFO Premises, and the terms and conditions of such lease. Within ten (10) Business Days following its receipt of the Offer Notice, Tenant shall advise Landlord in writing whether Tenant desires to lease the ROFO Premises (based on the space that is being offered by Landlord) on the terms and conditions set forth in the Offer Notice. Notwithstanding the foregoing, the ROFO shall be void if an Event of Default by Tenant exists at the time Landlord would otherwise be required to issue the Offer Notice, or at the time the lease of the ROFO Premises would otherwise take effect. If Tenant fails to notify Landlord of Tenant's election within said ten (10) Business Day period, then Tenant shall be deemed to have elected not to lease the ROFO Premises and the ROFO shall have no further force or effect unless and until Landlord later elects to market the ROFO Premises for lease to a third party. In such event, Landlord shall have the right to lease the ROFO Premises on terms and conditions to be determined by Landlord in its sole discretion, and Landlord shall also have the right to extend or renew such lease at the end of its term whether or not the lease provides an extension or renewal term. If Tenant elects to exercise the ROFO, Landlord and Tenant shall enter into an amendment to this Lease for the ROFO Premises, subject to modification only to reflect the terms of the Offer Notice. The term of the lease of the ROFO Premises shall be coterminous with the Term of this Lease. The ROFO shall be personal to the original Tenant named in this Lease and to any Permitted Transferee of the original Tenant.

5.4 Early Termination. Tenant shall have the right to terminate this Lease as of the tenth (10th) anniversary of the Commencement Date (the ***"Early Termination Option"***). In order to exercise the Early Termination Option, Tenant must deliver written notice to Landlord no later than the ninth (9th) anniversary of the Commencement Date. The Early Termination Option shall have no force or effect, and this Lease shall not terminate unless prior to the tenth (10th) anniversary of the Commencement Date Tenant delivers to Landlord a termination fee in the amount of One Million Eleven Thousand Six Hundred Sixty-six and 66/100 Dollars ($1,011,666.66).

6. RENT.

6.1 Base Rent. Commencing on the Commencement Date (but subject to Section 6.2 below), and thereafter during the Term, Tenant shall pay to Landlord the monthly Base Rent specified in Article 1 on or before the first day of each month, in advance, without any prior notice or demand and without any deductions or setoff whatsoever (except as otherwise expressly provided in this Lease). Base Rent shall be paid by wire transfer pursuant to the instructions set forth in Article 1 or, if requested by Landlord, at the address specified for Landlord in Article 1 or at such other place as Landlord designates in writing. If the Commencement Date occurs on a day other than the first day of a calendar month, or the Termination Date occurs on a day other than the last day of a calendar month, then the Base Rent for such fractional month will be prorated on the basis of the actual number of days in such month. Base Rent shall be increased on the first day of the thirteenth (13th) month following the first anniversary of the Commencement Date and on the anniversary of such date thereafter (each, an ***"Adjustment Date"***) by three percent (3%) over the Base Rent for the immediately preceding twelve (12) month period.

6.2 Abated Rent. Tenant's payment of Base Rent (but not including payment of Additional Rent, as defined in Section 6.3), shall be abated for three (3) full calendar months after the Commencement Date, so long as no Event of Default occurs during such period. If an Event of Default occurs during such period, Tenant shall not be entitled to any further abatement of Base Rent under this Section 6.2 until such time as Tenant cures the Event of Default.

6.3 Additional Rent. All sums due from Tenant to Landlord or to any third party under the terms of this Lease (other than Base Rent) shall be additional rent (***"Additional Rent"***), including without limitation the charges for Operating Expenses (described in Article 8), TDM Fees (described in Section 7.3), and all sums incurred by Landlord due to Tenant's failure to perform its obligations under this Lease. Tenant's obligation to pay Additional Rent shall commence on the Commencement Date. All Additional Rent that is payable to Landlord shall be paid at the time and place that Base Rent is paid, unless otherwise specifically provided in this Lease. Landlord will have the same remedies for a default in the payment of any Additional Rent as for a default in the payment of Base Rent. Together, Base Rent and Additional Rent are sometimes collectively referred to in this Lease as ***"Rent"***.

6.4 Late Fee. Any unpaid Rent shall bear interest from the date due until paid at the Interest Rate. In addition, Tenant recognizes that late payment of any Rent will result in administrative expense to Landlord, the extent of which expense is difficult and economically impracticable to determine. Therefore, Tenant agrees that if Tenant fails to pay any Rent within five (5) days after its due date, a one-time late fee for the applicable month of five percent (5%) of the overdue Rent for the applicable month shall become immediately due and payable. Notwithstanding the foregoing, if Tenant is late in payment of Rent and it is Tenant's first late payment in that calendar year, then provided there have been no more than three (3) late payments during the Term, Landlord agrees not to charge a late charge if Tenant has delivered the Rent payment within five (5) Business Days after written notice from Landlord to Tenant that the Rent payment has not been received. Tenant agrees that the late fee is a reasonable estimate of the additional administrative costs and detriment that will be incurred by Landlord as a result of such failure by Tenant. In the event of nonpayment of interest or late fees on overdue Rent, Landlord shall have, in addition to all other rights and remedies, the rights and remedies provided in this Lease and by law for nonpayment of Rent.

6.5 Letter of Credit. Within fifteen (15) Business Days following the full execution of this Lease, Tenant shall deliver to Landlord a letter of credit as described in this Section 6.5.

(a) The letter of credit (***"L-C"***) shall be a clean, unconditional irrevocable letter of credit in the initial amount of One Million One Hundred Thousand Dollars ($1,100,000), to be delivered concurrently with the execution of this Lease. The L-C shall be increased to Two Million Two Hundred Thousand Dollars ($2,200,000.00) within fifteen (15) Business Days after the date Landlord notifies Tenant that Landlord has obtained building permits and commenced construction of the Base Building Work, and by that date Tenant shall send a replacement or supplemental L-C to Landlord. Provided there is no outstanding Event of Default under this Lease, the L-C shall be reduced to one (1) month's Base Rent (based on the initial Base Rent as determined upon certification of the actual Rentable Area of the Premises) on the fifth (5th) anniversary of the Commencement Date. The amount of the L-C from time to time is sometimes referred to in this Lease as the ***"L-C Amount"***.

(b) If there is an Event of Default by Tenant with respect to any provisions of this Lease (including but not limited to the payment of Rent); if Tenant files a petition in bankruptcy, insolvency, reorganization, dissolution or liquidation under any law; makes an assignment for the benefit of its creditors; consents to or acquiesces in the appointment of a receiver of itself or the Premises, or if a court of competent jurisdiction enters an order or judgment appointing a receiver of Tenant or the Premises; or if a court of competent jurisdiction enters an order or judgment approving a petition filed against Tenant under any bankruptcy, insolvency or liquidation law (collectively, an ***"L-C Event"***), then in any such case Landlord may, without waiving any of Landlord's other rights or remedies under this Lease, draw down the L-C Amount in whole or in part to remedy any failure by Tenant to pay any sums due under this Lease, to repair or maintain the Premises, to perform any other terms, covenants or conditions contained in this Lease, to compensate Landlord for any loss or damages which Landlord may suffer as a result thereof, including without limitation any lost rent to which Landlord is entitled in the event the Lease terminates or is rejected as a result of any of the foregoing, and the cost of reletting the Premises upon any termination of this Lease. Should Landlord so apply any portion of the L-C Amount, Tenant shall replenish the L-C to the original L-C Amount within fifteen (15) Business Days after written demand by Landlord.

(c) The L-C shall be issued by a money-center bank (a solvent, nationally recognized bank with a long term rating of BBB, or higher, under the supervision of the Superintendent of Banks of the State of California, or a national banking association, which accepts deposits, maintains accounts, has a local California office which will negotiate the L-C, and whose deposits are insured by the FDIC) reasonably approved by Landlord (the ***"Bank"***) and shall be in a form that is reasonably acceptable to Landlord in Landlord's reasonable discretion. The Bank shall be a bank that accepts deposits, maintains accounts, has a local Santa Clara County office that will negotiate the L-C, or if no local office then the L-C shall provide for draws by Landlord upon delivery of the written draw request by courier or by fax (to be confirmed by telephone and with original to follow by overnight courier) and payment to be made by wire transfer to Landlord's account as directed by Landlord upon receipt of the original or fax request. If Landlord notifies Tenant in writing that the Bank that issued the L-C has become financially unacceptable in Landlord's reasonable opinion, then Tenant shall have thirty (30) days to provide Landlord with a substitute L-C complying with all of the requirements hereof and issued by a Bank reasonably approved by Landlord. If Tenant does not so provide Landlord with a substitute L-C within such time period, then Landlord shall have the right to draw upon the current L-C and shall hold the proceeds as provided in Section 6.5(f) below. Tenant shall pay all expenses, points, or fees incurred by Tenant in obtaining or extending the L-C. The L-C shall be available by draft at sight, subject only to receipt by the Bank of a statement from Landlord certifying that a matter allowing Landlord to draw upon the L-C Amount under the terms of this Lease has occurred. The L-C shall: (i) name Landlord as beneficiary; (ii) allow Landlord to make partial and multiple draws thereunder up to the face amount, as determined by Landlord in its sole discretion, upon an L-C Event by Tenant, or in the event Tenant fails to deliver a substitute L-C as provided in this paragraph; and (iii) provide that Landlord can freely transfer it in its entirety upon an assignment or other transfer of its interest in the Lease to the assignee or transferee, without charge to Landlord and without recourse, and without having to obtain the consent of Tenant or the Bank. If transfer fees are assessed as a result of any transfer of the L-C by Landlord, Tenant shall pay such fees. Tenant shall cooperate as required by Landlord and Bank to cause Bank to transfer the L-C to Landlord's assignee or transferee within fifteen (15) Business Days after Landlord's written request, subject to Landlord surrendering the original L-C if a replacement L-C will need to be obtained. The L-C shall by its terms expire not less than one (1) year from the date issued, and shall provide for automatic one (1) year extensions unless

Landlord is notified in writing not less than ninety (90) days prior to such expiration from the Bank that the L-C will not be extended. In any event, unless Tenant deposits with Landlord a replacement L-C, said L-C shall be renewed by Tenant for successive periods of not less than one (1) year throughout the Term. The L-C shall be maintained in effect, whether through renewal or extension, for the period from the Commencement Date and continuing until the date that is one hundred twenty (120) days after the Termination Date, and Tenant shall deliver a new L-C or certificate of renewal or extension to Landlord at least thirty (30) days before the expiration of the L-C then held by Landlord, without any action whatsoever on the part of Landlord. Tenant's failure to so deliver, renew (including specifically but not limited to the delivery to Landlord of such renewal not less than thirty (30) days prior to expiration of the L-C) and maintain such L-C, shall entitle Landlord to fully draw the L-C. If any portion of the L-C is drawn upon and not held by Landlord as a cash security deposit as provided in Section 6.5(f) below, Tenant shall, within fifteen (15) Business Days after written demand therefor from Landlord, reinstate the L-C to the full L-C Amount, and Tenant's failure to do so shall be an Event of Default. The L-C shall not be mortgaged, assigned or encumbered in any manner whatsoever by Tenant.

(d) Landlord and Tenant (i) acknowledge and agree that in no event or circumstance shall the L-C or any renewal thereof or substitute therefor be deemed to be or treated as a "security deposit" under any law applicable to security deposits in the commercial context, including, but not limited to, Section 1950.7 of the California Civil Code, as such Section now exists or as it may be hereafter amended or succeeded (the "***Security Deposit Laws***"), (ii) acknowledge and agree that the L-C (including any renewal thereof or substitute therefor) is not intended to serve as a security deposit, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (iii) waive any and all rights, duties and obligations that any such party may now, or in the future will, have relating to or arising from the Security Deposit Laws. Tenant hereby irrevocably waives and relinquishes the provisions of Section 1950.7 of the California Civil Code and any successor statute, and all other provisions of law, now or hereafter in effect, which (A) establish the time frame by which a landlord must refund a security deposit under a lease, and/or (B) provide that a landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by a tenant or to clean the premises, it being agreed that Landlord may, in addition, claim those sums specified in this Section, and/or those sums reasonably necessary to (y) compensate Landlord for any loss or damage caused by Tenant's breach of this Lease, including any damages Landlord suffers following termination of this Lease, and/or (z) compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code.

(e) On the date that is ninety (90) days after the Termination Date, Landlord shall return the L-C to Tenant, and/or any cash L-C Amount that Landlord holds due to Landlord having drawn the L-C pursuant to this Section 6.5; provided that during such ninety (90) days Landlord has not determined that Tenant failed to surrender the Premises in the condition required pursuant to this Lease and there has been an L-C Event hereunder, in which case Landlord may deduct only those L-C proceeds the amounts that Landlord may deduct legally from a cash security deposit, as modified herein.

(f) In the event at any time Landlord draws on the L-C, and to the extent any portion of the L-C Amount is not used by Landlord to cure a breach by Tenant, compensate for non-payment of Rent or the like, the cash L-C Amount shall be delivered to Landlord, in which case Landlord shall hold the cash as a security deposit, but shall not be required to keep the cash

L-C Amount separate from its general funds, and Tenant shall not be entitled to interest on the cash L-C Amount. If Tenant has fully complied with all of the terms, covenants and conditions of this Lease, the cash L-C Amount (less any amount applied to cleaning, repairing damage to the Premises caused by Tenant or otherwise applied in accordance with the provisions of this Lease) shall be returned to Tenant after the Termination Date and after delivery of possession of the Premises to Landlord in the manner required by this Lease. In the event of any Assignment of this Lease by Tenant, such Assignment shall be deemed to include an assignment of Tenant's rights to recover the L-C Amount, and Landlord's agreement to return the L-C Amount shall run only to Tenant's assignee and not to the original Tenant. Tenant hereby expressly waives the provisions of California Civil Code Section 1950.7 or under any similar law, statute or ordinance now or hereafter in effect.

7. USE OF PREMISES AND CONDUCT OF BUSINESS.

7.1 Permitted Use. Tenant may use and occupy the Premises during the Term solely for the Permitted Use, unless Landlord consents to any other use in Landlord's sole discretion. Tenant's use of the Property shall in all respects comply with all Applicable Laws.

7.2 Prohibited Uses. Tenant shall not use the Premises or allow the Premises to be used for any illegal purpose, or so as to create waste, or constitute a private or public nuisance. Tenant shall use reasonable efforts to maintain cooperative relations with Landlord and the occupants of neighboring buildings in the vicinity of the Property. Such cooperation shall include, as reasonably requested by Landlord (a) responding to complaints regarding operational issues (i.e., lighting, parking, noise, etc.), (b) designating a representative to handle any issues that may arise, and (c) advising Tenant's employees regarding issues of concern to Tenant's neighbors. Tenant shall not place any loads upon the floors, walls, or ceiling that endanger the structure, or overload existing electrical or other mechanical systems. Tenant shall not use any machinery or equipment which causes any substantial noise or vibration. Tenant shall not engage in any action or inaction that (i) jeopardizes the Building's LEED or Energy Star ratings, or (ii) compromises Landlord's sustainability goals for the Building as communicated in writing to Tenant. No waste materials or refuse shall be dumped upon or permitted to remain upon any part of the Premises or outside of the Premises except in trash containers placed inside exterior enclosures designated by Landlord for that purpose or inside of the Premises where approved by Landlord. No materials, supplies, equipment, finished products or semi-finished products, raw materials or articles of any nature shall be stored upon or permitted to remain outside the Premises or on any portion of the Common Area unless otherwise approved by Landlord in its reasonable discretion. No loudspeaker or other device, system or apparatus which can be heard outside the Premises shall be used in or at the Premises without the prior written consent of Landlord. No explosives or firearms shall be brought into the Premises. Landlord shall have the right to enter and conduct an inspection of the Premises, at any reasonable time and upon reasonable advance notice, to determine whether Tenant is complying with the terms of this Section 7.2. In the event such inspection identifies any deficiencies in Tenant's compliance with the terms of this Section 7.2, Tenant shall promptly correct such deficiency and shall reimburse Landlord within ten (10) days after written demand as Additional Rent for any reasonable third-party costs incurred by Landlord in connection with such inspection.

7.3 Transportation Demand Management Operational Obligations. Tenant shall (and shall cause any and all occupants and subtenants to) cooperate with Landlord in facilitating and coordinating the Transportation Demand Management programs implemented in the Stanford Research Park by Landlord. Tenant's obligations with respect to such program shall

include without limitation, designating a Transportation Demand Management liaison for Tenant and for each subtenant under a permitted sublease, supporting a transportation management association approved by Landlord, responding to and collecting responses from subtenants, employees and visitors to transportation related surveys, distributing information related to the program to subtenants, employees, and visitors, and encouraging subtenants, employees, contractors, and visitors to cooperate with and participate in such programs. Tenant shall provide to Landlord on each anniversary of the Commencement Date a reasonably detailed report regarding the number of persons working at the Premises and how such persons typically commute to the Premises. Tenant shall (or cause each employer located in the Premises to) use reasonable efforts to cause its employees to cooperate in the completion and return of transportation related surveys at a response rate of 70% or higher, when and as requested by Landlord or its designated transportation coordinator or independent consultant, but no more often than twice per calendar year. Cooperation with the Transportation Demand Management programs shall include Tenant's paying Tenant's proportionate share of the reasonable cost of any current or future Transportation Demand Management program serving the Stanford Research Park, whether implemented by Landlord, City or any other governmental agency, including without limitation fees imposed by Landlord, fees imposed by a transportation management association that Landlord has joined or similar program, and any fees imposed by any governmental agencies (collectively, ***"TDM Fees"***). TDM Fees may be based on the costs of on-going monitoring as well as the costs of Transportation Demand Management measures. Tenant's share of TDM Fees imposed by Landlord or by a transportation management association shall be assessed pro rata and on a non-discriminatory basis, based on a reasonable standard applied in a non-discriminatory manner (for example, based on the rentable area of the Improvements as compared to the total rentable area of the Stanford Research Park (or the area being served, if less than the entire Stanford Research Park), or based on the average employee headcount in the Premises as compared to the overall employee density of the Stanford Research Park). In the event a TDM Fee is assessed specifically for Premises or Tenant's building(s) and/or business operations on the Premises by the City or other governmental agency, and Tenant pays such fee directly to the City or other governmental agency, the direct payment shall fully satisfy Tenant's liability under this Section 7.3, unless Landlord adopts an additional Transportation Demand Management Program for the Stanford Research Park that funds services or programs that are different from those funded through the TDM Fee assessed by the City or other governmental agency.

8. OPERATING EXPENSES.

8.1 Net Lease. This Lease is intended to be a net lease, and the Base Rent and all Additional Rent are to be paid by Tenant absolutely net of all costs and expenses relating to Landlord's ownership, operation and maintenance of the Property during the Term of this Lease, except as specifically provided in this Lease. The provisions of this Article 8 for the payment of Operating Expenses are intended to make Tenant responsible for all such costs and expenses that are incurred by Landlord in connection with the ownership, operation and maintenance of the Property during the Term of this Lease, subject to the limitation and amortization provisions set forth below. Tenant shall have no responsibility with respect to any Operating Expenses attributable solely to 3160 Porter.

8.2 Operating Expenses. ***"Operating Expenses"*** means the total actual costs and expenses paid or incurred by Landlord in connection with the ownership, management, operation, maintenance, repair and replacement of the Property, including, without limitation, all costs of:

(a) taxes, assessments and charges levied upon or with respect to the Property or any personal property of Landlord used in the operation of the Property, or on Landlord's interest in the Property or its personal property (***"Real Estate Taxes"***). Real Estate Taxes shall include, without limitation, all general real property taxes and general and special assessments, charges, fees, or assessments for transit, housing, police, fire, or other governmental services or purported benefits to the Property or the occupants thereof, service payments in lieu of taxes that are now or hereafter levied or assessed against Landlord by the United States of America, the State of California or any political subdivision thereof, or any other political or public entity, and shall also include any other tax, assessment or fee, however described, that may be levied or assessed as a substitute for, or as an addition to, in whole or in part, any other Real Estate Taxes, whether or not now customary or in the contemplation of the parties as of the Commencement Date, including any general or supplemental real property taxes assessed as a result of a change in the assessed value of the Property following or in connection with any transfer of the Property by Landlord. Real Estate Taxes shall also include reasonable legal fees, costs, and disbursements incurred in connection with proceedings to contest, determine, or reduce Real Estate Taxes; provided that Landlord shall return to Tenant Tenant's proportionate share of such reduction in Real Estate Taxes, net of such fees, costs and disbursements. Real Estate Taxes shall not include franchise, transfer, succession, gift, inheritance, gross receipts or capital stock taxes or income taxes measured by the net income of Landlord unless, due to a change in the method of taxation, any of such taxes is levied or assessed against Landlord as a substitute for, or as an addition to, in whole or in part, any other tax that would otherwise constitute a Real Estate Tax. Without limiting the generality of the foregoing, Landlord shall have the right, in its sole discretion, but not the obligation, to cause all Real Estate Taxes applicable to the Property to be segregated from other real property owned by Landlord, and to have such Real Estate Taxes billed directly to Tenant by the Santa Clara County Assessor. In the event Landlord exercises such right, Tenant shall be liable for and shall pay before delinquency all such Real Estate Taxes and shall deliver satisfactory evidence of such payment to Landlord before delinquency;

(b) repair, maintenance, replacement and supply of any air conditioning, electricity, steam, water, heating, ventilating, mechanical, lighting, solar panels, automobile charging stations, elevator systems, sanitary and storm drainage systems and all other utilities and mechanical systems (the ***"Building Systems"***) provided that the cost of any capital improvements, repairs and replacements shall be subject to subsection (o) below;

(c) lighting, landscaping and gardening of the Common Area;

(d) cleaning, lighting, repaving, resealing, repairing, maintaining and restriping of the Parking Area, sidewalks, loading areas, driveways and vehicular entrances and exits at or serving the Property; provided that the cost of any capital improvements, repairs and replacements shall be subject to subsection (o) below;

(e) repair, maintenance and replacement of the Common Area; provided that the cost of any capital improvements, repairs and replacements shall be subject to subsection (o) below;

(f) repair, maintenance and replacement of any building access systems and fire protection systems installed in the Premises; provided that the cost of any capital improvements, repairs and replacements shall be subject to subsection (o) below;

(g) general maintenance, janitorial services, window cleaning, trash removal, cleaning and service contracts and the cost of all supplies, tools and equipment required in connection therewith;

(h) the costs of all utilities and services furnished to or used at the Premises and not paid for directly by Tenant, including the cost of renewable and green energy resources.

(i) all premiums and other costs for insurance carried by Landlord on the Premises, the Common Area and the Property, or in connection with the use or occupancy thereof (including all amounts paid as a result of loss sustained that would be covered by such policies but for deductibles or self-insurance retentions and all amounts not covered by insurance proceeds), including, but not limited to, the premiums and costs of fire and extended coverage, earthquake, flood, vandalism and malicious mischief, commercial liability and property damage, worker's compensation insurance, rental income insurance and any other insurance commonly carried by prudent owners of comparable buildings; provided, however, that the Landlord may, but shall not be obligated to carry earthquake insurance;

(j) wages, salaries, payroll taxes and other labor costs and employee benefits for all on-site and off-site persons engaged in the operation, management, maintenance and security of the Property, equitably allocated by Landlord to the extent one or more employees do not work full time at or on behalf of the Premises;

(k) a management fee equal to two percent (2%) of then-current Base Rent (whether or not Landlord employs a third party manager);

(l) fees, charges and other costs of all independent contractors and consultants engaged by Landlord to assess the Property or to insure compliance with Applicable Laws (storm water regulations, TDM reporting and ADA compliance) and LEED or Energy Star certification criteria;

(m) license, permit and inspection fees;

(n) the cost of supplies, tools, machines, materials and equipment used in operation and maintenance of the Common Area;

(o) the cost of any capital repairs, improvements or replacements to the Property, including without limitation those that are required by Applicable Laws (other than those required in connection with the Base Building Work), or that are made by Landlord to reduce energy or other utility costs or requirements (including LEED certification); provided that the cost of any such capital improvements, repairs and replacements shall be amortized over the useful life of the improvement, repair or replacement in question (determined in accordance with GAAP), together with interest on the unamortized balance at the rate of seven and one-quarter percent (7.25%) until fully paid;

(p) the cost of reasonably contesting the validity or applicability of any governmental enactments that may affect Operating Expenses;

(q) audit and bookkeeping fees, legal fees and expenses incurred in connection with the operation or management of the Property;

(r) reasonable allocation of costs for an off-site or on-site property management office and office operation;

(s) legal and accounting services related to the general management of the Property;

(t) assessments, fees or other charges levied by an association against the Property; and

(u) any other expenses of any kind whatsoever reasonably incurred in connection with the management, operation, maintenance, repair and replacement of the Property and typically included in pass-through expenses charged to triple net tenants in the vicinity of the Premises.

Notwithstanding anything in the definition of Operating Expenses to the contrary, Operating Expenses shall not include the following:

(i) costs actually reimbursed to Landlord by any insurer, tenant, condemnor or other third party;

(ii) costs incurred in connection with the sale, financing or refinancing (or attempted sale, financing or refinancing) of the Property including, without limitation, commissions, marketing costs, interest, principal, points and fees on debts or amortization on any mortgage or mortgages or any other debt instrument encumbering the Property or planned to encumber the Property;

(iii) legal fees, leasing commissions, allowances, buy-out amounts, tenant improvement costs, advertising expenses, promotional expenses, and other costs incurred in the leasing of space at the Property;

(iv) ground rent or any other payments paid under any present or future ground or overriding or underlying lease and/or grant affecting the Property and/or the Premises (other than payments which, independent of such lease, would constitute an Operating Expense hereunder);

(v) costs incurred due to a breach of this Lease by Landlord or any violation of any Applicable Laws by Landlord or Landlord's employees, agents or contractors with respect to the Property;

(vi) costs arising from the presence of any Hazardous Substances or violation of Environmental Requirements as of or prior to the Commencement Date or caused by Landlord or Landlord's employees, agents or contractors;

(vii) Any costs for the design or construction of the Base Building Work, and any costs associated with the correcting of any design or construction defects and/or the enforcement of warranties related to the design, materials or workmanship of any portion of the Base Building Work;

(viii) costs associated with damage or repairs to the Property necessitated by the breach of this Lease, Active Negligence or willful misconduct of Landlord or

Landlord's Agents;

(ix) reserves for Landlord's repair, replacement or improvement of the Property or any portion thereof;

(x) charitable or political contributions or fees paid to trade associates;

(xi) Landlord's general overhead expenses and costs associated with operation of the business of the ownership of the Property or entity that constitutes Landlord or Landlord's property manager, as distinguished from the cost of Property operations, including the costs of partnership or corporate accounting and legal matters; defending or prosecuting any lawsuit with any mortgagee, lender, ground lessor, broker, tenant, occupant, or prospective tenant or occupant; selling or syndicating any of Landlord's interest in the Property; and disputes between Landlord and Landlord's property manager;

(xii) any costs, fines, or penalties incurred due to the late payment of Real Estate Taxes or any other items that comprise Operating Expenses;

(xiii) costs incurred in connection with Hazardous Substances not payable by Tenant under this Lease; and

(xiv) any costs that are solely Landlord's responsibility pursuant to any express provisions of this Lease.

8.3 Payment of Operating Expenses. Commencing on the Commencement Date, Tenant shall pay to Landlord as Additional Rent one twelfth (1/12) of the estimated Operating Expenses for each calendar year or portion thereof during the Term, in advance, on or before the first day of each month in an amount estimated by Landlord and stated in a written notice to Tenant; provided, further, that with respect to the Real Estate Taxes, in addition to the right to have Tenant billed directly by the County of Santa Clara for the Real Estate Taxes pursuant to Section 8.2(a), Landlord shall have the right to bill Tenant for, and require Tenant to pay to Landlord the entire amount of Real Estate Taxes for the Premises not more than thirty (30) days before the date by which such installment would be deemed delinquent by the County of Santa Clara. Prior to the Commencement Date, and the beginning of each calendar year thereafter, or as soon thereafter as practicable, Landlord shall deliver to Tenant a reasonable estimate of Tenant's share of Operating Expenses for the then current calendar year. Landlord may by written notice to Tenant revise such estimates from time to time (but not more than once per year) and Tenant shall thereafter make payments on the basis of such revised estimates. With reasonable promptness after the expiration of each calendar year, Landlord will furnish Tenant with a statement (***"Landlord's Expense Statement"***) setting forth in reasonable detail the actual Operating Expenses for the prior calendar year. If the actual Operating Expenses for such year exceeds the estimated Operating Expenses paid by Tenant for such year, Tenant shall pay to Landlord (whether or not this Lease has terminated) the difference between the amount of estimated Operating Expenses paid by Tenant and the actual Operating Expenses within thirty (30) days after the receipt of Landlord's Expense Statement. If the total amount paid by Tenant for any year exceeds the actual Operating Expenses for that year, the excess shall be credited against the next installments of Base Rent due from Tenant to Landlord, or, if after the Termination Date, the excess shall first be credited against any unpaid Base Rent or Additional Rent due and any remaining excess shall be refunded to Tenant concurrently with

the furnishing of Landlord's Expense Statement. Notwithstanding anything to the contrary set forth above, Tenant shall not be responsible for any Operating Expense not billed by Landlord to Tenant within three (3) years after the year in which such Operating Expense was incurred by Landlord. Further, all calculations, determinations, allocations and decisions to be made hereunder with respect to Operating Expenses shall be made in accordance with the good faith determination of Landlord applying sound accounting and property management principles consistently applied which are consistent with institutional owner practices. All discounts, reimbursements, rebates, refunds, or credits attributable to Operating Expenses received by Landlord in a particular year shall be deducted from Operating Expenses in the year the same are received;

8.4 Audit. Each Landlord's Expense Statement shall be conclusive and binding upon Tenant unless, within three (3) months after receipt thereof, Tenant shall give Landlord notice that Tenant disputes the correctness of the Landlord's Expense Statement, specifying the particular respects in which the Landlord's Expense Statement is claimed to be incorrect. Tenant shall not have the right to withhold payment of Tenant's Share of Operating Expenses in the event of a dispute. Landlord shall maintain books and records appropriate for the computation and verification of Operating Expenses and shall permit Tenant's accountants, consultants and/or employees to examine Landlord's books and records, during Landlord's regular business hours at Landlord's place of business and with at least ten (10) Business Days prior written notice, in order to verify the accuracy of the relevant Landlord's Expense Statement. The records and any related information obtained from Landlord shall be treated as confidential, and as applicable only to the Premises, by Tenant, its accountants, consultants, and any other parties reviewing the same on behalf of Tenant. Before making any records available for review, Landlord may require Tenant and Tenant's accountants, consultants and employees to execute a reasonable confidentiality agreement, in which event Tenant shall cause the same to be executed and delivered to Landlord within thirty (30) days after receiving it from Landlord, and if Tenant fails to do so, the three (3) month objection period referred to in the first sentence of this paragraph shall be reduced by one day for each day by which such execution and delivery follows the expiration of such 30-day period. If it shall be finally determined by an independent accountant engaged by Tenant and reasonably approved by Landlord that Landlord's Expense Statement was incorrect or commercially unreasonable, then either (a) Landlord shall at its election reimburse Tenant for any overpayment or credit the amount of such overpayment against the next monthly installment of Tenant's Share of Operating Expenses payable under this Lease, or (b) Tenant shall within fifteen (15) days after such determination pay any amounts due to Landlord. Tenant agrees to pay the cost of such audit, provided that, if the audit reveals that Landlord's determination of Operating Expenses was overstated by more than five percent (5%), Landlord shall pay the cost of such audit. Notwithstanding any contrary provision hereof, Tenant may not examine Landlord's records or dispute any Landlord's Expense Statement if any Rent remains unpaid past its due date.

8.5 Proration. If either the Commencement Date or the Termination Date occurs on a date other than the first or last day, respectively, of a calendar year, Operating Expenses for the year in which the Commencement Date or Termination Date occurs shall be prorated based on a 365-day year.

8.6 Taxes on Tenant's Property and Business. Tenant shall pay prior to delinquency all taxes levied or assessed by any local, state or federal authority upon the conduct of Tenant's business in the Premises or upon Tenant's Property and shall deliver satisfactory evidence of such payment to Landlord. If the assessed value of the Property is increased by the inclusion of a value placed upon Tenant's Property, Tenant shall pay to Landlord, upon written

demand, the taxes so levied against Landlord, or the portion of Landlord's taxes resulting from said increase in assessment, as determined from time to time by Landlord.

9. REPAIRS, MAINTENANCE, UTILITIES AND SERVICES.

9.1 Landlord's Repair Obligations. Landlord shall have the obligation to repair, replace and maintain only the structural portions of the Premises, including, without limitation, the foundation, footings, floor/ceiling slabs, roof (including roof structure), curtain wall, exterior glass and mullions, load bearing walls, columns, beams, shafts (including elevator shafts), stairs, building standard stairwells (but not stairs or stairwells installed by the Tenant or any former tenant) and elevators (collectively, the ***"Building Structure"***), and the Building Systems and Common Area. Landlord shall repair, replace and maintain the Building Structure, the Building Systems and Common Area in good working order and in a clean, safe and sanitary condition, consistent with the maintenance and repair of first class buildings of similar age and quality located in the Stanford Research Park in Palo Alto. The costs of such repair, replacement and maintenance shall be included in Operating Expenses to the extent permitted by Section 8 of this Lease; provided that, Tenant shall reimburse Landlord in full and within thirty (30) days after written demand for the cost of any repair to the Common Area, Building Structure or Building Systems attributable to misuse by Tenant or Tenant's Agents. Such reimbursement shall be Additional Rent. Except as specifically provided in this Section 9.1 or elsewhere in this Lease, Landlord shall not be required to furnish any services, facilities or utilities to the Premises or to Tenant, and Tenant assumes full responsibility for paying for all services, facilities and utilities to the Premises. Tenant shall notify Landlord in writing when it becomes aware of the need for any repair, replacement or maintenance which is Landlord's responsibility under this Section of which it becomes aware. Except as otherwise provided in Section 16.7 below, Tenant hereby waives and releases any right it may have under any Applicable Laws to make any repairs that are Landlord's obligation under this Section.

9.2 Services to be Provided by Landlord. Landlord shall provide the following services to the Premises:

(g) hot and cold water, gas and electricity service in amounts sufficient for normal office operations as provided in similar buildings in the Stanford Research Park; provided that Landlord shall have the right to purchase green or renewable utilities;

(h) heating and air conditioning, at such temperatures and in such amounts as are reasonably determined by Tenant and customary for research and development uses, subject to the requirements of Applicable Law;

(i) sewer service and non-hazardous waste pick-up;

(j) interior and exterior window washing services; and

(k) janitorial service on a five (5) day week basis excluding holidays; provided that Tenant shall have the right to assume responsibility for providing janitorial services at the Premises upon thirty (30) days prior written notice to Landlord.

Except as otherwise provided in Section 16.7 below, Tenant hereby waives and releases any right it may have under any Applicable Laws to make any repairs that are Landlord's obligation under this Section.

9.3 Tenant's Obligations. Except as provided in Section 9.1 and Article 19, Tenant assumes full responsibility for the condition, repair, replacement and maintenance of the Premises on and after the Commencement Date, including, without limitation, all electrical, steam, water, heating, ventilating and mechanical systems and all other utilities, systems and equipment installed in the Premises by Tenant in connection with its use and occupancy of the Premises as permitted by this Lease (***"Tenant Systems"***). Tenant shall be responsible for arranging for and supplying security services and telephone and other electronic communication services to the Premises and shall pay the costs of such utilities and services directly. Tenant shall take good care of the Premises and the Tenant Systems and keep the Premises (other than the Common Area, Building Structure and Building Systems that are the responsibility of Landlord to the extent expressly provided in Section 9.1) and the Tenant Systems in good working order and in a clean, safe and sanitary condition. All repairs and replacements by Tenant for which Tenant is responsible are collectively referred to as the ***"Tenant Obligations"*** and shall be made and performed: (a) at Tenant's cost and expense, and in such manner as Landlord may reasonably designate, (b) by licensed and reputable contractors or mechanics reasonably approved by Landlord, (c) so that the same shall be at least equal in quality, value and utility to the original work or installation, (d) in a manner and using equipment and materials that will not interfere with or impair the operation of or damage the Building Systems, and (e) in accordance with Article 10 (if applicable) and all Applicable Laws. Tenant shall cooperate fully and in good faith with Landlord and Landlord's property manager in the performance of all such repairs and replacements by Tenant, and shall perform all such work and activities diligently and expeditiously to completion, and in a manner consistent with the repair and maintenance of first class buildings of similar age and quality located in the Stanford Research Park in Palo Alto. Tenant shall reimburse Landlord within ten (10) Business Days after written demand as Additional Rent for any actual out-of-pocket expenses incurred by Landlord in connection with any repairs or replacements required to be made by Tenant, including without limitation, any reasonable fees charged by Landlord's contractors to review plans and specifications prepared by Tenant.

9.4 Utility Costs. Subject to Tenant's right to contract directly with the providers of certain utilities, as provided in Section 9.3, Landlord shall arrange for water, electrical, gas, non-hazardous waste collection and sewer service to the Premises as are generally provided in similar research and development buildings in the Stanford Research Park. Tenant shall be responsible for arranging for hazardous waste collection, telephone and other electronic communications services at the Premises. Tenant shall pay, either through Operating Expenses, as a reimbursement to Landlord, or directly the cost of all utilities provided to the Premises. If Tenant is billed directly by Landlord for any utilities, Tenant shall deliver payment to Landlord within thirty (30) days after receipt of an invoice. If Tenant is billed directly by a utility company with respect to Tenant's electricity and gas usage at the Premises, then, promptly upon request, Tenant shall provide monthly electricity and gas usage data for the Premises to Landlord for the period of time requested by Landlord (in electronic or paper format) or, at Landlord's option, provide any written authorization or other documentation required for Landlord to request information regarding Tenant's electricity and gas usage data with respect to the Premises directly from the utility company. Tenant acknowledges and consents to Landlord's use and disclosure of such information to the extent required to comply with California Public Resources Code Section 25402.10.

9.5 Security. Tenant shall be solely responsible for the security of the Premises and Tenant and Tenant's Agents while in or about the Premises. Landlord shall not be obligated to provide any security services, facilities or equipment for the Premises, the Building, the Common Area or the Property. Any security services provided to the Property by Landlord shall be at

Landlord's sole discretion and Landlord shall not be liable to Tenant or Tenant's Agents for any failure to provide security services or any loss, injury or damage suffered as a result of a failure to provide security services.

9.6 Assumption of Additional Tenant Obligations. In addition to the Tenant Obligations set forth in Section 9.3, Tenant may upon written notice to Landlord assume specific items included in Landlord's repair and maintenance obligations as Tenant Obligations, subject to Landlord's prior written consent, which consent shall not be unreasonably withheld or conditioned. Notwithstanding the foregoing, in the event Tenant fails to perform or adequately perform any of Tenant's Obligations as reasonably determined by Landlord, Landlord, in its sole and absolute discretion, and upon fifteen (15) Business Days written notice to Tenant, may terminate Tenant's right to perform such Tenant's Obligations, and Landlord shall then assume for itself or assign to Landlord's property manager all responsibility for the performance of all such Tenant's Obligations for the remainder of the Term, the cost of which shall be included within the definition of Operating Expenses.

9.7 Special Services. If Tenant requests any services from Landlord other than those for which Landlord is obligated under this Lease, Tenant shall make its request in writing and Landlord may elect in its sole discretion whether to provide the requested services. If Landlord provides any special services to Tenant, Landlord shall charge Tenant for such services and Tenant shall pay the cost of such services as Additional Rent within thirty (30) days after receipt of Landlord's invoice.

9.8 Generator Equipment. Tenant shall have the right to install a back-up generator to supply emergency power to the Premises, and rooftop communication systems on the Building; provided that the installation and operation of such equipment shall be subject to the terms and conditions set forth in ***Schedule 9.8***.

9.9 Sustainability. Tenant shall use commercially reasonable efforts to incorporate sustainable products, components and supplies in its operation and maintenance of the Premises; provided that this Section 9.9 shall not require Tenant to incorporate sustainable products in its research and development activities.

10. INITIAL IMPROVEMENT WORK; ALTERATIONS.

10.1 Base Building Work. Landlord shall construct the Base Building Work specified in, and in accordance with, the provisions of attached **Exhibit D**.

10.2 Entitlement Efforts. Tenant acknowledges that as of the Effective Date, the tentative site plan attached as **Exhibit A** that has been developed by Landlord for development and construction of the Building is preliminary and therefore subject to change. Landlord agrees to use commercially reasonable efforts to keep Tenant informed of any material changes to the design of the Building during the City approval process. Landlord shall have primary responsibility for pursuing all necessary City entitlements and approvals for the Base Building Work through the expiration of all appeal periods at Landlord's cost and expense (the ***"Entitlement Efforts"***). Landlord shall have the right to determine all aspects of the strategy and timing for all submissions and applications to all governmental authorities regarding the Entitlement Efforts for the development of the Building with the goal of obtaining approval of the Building and construction of the Base Building Work in accordance with the Work Letter with the timing of delivery of the

Premises to Tenant as anticipated in this Lease. Tenant acknowledges that the process for obtaining approval from the City is subject to City discretion, fluid and iterative, and therefore, the design may be subject to change based upon feedback and conditions of approval from the City. Tenant agrees to support Landlord's Entitlement Efforts and to make its chief executive officer or other "C-Level" executive available (or another senior company representative if scheduling conflicts so require) to participate in City hearings and meetings regarding the Entitlement Efforts for the development of the Building.

10.3 Rentable Area. The maximum Rentable Area to be developed by Landlord is specified in Article 1. The actual Rentable Area of the Premises will be certified by Landlord's architect upon Substantial Completion of the Base Building Work (as defined in **Exhibit D**) as set forth in Section 2.4 of this Lease. The final size of the Building will be determined by City Zoning Code requirements and the City approval process, with input from Landlord and Tenant regarding "amenity space" for traffic-mitigating uses (e.g. fitness area, cafeteria) that may be allowed under the City Zoning Code. If the City approves the inclusion of any such amenity space, pursuant to the City Zoning Code Landlord will be permitted to construct square footage in excess of the floor area ratio square footage otherwise permitted by and defined in the City Zoning Code. Any amenity space constructed by Landlord shall be included in the calculation of Rentable Area for the purposes of determining the Base Rent and the Tenant Improvement Allowance to be paid hereunder.

10.4 Tenant Improvement Work. Tenant shall construct the Tenant Improvement Work specified in, and in accordance with, the provisions of **Exhibit D**.

10.5 Tenant Improvements and Alterations by Tenant. Tenant's construction of the Tenant Improvement Work shall comply with the requirements of this Article 10, except to the extent inconsistent with **Exhibit D**, in which case the terms and conditions of **Exhibit D** shall control. After completion of the Tenant Improvement Work, Tenant shall not make or permit any alterations to the Building Systems, and shall not make or permit any alterations, installations, additions or improvements, structural or otherwise (collectively, ***"Alterations"***) in or to the Premises or the Building without Landlord's prior written consent, which Landlord shall not unreasonably withhold, condition or delay. Notwithstanding the foregoing, in no event shall Tenant be permitted to make any Alterations that affect the exterior appearance of the Building without Landlord's prior written consent, which Landlord may withhold in its sole discretion.

(a) Tenant's request shall include copies of all plans and specifications for the proposed Alterations, and Tenant shall promptly supply any additional information reasonably requested by Landlord. Landlord shall respond to any request by Tenant to make any Alteration within ten (10) Business Days after receipt of such request for consent from Tenant.

(b) Notwithstanding the foregoing, Landlord's consent shall not be required (i) in the case of interior, cosmetic non-structural Alterations that do not require a permit, or affect the Building Systems, or (ii) in the case of other Alterations that do not exceed a total price of Fifty Thousand Dollars ($50,000) per project and do not affect the Building Systems, the structural integrity of the Building or the exterior appearance of the Building.

(c) All Alterations shall be done at Tenant's sole cost and expense, including without limitation the cost and expense of obtaining all permits and approvals required for any Alterations. Further, to the extent any of Tenant's permitted Tenant Improvement Work and Alterations cause the Property or any portion thereof to be in violation of the ADA or to become

subject to any compliance obligations of, or any enforcement actions under, the ADA (which obligations or actions were not triggered by Landlord's Base Building Work), Tenant shall correct, perform or resolve such violations, obligations or enforcement actions at Tenant's sole cost and expense.

10.6 Project Requirements. The following provisions of this Section 10.6 shall apply to the Tenant Improvement Work and all Alterations, whether or not requiring Landlord's approval (unless otherwise noted):

(a) Prior to entering into a contract for any Tenant Improvement Work or Alterations requiring Landlord's approval, Tenant shall obtain Landlord's written approval, which approval shall not be unreasonably withheld, conditioned or delayed, of the identity of each of the design architect and the general contractor.

(b) Before commencing the construction of any Tenant Improvement Work or Alterations, Tenant shall procure or cause Tenant's contractor to procure the insurance coverage described below and provide Landlord with certificates of such insurance in form reasonably satisfactory to Landlord. All such insurance shall comply with the following requirements of this Section and of Section 14.2.

(i) During the course of construction, to the extent not covered by property insurance maintained by Tenant pursuant to Section 14.3, comprehensive special form builder's risk insurance, covering all improvements in place on the Premises, all materials and equipment stored at the site and furnished under contract, and all materials and equipment that are in the process of fabrication at the premises of any third party or that have been placed in transit to the Premises when such fabrication or transit is at the risk of, or when title to or an insurable interest in such materials or equipment has passed to, Tenant or its construction manager, contractors or subcontractors (excluding any contractors', subcontractors' and construction managers' tools and equipment, and property owned by the employees of the construction manager, any contractor or any subcontractor), such insurance to be written on a completed value basis in an amount not less than the full estimated replacement cost of the Alterations.

(ii) Commercial general liability insurance covering Tenant, Landlord and each construction manager, contractor and subcontractor engaged in any work on the Premises, which insurance may be effected by endorsement, if obtainable, on the policy required to be carried pursuant to Section 14.3, including insurance for completed operations, for three (3) years after the date of acceptance of the work by Tenant, contractual liability, property damage and personal injury (including but not limited to bodily injury), covering the performance of all work at or from the Premises by Tenant, its construction manager, contractors and subcontractors, and with a liability limit not less than the amount at the time carried by prudent owners of comparable construction projects, but in any event not less than Five Million Dollars ($5,000,000) per occurrence, which policy shall include thereunder for the mutual benefit of Landlord and Tenant, bodily injury liability and property damage liability, and automobile insurance on any non-owned, hired or leased automotive equipment used in the construction of any work. Such insurance shall include Landlord as an additional insured.

(iii) Commercial auto liability insurance for all owned, non-owned and hired autos used in the construction of any work with liability limits not less than Five

Million Dollars ($5,000,000) combined single limit per accident. Such insurance shall name Landlord and Tenant as additional insureds.

(iv) Workers' compensation insurance approved by the State of California, covering all employees of the contractor and any subcontractors, in the amounts and coverages required under workers' compensation, disability and similar employee benefit laws applicable to the Premises, and employer's liability insurance with limits not less than Two Million Dollars ($2,000,000) each accident and each disease, or such higher amounts as may be required by Applicable Law. Such insurance shall include a waiver of subrogation in favor of Landlord.

(c) All construction and other work shall be done at Tenant's sole cost and expense and in a prudent and first class manner. Tenant shall cause all work to be performed in accordance with all Applicable Laws, and with plans and specifications that are in accordance with the provisions of this Article 10 and all other provisions of this Lease.

(d) Prior to the commencement of any Alteration in excess of Ten Thousand Dollars ($10,000), Landlord shall have the right to post in a conspicuous location on the Premises and to record in the public records a notice of Landlord's nonresponsibility. Tenant covenants and agrees to give Landlord at least ten (10) Business Days prior written notice of the commencement of any such Alteration in order that Landlord shall have sufficient time to post such notice.

(e) Tenant shall reimburse Landlord within thirty (30) days after written demand as Additional Rent for any out-of-pocket expenses incurred by Landlord in connection with the Tenant Improvement Work or Alterations and/or any repairs or replacements required to be made by Tenant, including, without limitation, any reasonable fees charged by Landlord's contractors and/or consultants to review plans and specifications or working drawings prepared by Tenant and to inspect or supervise any work performed by or on behalf of Tenant. Tenant acknowledges and agrees that Landlord and Landlord's contractors and consultants, in reviewing Tenant's plans and specifications or working drawings, in granting approval for them, and in approving any work done by Tenant, owe no duty and assume no responsibility to Tenant for the design and construction of the Tenant Improvement Work or Alterations, it being expressly understood and agreed that Landlord, its contractors and consultants may, in their sole discretion, limit the scope of its review to only such matters as may appear appropriate or necessary in the interests of Landlord.

(f) Tenant and Tenant's Agents shall take all necessary safety precautions during any construction.

(g) Tenant shall take all necessary and prudent measures to secure the Premises, all of the materials and equipment stored on the Property in connection with Tenant's Alterations and any components of the Building or the Property exposed as a result of Tenant's Alterations. Tenant shall be solely responsible for any loss, injury or damage suffered as a result of a failure to provide such security measures.

(h) Tenant shall prepare and maintain (i) on a current basis during construction, annotated plans and specifications showing clearly all changes, revisions and substitutions during construction, and (ii) upon completion of construction, as-built drawings showing clearly all changes, revisions and substitutions during construction, including, without

limitation, field changes and the final location of all mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions and other significant features. These as-built drawings and annotated plans and specifications shall be kept at the Premises and Tenant shall update them as often as necessary to keep them current. The as-built drawings and annotated plans and specifications shall be made available for copying and inspection by Landlord at all reasonable times. Within sixty (60) days after the Tenant Improvement Work with respect to the Premises has been substantially completed, Tenant shall, at its cost, deliver copies of the as-built drawings and annotated plans to Landlord in Adobe Acrobat and AutoCAD formats.

(i) Upon completion of the construction of the Tenant Improvement Work and any Alterations in excess of Ten Thousand Dollars ($10,000) during the Term, Tenant shall file for recordation, or cause to be filed for recordation, a notice of completion and shall deliver to Landlord evidence satisfactory to Landlord of payment of all costs, expenses, liabilities and liens arising out of or in any way connected with such construction (except for liens that are contested in the manner provided herein).

10.7 Communications and Computer Lines. Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the ***"Lines"***), provided that (a) Tenant shall obtain Landlord's prior written consent, not to be unreasonably withheld, conditioned or delayed, use an experienced and qualified contractor approved in writing by Landlord, and comply with all provisions of Article 10; (b) the Lines (including riser cables) shall be appropriately insulated to prevent excessive electromagnetic fields or radiation and shall be surrounded by a protective conduit reasonably acceptable to Landlord; (c) the Lines shall be clearly marked at end points; (d) any new Lines installed in the Premises shall comply with all Applicable Laws; and (e) Tenant shall pay all costs in connection therewith. Unless otherwise instructed by Landlord in writing, Tenant shall, at its expense, before the expiration or earlier termination of this Lease, remove any Lines located in or serving the Premises and repair any resulting damage.

10.8 Ownership of Improvements. Except as provided in Section 10.9, all Tenant Improvement Work, Alterations, and any other appurtenances, fixtures, improvements, equipment, additions and property permanently attached to or installed in the Premises at the commencement of or during the Term, shall at the end of the Term become Landlord's property without compensation to Tenant, or be removed in accordance with this Section. Landlord shall notify Tenant in writing at the time of Landlord's approval of the Tenant Improvement Work or any Alterations, as applicable, whether or not the proposed Tenant Improvement Work or Alterations will be required to be removed by Tenant at the end of the Term, and Tenant shall not be required to remove any such Tenant Improvement Work or Alterations unless so notified by Landlord. With respect to any Tenant Improvement Work or Alterations that Landlord has reserved the right to require be removed at the end of the Term, Tenant shall request in writing no earlier than six (6) months prior to the Termination Date that Landlord notify Tenant in writing whether or not Tenant will be required to remove such Tenant Improvement Work or Tenant Alterations installed by Tenant at the end of the Term. If Landlord fails to respond to Tenant's request, no Tenant Improvement Work and Alterations installed by Tenant shall be required to be removed by Tenant prior to the end of the Term. Any Alterations made by Tenant that required Landlord's consent under this Lease that Tenant makes without requesting and receiving Landlord's consent shall be removed at the end of the Term without any requirement that Landlord give Tenant notice of such removal. Tenant shall repair or pay the cost of repairing any damage to the Property caused by the removal of Tenant Improvement Work or Alterations. If Tenant fails to perform its repair or removal obligations,

without limiting any other right or remedy, Landlord may on five (5) Business Days prior written notice to Tenant perform such obligations at Tenant's expense without liability to Tenant for any loss or damage, and Tenant shall reimburse Landlord within thirty (30) days after demand for all out-of-pocket costs and expenses incurred by Landlord in connection with such repair or removal. Tenant's obligations under this Section shall survive the termination of this Lease.

10.9 Tenant's Personal Property. All furniture, trade fixtures, furnishings, equipment and articles of movable personal property installed in the Premises by or for the account of Tenant (except for ceiling and related fixtures, HVAC equipment and floor coverings, which shall become the property of Landlord at the end of the Term), and which can be removed without structural or other material damage to the Property (collectively, ***"Tenant's Property"***) shall be and remain the property of Tenant and may be removed by it at any time during the Term. Tenant shall remove from the Premises all Tenant's Property on or before the Termination Date, except such items as the parties have agreed pursuant to the provisions of this Lease or by separate agreement are to remain and to become the property of Landlord. Tenant shall repair or pay the cost of repairing any damage to the Property resulting from such removal, and the provisions of Section 10.8 above shall apply in the event Tenant fails to do so. Any items of Tenant's Property which remain in the Premises after the Termination Date may, on five (5) Business Days prior written notice to Tenant, at the option of Landlord, be deemed abandoned and in such case may either be retained by Landlord as its property or be disposed of, without accountability, at Tenant's expense in such manner as Landlord may see fit. In no event shall Tenant's failure to remove Tenant's Property prior to the Termination Date constitute a holdover as described in Section 21.2 of this Lease.

11. LIENS.

Tenant shall keep the Premises free from any liens arising out of any work performed, material furnished or obligations incurred by or for Tenant. If Tenant shall not, within ten (10) days after notice of the imposition of any such lien, cause the lien to be released of record by payment or posting of a proper bond, Landlord shall have, in addition to all other remedies provided in this Lease and by law, the right but not the obligation to cause any such lien to be released by such means as it shall deem proper, including payment of the claim giving rise to such lien. All such sums paid by Landlord and all expenses incurred by it in connection therewith (including, without limitation, reasonable counsel fees) shall be payable to Landlord by Tenant upon demand with interest from the date incurred at the Interest Rate. Landlord shall have the right at all times to post and keep posted on the Premises any notices permitted or required by Applicable Laws or that Landlord shall deem proper for the protection of Landlord, the Premises and the Property from mechanics' and materialmen's liens, as more specifically provided in Section 10.6(d).

12. COMPLIANCE WITH LAWS AND INSURANCE REQUIREMENTS.

12.1 Applicable Laws. Subject to Landlord's obligation to obtain entitlements under Section 10.2 above and to deliver the Base Building Work to Tenant as required by **Exhibit D**, and further excluding any of Landlord's obligations to monitor, test, contain or otherwise remediate any Pre-Existing Environmental Condition, Tenant, at Tenant's cost and expense, shall comply with all applicable laws, statutes, codes, ordinances, orders, directives, resolutions, zoning restrictions, rules, regulations, conditions of approval, and requirements, of all federal, state, county, municipal and other governmental authorities (including but not limited to the City, the County of Santa Clara, the Regional Water Quality Control Board, Department of Toxic Substances Control,

California Department of Fish and Wildlife, California Environmental Protection Agency, United States Environmental Protection Agency, United States Fish and Wildlife Services and Army Corps of Engineering) and the departments, commissions, boards, bureaus, instrumentalities, and officers thereof, and all administrative or judicial orders or decrees and all permits, licenses, approvals and other entitlements issued by governmental entities, and rules of common law, whether now existing or hereafter enacted, including without limitation all Environmental Requirements (collectively, ***"Applicable Laws"***), relating to or affecting Tenant's use, alteration, operation or occupancy of the Premises. Subject to Landlord's obligations with respect to entitlements, the Base Building Work and Pre-Existing Environmental Conditions, Tenant shall be solely responsible for compliance with and shall make or cause to be made all such improvements and alterations to and within the Premises (including, without limitation, removing barriers and providing alternative services) as shall be required to comply with all Applicable Laws relating to public accommodations, including the Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12111 et seq. (the ***"ADA"***), and the ADA Accessibility Guidelines promulgated by the Architectural and Transportation Barriers Compliance Board, the public accommodations title of the Civil Rights Act of 1964, 42 U.S.C. §§ 2000a et. seq., the Architectural Barriers Act of 1968, 42 U.S.C. §§ 4151 et. seq., as amended, Title V of the Rehabilitation Act of 1973, 29 U.S.C. §§ 790 et. seq., the Minimum Guidelines and Requirements for Accessible Design, 36 C.F.R. Part 1190, the Uniform Federal Accessibility Standards, and Title 24 of the California Code of Regulations, as the same may be amended from time to time, or any similar or successor laws, ordinances and regulations, now or hereafter adopted. Tenant's liability for compliance with Applicable Laws as provided in this Section shall be primary and Tenant shall indemnify Landlord in accordance with Section 14.1 in the event of any failure or alleged failure of Tenant to comply with Applicable Laws as required pursuant to this Lease. Any work or installations made or performed by or on behalf of Tenant or any person or entity claiming through or under Tenant pursuant to the provisions of this Section shall be made in conformity with and subject to the provisions of Article 10. Tenant shall deliver to Landlord within five (5) Business Days of receipt, a copy of any notice from any governmental authority relating to any violation or alleged violation of any Applicable Law pertaining to the Premises or the Property or activities in, on or about the Premises or the Property. Tenant shall deliver to Landlord within five (5) Business Days after receipt a copy of any notice from any governmental authority relating to any violation or alleged violation of any Applicable Laws pertaining to the Premises or Tenant's activities in, on or about the Premises or the Property. Landlord shall be responsible for compliance with Applicable Laws with respect to its construction and operation of the Base Building Work. Notwithstanding the foregoing, Tenant shall not be required to correct any non-compliance with Applicable Law for which Tenant is responsible hereunder unless (a) the non-compliance arises, directly or indirectly, from work performed by or on behalf of Tenant for Tenant's Alterations or (b) Tenant is required to do so by a government authority.

12.2 Insurance Requirements. Tenant shall not do anything, or permit anything to be done, in or about the Premises that would: (a) invalidate or be in conflict with the provisions of or cause any increase in the applicable rates for any fire or other insurance policies covering the Property or any property located therein (unless Tenant pays for such increased costs), or (b) result in a refusal by fire insurance companies of good standing to insure the Property or any such property in amounts reasonably satisfactory to Landlord (which amounts shall be comparable to the amounts required by comparable landlords of comparable buildings, or (c) subject Landlord to any liability or responsibility for injury to any person or property by reason of any business operation being conducted in the Premises.

13. HAZARDOUS SUBSTANCES.

13.1 Except as provided in this Section 13.1, no Hazardous Substance shall be used, treated, kept, stored, transported, handled, sold or Released at, on, under or from the Premises by Tenant or Tenant's Agents. Notwithstanding the foregoing, (a) Tenant and Tenant's Agents may use small quantities of standard janitorial and office products, and also such products as are incorporated into the functioning of building systems (e.g., HVAC units and elevators) that are necessary to the Permitted Use of the Premises, and then only in compliance with all Applicable Laws; and (b) Tenant and Tenant's Agents shall also be permitted to use, keep and store reasonable quantities of the Hazardous Substances required in connection with the operation of Tenant's or Tenant's assignees' or subtenants' business in the Premises for the Permitted Use as of the Commencement Date, as set forth on ***Schedule 13.1***. Any change in use, type or quantities of Hazardous Substances at the Premises shall require Landlord's prior written consent and the submittal of an amended ***Schedule 13.1***, which consent shall not be unreasonably withheld, conditioned or delayed. Tenant shall in all respects handle, treat, deal with and manage any and all Tenant's Hazardous Substances in total conformity with all Environmental Requirements, other Applicable Laws, and prudent industry practices regarding Hazardous Substances management. Tenant's completed hazard substances questionnaire is attached as ***Schedule 13.1***, which Tenant shall update upon written request by Landlord.

13.2 **Permits; Inventories.** Tenant shall, at its own expense, procure, maintain in effect and comply with all conditions of any and all permits, licenses, and other governmental and regulatory approvals required for Tenant's use of Hazardous Substances at the Premises, including, without limitation, discharge of appropriately treated materials or wastes into or through any sanitary sewer serving the Premises, or for the use or storage of radiological materials. If Tenant uses Hazardous Substances in the operation of its business other than those found in standard janitorial and office products, Tenant shall, promptly following the Commencement Date, provide Landlord copies of the following for Landlord's review and approval, as applicable:

(d) Bay Area Air Quality Management District air permits for generators and for volatile organic compounds;

(e) Radiological license from Department of Health Services;

(f) A complete hazardous materials business plan or hazardous material inventory form for all Hazardous Substances to be used or stored by Tenant or any of Tenant's Agents at the Premises, excluding standard janitorial and office products; and

(g) All other permits, licenses and approvals required for Tenant's use of Hazardous Substances at the Premises.

Throughout the Term, Tenant shall update the hazardous materials business plan or hazardous material inventory form annually, or as required by permit, license or regulatory requirements, so that it remains current. If required by Applicable Laws, Tenant shall obtain and retain during the Term manifests for the transport of all Hazardous Substances, and all such Hazardous Substances shall be disposed of using Tenant's hazardous waste generator number.

13.3 **No Lien.** Tenant shall not suffer any lien to be recorded against the Premises or other property in which Landlord has an interest as a consequence of any Tenant Environmental

Activity or off-site disposal, including any so-called state, federal or local Superfund lien related to the remediation of any Hazardous Substances in, on, under or about the Premises, except to the extent that such lien is related to the existence of a Pre-Existing Environmental Condition and is not the result of Exacerbation by Tenant or Tenant's Agents.

13.4 Tenant's Indemnity for Environmental Claims. Tenant (on behalf of itself and its successors and assigns) shall indemnify, protect, defend, reimburse, and save and hold harmless Landlord and Landlord's trustees, directors, officers, agents, employees, contractors, representatives, property managers, students and volunteers, and their respective successors and assigns (collectively, the ***"Landlord Parties"***) from and against any and all Environmental Claims to the extent arising from or related to (a) Tenant Environmental Activity, (b) any non-compliance by Tenant or Tenant's Agents with Environmental Requirements at the Premises, (c) any other acts or omissions of Tenant or Tenant's Agents in, on, under or about the Premises which result in the Release of Hazardous Substances, (d) Tenant's failure to pay and Added Costs, or (e) Tenant's failure to comply with the requirements of this Article 13. Tenant's obligations hereunder shall include, but not be limited to, the reimbursement of Landlord's reasonable costs and expenses related to the defense of all claims, suits and administrative proceedings (with counsel selected by Landlord and approved by Tenant), even if such claims, suits or proceedings are groundless, false or fraudulent; participating in all negotiations of any description; and promptly paying and discharging when due any and all judgments, penalties, fines or other sums due against or from Landlord or the Premises.

13.5 Obligation to Remediate.

(a) Notwithstanding the obligation of Tenant to indemnify Landlord pursuant to this Lease, Tenant shall, upon demand by Landlord, and at Tenant's sole cost and expense, promptly take all actions to remediate the Premises from the effects of any Tenant Environmental Activity (which includes the Pre-Existing Environmental Condition only to the extent that it is caused by or results from Exacerbation by Tenant Environmental Activity), and to obtain "no further action" letters from all governmental authorities asserting jurisdiction over the Premises. Such "no further action" letters shall apply solely to the effects of any Tenant Environmental Activity. If it is not the custom or practice of such governmental authority to issue a "no further action" letter under such circumstances, Tenant shall deliver documentation from its consultant evidencing the completion of the remediation in compliance with Environmental Requirements. By receiving documents from Tenant's consultants, however, Landlord is not deemed to have agreed with any statements from such consultant or waived any rights to dispute their accuracy. Notwithstanding any provision of this Lease to the contrary, in no event shall Tenant be responsible for obtaining "no further action" letters with respect to any Pre-Existing Environmental Condition, nor shall Tenant be required to remediate any Pre-Existing Environmental Condition, except to the extent it was Exacerbated by Tenant Environmental Activity. With regard only to Tenant Environmental Activity that is not an Added Cost, Tenant shall be responsible for all reporting obligations under applicable Environmental Requirements, and Tenant agrees to be named on any remediation orders as the sole primarily responsible party. Landlord shall have the right to report any Release to governmental authorities, and to participate in all negotiations with the governmental authorities having jurisdiction over any remediation. With regard only to Tenant Environmental Activity that is not an Added Cost, Tenant's remediation obligations shall include, but not be limited to, the investigation of the environmental condition of the Premises, the preparation of any feasibility studies, reports or remedial plans, and the performance of any cleanup, remediation, containment, operation, maintenance, monitoring or restoration work, whether on or off of the Premises. Tenant shall take

all actions necessary to remediate such contamination on the Premises and any other real property owned by Landlord from the effects of such Tenant Environmental Activity to a condition allowing Unrestricted Use of the Premises, notwithstanding any lesser standard of remediation allowable under Applicable Laws, and Tenant agrees that the foregoing remediation standard with respect to Tenant Environmental Activity shall be included in any remediation orders; provided that (i) Tenant's obligation to remediate to such standard is only with respect to any Tenant Environmental Activity and not due to the Pre-Existing Environmental Condition. All such remediation work, including without limitation the contractor(s) performing the work and the work plan for the remediation, shall be disclosed in advance in writing to Landlord and Landlord shall have the right to approve or disapprove any such work. Tenant shall proceed continuously and diligently with such investigatory and remedial actions, provided that in all cases such actions shall be in accordance with all Applicable Laws. Any such actions shall be performed in a good, safe and workmanlike manner. Tenant shall pay all costs in connection with such investigatory and remedial activities, including but not limited to all power and utility costs, and any and all taxes or fees that may be applicable to such activities.

(b) Landlord's environmental consultant or contractor shall have the right to be present during any testing or investigation on the Premises, and Tenant shall promptly provide to Landlord copies of testing results and reports that are generated in connection with the above activities, including, without limitation, any that are submitted to any governmental entity. Promptly upon completion of such investigation and remediation, Tenant shall permanently close all monitoring wells and test holes in accordance with sound engineering practice and in compliance with Applicable Laws, remove all associated equipment, and restore the Premises to the maximum extent possible, which shall include, without limitation, the repair of any surface damage, including paving, caused by such investigation or remediation.

(c) If Tenant uses Hazardous Substances in the operation of its business other than those found in standard janitorial and office products, at least one (1) year before expiration or earlier termination of the Lease, Tenant shall prepare and deliver to Landlord a plan for facility closure activities. Prior to the expiration or earlier termination of this Lease (and in addition to Landlord's rights pursuant to Sections 13.7 and 13.8 below), Landlord shall have the right to engage a consultant to perform an environmental assessment, including sampling of soil or groundwater, of the Property to verify that Tenant has fully complied with the requirements of this Article 13 and to determine the need for any further remediation. Tenant shall cooperate with the consultants performing the assessment and comply with Landlord's then-current policies and requirements generally applicable to the Stanford Research Park regarding the environmental condition of the Property and full facility closure of any facility permits upon surrender, unless Landlord agrees in its sole discretion to allow partial facility closure, in which case Tenant shall be responsible for all Added Costs relating to such partial facility closure, as described in subsection (c) below. Facility closure shall be at Tenant's sole cost and expense. Tenant shall make its employees reasonably available for interviews by Landlord and Landlord's Agents regarding the use of Hazardous Substances and Tenant's end-of-Term obligations hereunder. In the event the end-of-Term assessment identifies any deficiencies in the compliance of the Property with Environmental Requirements which the consultant determines arose from or are related to any Tenant Environmental Activity, Tenant shall promptly correct any such deficiencies identified in the assessment, and document to Landlord that corrective action has been taken. In such event, Tenant shall also reimburse Landlord for the reasonable cost of the assessment.

(d) In the event that there are Hazardous Substances remaining in or under the Property (including those that may be identified in the components of any tenant improvements) as a result of any Tenant Environmental Activity that are not removed due to a Landlord-permitted partial facility closure, or that cannot be removed without material damage to or demolition of some or all of the improvements (the ***"Remaining Substances"***), Tenant shall pay to Landlord an amount equal to the estimated Added Costs associated with such Remaining Substances on or before the later of thirty (30) days after receipt of the estimate described in the following sentence and the expiration date of the Term. Landlord and Tenant shall mutually agree upon a third-party consultant or neutral third-party arbitrator who, prior to the end of the Term, will provide the parties with an estimate of the Added Costs, based on a commercially reasonable method of remediation (based on the costs associated with the prospective demolition of the structure at the end of the Term) and an industry-standard contingency amount. Landlord shall have no obligation to refund to Tenant any sums paid by Tenant that are not expended in the remediation of the Premises. With respect to any work undertaken by Landlord to remediate the Premises from the effects of Tenant's Environmental Activity, Tenant shall be named as generator of all Hazardous Substances that are disposed of in connection with the remediation and shall sign all manifests and bills of lading, and all such Hazardous Substances shall be disposed of using Tenant's hazardous waste generator number.

13.6 Obligation to Notify. If either Landlord or Tenant becomes aware of or receive notice or other communication in writing concerning any actual, alleged, suspected or threatened violation of Environmental Requirements, Release of Hazardous Substances, or liability for Environmental Claims in connection with the Property or in connection with other property that is reasonably expected to affect the Property, including but not limited to, notice or other communication concerning any actual or threatened investigation, inquiry, lawsuit, claims, citation, directive, summons, proceeding, complaint, notice, order, writ, or injunction, relating to same, then such party shall deliver to the other a written description of said notice or other communication immediately, but in no event later than five (5) Business Days after becoming aware. If such notice or other communication is received by Landlord, and if the notice relates to Tenant Environmental Activity, Landlord shall have the right to tender such notice or communication to Tenant for response and action.

13.7 Periodic Audits. If Tenant uses Hazardous Substances in the operation of its business other than those found in standard janitorial and office products, Tenant shall establish and maintain, at its sole cost and expense, a system to assure and monitor continued compliance on the Premises with Environmental Requirements related to Tenant Environmental Activity. No more than once per calendar year, or at any time Landlord has a reasonable basis for belief that Tenant is in breach of its obligations under this Article 13, Landlord may retain a consultant selected by Landlord to undertake a detailed review of such compliance (the **"*Environmental Audit*"**). A copy of the Environmental Audit report shall be promptly supplied to Landlord and Tenant when it becomes available. In the event the Environmental Audit identifies any deficiencies in the compliance of the Premises with Environmental Requirements (other than those relating to the Pre-Existing Environmental Condition), Tenant shall promptly correct any such deficiencies, and document to Landlord that corrective action has been taken. In such event, Tenant shall also reimburse Landlord for the reasonable cost of the Environmental Audit. If the Environmental Audit identifies any such deficiency in compliance of the Premises with Environmental Requirements due to any Tenant Environmental Activity, then, within two-hundred seventy (270) days of the date of the Environmental Audit, Landlord may request a detailed review of the status of such violation by a consultant selected by Landlord (the **"*Supplemental Audit*"**). Tenant shall pay for the

reasonable cost of any Supplemental Audit. A copy of the Supplemental Audit shall be promptly supplied to Landlord and Tenant when it becomes available.

13.8 Right to Inspect. In addition to Landlord's rights under Section 13.7 above, Landlord shall have the right to enter and conduct an inspection of the Premises, including invasive tests, at any reasonable time and upon reasonable advance notice, to determine whether Tenant is complying with the terms of this Lease, including but not limited to the compliance of the Premises and the activities thereon with Environmental Requirements and the existence of Environmental Claims as a result of the condition of the Premises or surrounding properties and activities thereon. Landlord shall have the right, but not the obligation, to retain at its expense any independent professional consultant or contractor to enter the Premises to conduct such an inspection, and to review any report prepared by or for Tenant concerning such compliance. Tenant hereby grants to Landlord and Landlord's Agents the right to enter the Premises and to perform such tests on the Premises as are reasonably necessary in the opinion of Landlord to conduct such review and inspections. Except to the extent of Landlord's gross negligence or willful misconduct in the exercise of its rights under this Section 13.8, Tenant hereby waives and releases any claims for damages for any injury or inconvenience to or interference with Tenant's business at the Premises, any loss of occupancy or quiet enjoyment of the Premises or any other loss, damage, liability or cost occasioned by Landlord's exercise of the rights reserved to Landlord under, or granted to Landlord pursuant to this Section 13.8. In no event shall Tenant be entitled to terminate this Lease as a result of Landlord's exercise of such rights, notwithstanding any possible liability of Landlord for damages as a result of its gross negligence or willful misconduct.

13.9 Right to Remediate. Should Tenant fail to perform or observe any of its obligations or agreements pertaining to Hazardous Substances or Environmental Requirements as set forth herein within thirty (30) days after receipt of written notice from Landlord, then Landlord shall have the right, but not the obligation, without limitation of any other rights of Landlord hereunder, to enter the Premises personally or through Landlord's Agents and perform the same. Tenant agrees to indemnify Landlord for the actual costs thereof and liabilities therefrom as set forth above in this Article 13. With respect to any work undertaken by Landlord to remediate the Premises from the effects of Tenant Environmental Activity pursuant to this Section 13.9, Tenant shall be named as generator of all Hazardous Substances that are disposed of in connection with the remediation, shall sign all manifests and bills of lading and all such Hazardous Substances shall be disposed of using Tenant's hazardous waste generator number.

13.10 Statute of Limitations. Tenant hereby agrees that no statute of limitations relating to Tenant Environmental Activity, or any other matter covered by this Article 13 shall commence to run unless and until Landlord obtains actual knowledge of the foregoing in the course of any inspection or assessment conducted by Landlord or by written notice from a governmental agency with jurisdiction over the environmental condition of the Premises (each, a **"*Triggering Event*"**). In the event of a Triggering Event, Landlord and Tenant shall enter into a commercially reasonable agreement to toll all applicable statutes of limitation, which the parties shall renew periodically during or after the Term; provided that by entering into such agreement Landlord shall not be deemed to have waived any rights, and Tenant shall not be deemed to have waived any substantive defenses, available pursuant to this Lease or any Applicable Laws.

13.11 Release of Landlord. Tenant represents and acknowledges that it is aware that, prior to the Effective Date, detectable amounts of Hazardous Substances and any byproducts thereof may have been Released to air, soil and groundwater beneath and/or in the vicinity of the

Premises as described in the documents listed on the attached ***Schedule 13.11*** (the ***"Pre-Existing Environmental Condition"***). Tenant further represents and acknowledges that it has made such investigations and inquiries as it deems appropriate to ascertain the effects, if any, of the Pre-Existing Environmental Condition on the Premises and on persons using the Premises. Landlord makes no representation or warranty with regard to the Pre-Existing Environmental Condition or with regard to any aspect of the environmental condition of the Premises. Landlord does not guaranty or warrant the accuracy of any of the information contained within the documents listed on ***Schedule 13.11***. Tenant, on behalf of itself and its successors and assigns, hereby releases Landlord and the Landlord Parties from any and all claims, demands, debts, liabilities, and causes of action of whatever kind or nature, whether known or unknown or suspected or unsuspected which Tenant may have, claim to have, or which may hereafter accrue, arising out of or relating to or in any way connected with the Pre-Existing Environmental Condition or the presence, suspected presence, Release or suspected Release of any Hazardous Substances in or into the air, soil, groundwater, surface water or improvements at, on, about, under or within the Premises or any portion thereof, or elsewhere in connection with the transportation of Hazardous Substances to or from the Premises, in each case prior to the Effective Date. In connection with such release, Tenant hereby waives any and all rights conferred upon it by the provisions of Section 1542 of the California Civil Code, which reads as follows:

> "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

or by the provisions of any similar statute. Nothing in the foregoing shall be deemed to release Landlord from its indemnity obligations set forth in Section 13.13.

13.12 Release of Tenant. Landlord hereby releases Tenant from any and all claims, demands, debts, liabilities, and causes of action of whatever kind or nature, whether known or unknown or suspected or unsuspected which Landlord may have, claim to have, or which may hereafter accrue against Tenant, arising out of or relating to or in any way connected with the Pre-Existing Environmental Condition, except to the extent related to Tenant Environmental Activity. In connection with such release, Landlord hereby waives any and all rights conferred upon it by the provisions of Section 1542 of the California Civil Code, which reads as follows:

> "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

or by the provisions of any similar statute.

13.13 Landlord Indemnity. Landlord shall indemnify, defend (by counsel reasonably acceptable to Tenant), protect and hold Tenant and Tenant's directors, officers, agents, and employees and their respective successors and assigns (not including any subtenants), free and harmless from and against (i) any government-required investigations and remediation costs incurred by Tenant and (ii) any third party claims brought against Tenant (other than those brought by Tenant's employees), in either event only to the extent caused by a Pre-Existing Environmental Condition (except to the extent caused by the exacerbation of any Pre-Existing Environmental

Condition arising out of or resulting from the acts or negligent omissions of Tenant or Tenant's Agents or subtenants on or about the Premises). Landlord's obligations hereunder shall include, but not be limited to, the burden and expense of defending all such claims, suits and administrative proceedings (with counsel reasonably approved by Tenant), even if such claims, suits or proceedings are groundless, false or fraudulent; conducting all negotiations of any description; and promptly paying and discharging when due any and all judgments, penalties, fines or other sums due against or from Tenant or the Premises. Landlord's indemnification obligations with respect to claims under Subsection 13.13(i) above hereunder shall extend only to Tenant's investigations and remediation costs.

13.14 General Provisions.

(a) The obligations of Tenant under this Article 13 shall not be affected by any investigation by or on behalf of Landlord, or by any information which Landlord may have or obtain as a result of any such investigation.

(b) The provisions of this Article 13 shall survive any termination of this Lease.

(c) The provisions of Article 14 (Insurance) shall not limit in any way Tenant's obligations under this Article 13.

(d) Except as required by Applicable Laws, Tenant shall maintain the confidentiality of all information, reports and assessments regarding the environmental condition of the Premises, whether received by or prepared for Tenant, Landlord or any third party. Tenant shall have the right to disclose any such information only to Tenant's employees, consultants, prospective or actual lenders and other persons or entities having a reasonable need to know such information in connection with this Lease; provided that Tenant has first obtained a written agreement from the third party to keep the information confidential. Tenant shall be responsible for any breaches of confidentiality by persons to whom Tenant discloses information. If Tenant is confronted with, or is otherwise subject to, government compulsion, regulatory requirement, or legal action to disclose information received under this Agreement, Tenant shall promptly notify Landlord. In the event disclosure is not required by Applicable Laws, Tenant shall reasonably assist Landlord in obtaining a protective order requiring that any portion of the information required to be disclosed be used only for the purpose for which a court issues an order.

14. INDEMNITY; INSURANCE.

14.1 Indemnity. Tenant shall indemnify, protect, defend and save and hold Landlord and the Landlord Parties harmless from and against any and all losses, costs, liabilities, claims, judgments, liens, damages and expenses, including, without limitation, reasonable attorneys' fees and costs (including Landlord's in-house counsel), and reasonable investigation costs (collectively, ***"Claims"***), incurred in connection with or arising from: (a) any default by Tenant in the observance or performance of any of the terms, covenants or conditions of this Lease on Tenant's part to be observed or performed, or (b) the use or occupancy or manner of use or occupancy of the Premises and the Property by Tenant and Tenant's Agents, except to the extent any Claim arises due to the Active Negligence or willful misconduct of Landlord or any of Landlord's Agents, (c) the condition of the Premises, and any occurrence on the Premises (including injury to or death of any person, or damage to property) or the Property from any cause whatsoever

occurring after the Actual Access Date, except to the extent arising due to the Active Negligence or willful misconduct of Landlord or any of Landlord's Agents, and (d) any acts or omissions or negligence of Tenant or of Tenant's Agents, in, on or about the Premises or the Common Area. In case any action or proceeding be brought, made or initiated against Landlord relating to any matter covered by Tenant's indemnification obligations under this Section or under Section 13.5, Landlord will provide prompt written notice of such action or proceeding and Tenant, upon notice from Landlord, shall at its sole cost and expense, resist or defend such claim, action or proceeding by counsel approved by Landlord, such approval not to be unreasonably withheld; provided that Landlord shall not disapprove any counsel designated by Tenant's insurance carrier. Notwithstanding the foregoing, in the event Landlord is reasonably concerned about Tenant's solvency or a claim under this indemnity is not fully covered (less a reasonable deductible) by Tenant's insurance, Landlord may retain its own counsel to defend or assist in defending any claim, action or proceeding involving potential liability of Five Million Dollars ($5,000,000) or more, and Tenant shall pay the reasonable fees and disbursements of such counsel. The indemnity in this Section 14.1 shall include indemnification by Tenant for all Claims against Landlord and the Landlord Parties under any theory of landowner premises liability, except to the extent of Landlord's Active Negligence or willful misconduct. Tenant's obligations under this Section shall survive the expiration or earlier termination of this Lease.

14.2 Tenant Insurance. At all times during the Term and at its sole cost and expense, Tenant shall obtain and keep in force for the benefit of Tenant and Landlord the following insurance:

(a) Commercial general liability insurance (ISO occurrence form CG0001 or its equivalent) through one or more primary and umbrella liability policies covering the use and occupancy of the Premises and insuring against claims for bodily injury and property damage occurring on the Premises during the policy term. Such coverage shall be written on an "occurrence" form, with such limits of not less than Five Million Dollars $5,000,000 per occurrence. Any combination of primary general liability insurance and umbrella liability insurance limits can satisfy the per occurrence limit shown above. All such general and umbrella liability insurance shall include as additional insureds Landlord, and such other parties as Landlord reasonably may request.

(i) Such insurance shall (A) include employees as insureds; (B) provide standard contractual liability coverage (for Tenant); and (C) include a cross liability endorsement (or provision) permitting recovery with respect to claims of one insured against another. Such insurance shall insure against claims for bodily injury, including death resulting therefrom, and damage to or destruction of property.

(b) Plate glass insurance with coverage against breakage.

(c) Boiler and machinery insurance (if applicable).

(d) As respects owned, non-owned and hired autos, Tenant shall maintain commercial auto liability coverage with liability limits not less than Five Million Dollars ($5,000,000) combined single limit per accident.

(e) Commercial property insurance, including sprinkler leakages, vandalism and malicious mischief and plate glass damage covering all property of every description

including stock-in-trade, furniture, fittings, installations, alterations, additions, partitions and fixtures or anything in the nature of a leasehold improvement made or installed by or on behalf of the Tenant in an amount of not less than one hundred percent (100%) of the full replacement cost thereof as shall from time to time be determined by Tenant in form satisfactory to Landlord.

(f) Business interruption insurance with extra expense insurance in an amount sufficient to insure payment of Rent for a period of not less than twelve (12) months during any interruption of Tenant's business by reason of the Premises being damaged by casualty.

(g) Workers' Compensation Insurance in the amounts and coverages required in accordance with Applicable Laws, and employer's liability insurance in an amount not less than Two Million Dollars ($2,000,000) each accident and each disease, or such higher amounts as may be required by law.

(h) All other insurance that Tenant is required to maintain under Applicable Laws.

14.3 Landlord Insurance. Landlord shall maintain at a minimum the following insurance, together with such other insurance or self-insurance coverage as Landlord, in its reasonable judgment, may elect to maintain: (a) commercial general liability insurance or self-insurance applicable to the Premises, Building and Property providing, on an occurrence basis, combined primary and excess/umbrella limits of at least Five Million Dollars ($5,000,000) each occurrence and Five Million Dollars ($5,000,000) annual aggregate; (b) special cause of loss or "all risk" insurance or self-insurance on the Building and improvements within the Common Area at replacement cost value as reasonably estimated by Landlord; and (c) worker's compensation insurance to the extent required by Applicable Law.

14.4 Policy Form and General.

(a) All of the insurance policies required under this Lease, and all renewals thereof shall be issued by one or more companies of recognized responsibility, authorized to do business in California with a financial rating of at least a Class A-VIII (or its equivalent successor) status, as rated in the most recent edition throughout the Term of Best's Insurance Reports (or its successor, or, if there is no equivalent successor rating, otherwise reasonably acceptable to Landlord). All deductibles shall be paid by Tenant. All insurance of Tenant shall be primary coverage to Landlord. Any insurance maintained by Landlord shall be excess of, and shall not contribute with, Tenant's insurance.

(b) All commercial general liability and property damage policies shall contain a provision that Landlord and any other additional insured, although named as loss payees or additional insureds, shall nevertheless be entitled to recover under said policies for a covered loss occasioned by it, its servants, agents and employees, by reason of Tenant's negligence. Landlord shall be named as a loss payee on Tenant's business interruption insurance policy. As often as any policy shall expire or terminate, renewal or additional policies shall be procured and maintained by Tenant in like manner and to like extent. Tenant will give to Landlord not less than thirty (30) days' notice in writing in advance of any cancellation of the policy and not less than ten (10) days' notice in writing in advance of any failure to pay the premium of the policy. All commercial general liability and property damage shall be written on an occurrence basis. Landlord's coverage shall not be contributory. No policy shall have a deductible in excess of Two Hundred Fifty Thousand

Dollars ($250,000) for any one occurrence. Tenant shall furnish Landlord with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by Landlord before work commences. Landlord reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by the specifications at any time.

(c) Each policy, or a certificate of the policy executed by the insurance company's representative evidencing that the required insurance coverage is in full force and effect, shall be deposited with Landlord on or before the Actual Access Date, shall be maintained throughout the Term, and shall be renewed not less than ten (10) days before the expiration of the term of the policy.

(d) No approval by Landlord of any insurer, or the terms or conditions of any policy, or any coverage or amount of insurance, or any deductible amount shall be construed as a representation by Landlord of the solvency of the insurer or the sufficiency of any policy or any coverage or amount of insurance or deductible, and Tenant assumes full risk and responsibility for any inadequacy of insurance coverage or any failure of insurers.

(e) Should Tenant fail to take out and keep in force each insurance policy required under this Section, or should such insurance not be reasonably approved by Landlord and should Tenant not rectify the situation within ten (10) Business Days after written notice from Landlord to Tenant, Landlord shall have the right, without assuming any obligation in connection therewith, to purchase such insurance at the sole cost of Tenant, and all costs incurred by Landlord shall be payable to Landlord by Tenant within thirty (30) days after demand as Additional Rent and without prejudice to any other rights and remedies of Landlord under this Lease.

(f) Notwithstanding anything to the contrary contained herein, to the extent permitted by their respective policies of insurance and to the extent of insurance proceeds received (or which would have been received had the party carried the insurance required by this Lease) with respect to the loss, Landlord and Tenant each hereby waives any right of recovery against the other party and against any other party maintaining a policy of insurance with respect to the Property or any portion thereof, or the contents of the Premises or any Alterations in the Premises for any loss or damage sustained by such party with respect to this Lease, the Property, the Premises, the Alterations, or any portion thereof, or the contents of the same or any operation therein (including for Tenant with respect to workers' compensation insurance), whether or not such loss is caused by the fault or negligence of such other party. Each party shall notify the other party if the policy of insurance carried by it does not permit the foregoing waiver.

15. ASSIGNMENT AND SUBLETTING.

15.1 Consent Required. Tenant shall not directly or indirectly, voluntarily or by operation of law, sell, assign, encumber, pledge or otherwise transfer or hypothecate all or any part of its interest in or rights with respect to the Premises or its leasehold estate (collectively, ***"Assignment"***), or permit all or any portion of the Premises to be occupied by anyone other than itself or sublet all or any portion of the Premises (collectively, ***"Sublease"***) without Landlord's prior written consent, such consent not to be unreasonably withheld, conditioned or delayed (subject to Landlord's rights as described in Section 15.5).

15.2 Notice. If Tenant desires to enter into a Sublease of all or any portion of the Premises or Assignment of this Lease (other than a Permitted Transfer under Section 15.7), it shall give written notice (the ***"Transfer Notice"***) to Landlord of its intention to do so, which notice shall contain (a) the name and address of the proposed assignee, subtenant or occupant (the ***"Transferee"***), (b) the nature of the proposed Transferee's business to be carried on in the Premises, (c) the terms and provisions of the proposed Assignment or Sublease, (d) such financial information as Landlord may reasonably request concerning the proposed Transferee, and (e) all other documents reasonably requested by Landlord. Without limitation of any other provision hereof, it shall not be unreasonable for Landlord to withhold its consent if (i) an Event of Default is then in existence, (ii) the use of the Premises would not comply with the provisions of this Lease, (iii) any civil or administrative judgments involving fraud or dishonesty, or criminal convictions of any kind, have been entered against the proposed Transferee or its key people, or (iv) in Landlord's reasonable judgment, the proposed Transferee (for an Assignment only) does not have the financial capability to perform its obligations with respect to the Premises which are the subject of the Assignment.

15.3 Terms of Approval. Landlord shall respond to Tenant's request for approval within fifteen (15) Business Days after receipt of the Transfer Notice. If Landlord approves the proposed Assignment or Sublease, Tenant may, not later than ninety (90) days thereafter, enter into the Assignment or Sublease with the proposed Transferee upon the terms and conditions set forth in the Transfer Notice.

15.4 Excess Rent. For any Assignment or Sublease (other than a Permitted Transfer under Section 15.7), fifty percent (50%) of the Excess Rent received by Tenant shall be paid to Landlord as and when received by Tenant. ***"Excess Rent"*** means the gross rent received by Tenant from the Transferee during the Sublease term or consideration received from the Transferee with respect to the Assignment, less (a) the gross rent received by Landlord from Tenant during the period of the Sublease term or concurrently with or after the Assignment; (b) any reasonably documented tenant improvement costs or allowance or other economic concession (planning allowance, moving expenses, abated rent, etc.), paid by Tenant to or on behalf of the Transferee; (c) customary and reasonable external brokers' commissions to the extent paid and documented; (d) reasonable and documented attorneys' fees; and (e) reasonable and documented costs of advertising the space for Sublease or Assignment (collectively, ***"Transfer Costs"***). Tenant shall not be required to pay to Landlord any Excess Rent until Tenant has recovered its Transfer Costs.

15.5 Right of First Refusal. Except for Permitted Transfers, if Tenant desires to assign Tenant's interest in the Premises or to sublease fifty percent (50%) or more of the Premises for more than three (3) years or for the balance of the Term (collectively, a ***"Transfer"***), Tenant's Transfer Notice shall also include a written offer that includes all of the substantial business terms that Tenant has offered to a Transferee and shall offer to Transfer to Landlord, Tenant's interest in the portion of the Premises offered to the Transferee on such terms and conditions (the ***"Offer"***). Landlord shall have ten (10) Business Days from Landlord's receipt of the Offer to accept the Offer by written notice to Tenant or to approve or disapprove the Transfer as provided in Section 15.3. If Landlord accepts the Offer, Landlord and Tenant shall consummate the Transfer within fifteen (15) Business Days after Landlord's written notice of acceptance. Notwithstanding the above, Tenant may, by delivering written notice to Landlord within ten (10) Business Days after its receipt of Landlord's acceptance, rescind the Transfer Notice, in which event Landlord's acceptance shall be of no force and effect. The Transfer shall be consummated by Tenant's delivery to Landlord of

a good and sufficient assignment of lease or sublease. If Landlord does not accept the Offer, but approves the Transfer, then in the event the terms of the Transfer are materially changed during subsequent negotiations to be more favorable to the Transferee, Tenant shall again deliver to Landlord an Offer in accordance with this Section, offering the interest to Landlord on such more favorable terms. Landlord shall then have another period of fifteen (15) Business Days after receipt of such Offer to accept such Offer.

15.6 No Release. No Sublease or Assignment by Tenant nor any consent by Landlord thereto shall relieve Tenant of any obligation to be performed by Tenant under this Lease. Any Sublease or Assignment that is not in compliance with this Article shall be null and void and, at the option of Landlord, shall constitute an Event of Default by Tenant under this Lease, and Landlord shall be entitled to pursue any right or remedy available to Landlord under the terms of this Lease or under the laws of the State of California. The acceptance of any Rent or other payments by Landlord from a proposed Transferee shall not constitute consent to such Sublease or Assignment by Landlord or a recognition of any Transferee, or a waiver by Landlord of any failure of Tenant or other Transferor to comply with this Article.

15.7 Permitted Transfers. Notwithstanding anything in this Article 15 to the contrary, but subject to the provisions of Section 15.8 below, Landlord's prior written consent shall not be required for any assignment of this Lease or sublease to the following: (a) a successor entity that acquires Tenant or combines with Tenant through a merger or purchase of substantially all of the assets or equity of Tenant, or (b) an Affiliate of Tenant; provided that after such assignment or transfer the operation of the business conducted in the Premises shall be in the manner required by this Lease and, in the event of a transfer under Section 15.7(a) above, the Transferee shall have a net worth at least equivalent to the lesser of the Tenant's net worth at the Commencement Date or the net worth of the Tenant immediately prior to the consummation of the Assignment or Sublease. Any such transfer shall be deemed a ***"Permitted Transfer"***, and the Transferee shall be deemed a ***"Permitted Transferee"***. As used in this Lease, the term "***Affiliate***" shall mean an individual, partnership, corporation, unincorporated association or other entity controlling, controlled by or under common control with Tenant and for the purposes of the foregoing, "control" shall mean ownership of 50% or more of the legal and beneficial interest in such corporation or other entity coupled with the power to direct the management and affairs thereof.

15.8 Assumption of Obligations by Assignees. Any Transferee shall, from and after the effective date of the Assignment, assume all obligations of Tenant under this Lease with respect to the Premises and shall be and remain liable jointly and severally with Tenant for the payment of Base Rent and Additional Rent, and for the performance of all of the terms, covenants, conditions and agreements herein contained on Tenant's part to be performed for the Term. No Assignment shall be binding on Landlord unless Tenant delivers to Landlord a counterpart of the Assignment and an instrument that contains a covenant of assumption reasonably satisfactory in substance and form to Landlord, and consistent with the requirements of this Section.

16. DEFAULT.

16.1 Event of Default. The occurrence of any of the following shall be an ***"Event of Default"*** on the part of Tenant:

(a) Failure to pay any part of the Base Rent or Additional Rent, or any other sums of money that Tenant is required to pay under this Lease where such failure continues

for a period of five (5) Business Days after written notice of default has been delivered by Landlord to Tenant. Landlord's notice to Tenant pursuant to this subsection shall be deemed to be the notice required under California Code of Civil Procedure Section 1161.

(b) Failure to perform any other covenant, condition or requirement of this Lease when such failure shall continue for a period of thirty (30) days after written notice thereof from Landlord to Tenant; provided that if the nature of the default is such that more than thirty (30) days are reasonably required for its cure, then an Event of Default shall not be deemed to have occurred if Tenant shall commence such cure within said thirty (30) day period and thereafter diligently and continuously prosecute such cure to completion. Landlord's notice to Tenant pursuant to this subsection shall be deemed to be the notice required under California Code of Civil Procedure Section 1161.

(c) The abandonment of the Premises by Tenant.

(d) Tenant shall admit in writing its inability to pay its debts generally as they become due, file a petition in bankruptcy, insolvency, reorganization, dissolution or liquidation under any law or statute of any government or any subdivision thereof either now or hereafter in effect, or Tenant shall make an assignment for the benefit of its creditors, consent to or acquiesce in the appointment of a receiver of itself or of the whole or any substantial part of the Premises.

(e) A court of competent jurisdiction shall enter an order, judgment or decree appointing a receiver of Tenant or of the whole or any substantial part of the Premises and such order, judgment or decree shall not be vacated, set aside or stayed within sixty (60) days after the date of entry of such order, judgment, or decree, or a stay thereof shall be thereafter set aside.

(f) A court of competent jurisdiction shall enter an order, judgment or decree approving a petition filed against Tenant under any bankruptcy, insolvency, reorganization, dissolution or liquidation law or statute of the federal or state government or any subdivision of either now or hereafter in effect, and such order, judgment or decree shall not be vacated, set aside or stayed within sixty (60) days from the date of entry of such order, judgment or decree, or a stay thereof shall be thereafter set aside.

16.2 Remedies. Upon the occurrence of an Event of Default, Landlord shall have the following rights and remedies:

(a) The right to terminate this Lease upon written notice to Tenant, in which event Tenant shall immediately surrender possession of the Premises in accordance with Article 21.

(b) The right to bring a summary action for possession of the Premises.

(c) The rights and remedies described in California Civil Code Section 1951.2, pursuant to which Landlord may recover from Tenant upon a termination of the Lease, (i) the worth at the time of award of the unpaid rent which has been earned at the time of termination; (ii) the worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; (iii) the worth at the time of the award of the amount by which the unpaid rent for the balance of the term after the time of award exceeds the amount

of such rental loss that Tenant proves could be reasonably avoided; and (iv) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of events would be likely to result therefrom. The "worth at the time of award" of the amounts referred to in (i) and (ii) above is computed by allowing interest at the Interest Rate. The "worth at the time of award" of the amount referred to in (iii) above shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). The detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of events would be likely to result therefrom includes, without limitation, (A) the unamortized portion of any brokerage or real estate agent's commissions paid in connection with the execution of this Lease, (B) any direct costs or expenses incurred by Landlord in recovering possession of the Premises, maintaining or preserving the Premises after such default, (C) preparing the Premises for reletting to a new tenant, (D) any repairs or alterations to the Premises for such reletting, (E) leasing commissions, architect's fees and any other costs necessary or appropriate either to relet the Premises or, if reasonably necessary in order to relet the Premises, to adapt them to another beneficial use by Landlord and (F) such amounts in addition to or in lieu of the foregoing as may be permitted from time to time by Applicable Law to the extent that such payment would not result in a duplicative recovery.

(d) The rights and remedies described in California Civil Code Section 1951.4 which allow Landlord to continue this Lease in effect and to enforce all of Landlord's rights and remedies under this Lease, including the right to recover Base Rent, Additional Rent and other charges payable hereunder as they become due. Acts of maintenance or preservation, efforts to relet the Premises or the appointment of a receiver upon Landlord's initiative to protect its interest under this Lease shall not constitute a termination of Tenant's right to possession.

(e) The right and power, as attorney-in-fact for Tenant, to sublet the Premises, to collect rents from all subtenants and to provide or arrange for the provision of all services and fulfill all obligations of Tenant under any permitted subleases. Landlord is hereby authorized on behalf of Tenant, but shall have absolutely no obligation, to provide such services and fulfill such obligations and to incur all such expenses and costs as Landlord deems necessary. Landlord is hereby authorized, but not obligated, to relet the Premises or any part thereof on behalf of Tenant, to incur such expenses as may be necessary to effect a relet and make said relet for such term or terms, upon such conditions and at such rental as Landlord in its reasonable discretion may deem proper. Tenant shall be liable immediately to Landlord for all costs and expenses Landlord incurs in reletting the Premises including, without limitation, brokers' commissions, expenses of remodeling the Premises required by the reletting, and the cost of collecting rents and fulfilling the obligations of Tenant to any subtenant. If Landlord relets the Premises or any portion thereof, such reletting shall not relieve Tenant of any obligation hereunder, except that Landlord shall apply the rent or other proceeds actually collected by it as a result of such reletting against any amounts due from Tenant hereunder to the extent that such rent or other proceeds compensate Landlord for the nonperformance of any obligation of Tenant hereunder. Such payments by Tenant shall be due at such times as are provided elsewhere in this Lease, and Landlord need not wait until the termination of this Lease, by expiration of the Term or otherwise, to recover them by legal action or in any other manner. Landlord may execute any sublease made pursuant to this Section in its own name, and the tenant thereunder shall be under no obligation to see to the application by Landlord of any rent or other proceeds, nor shall Tenant have any right to collect any such rent or other proceeds. Landlord shall not by any reentry or other act be deemed to have accepted any surrender by Tenant of the Premises or Tenant's interest therein, or be deemed to have

otherwise terminated this Lease, or to have relieved Tenant of any obligation hereunder, unless Landlord shall have given Tenant express written notice of Landlord's election to do so as set forth herein.

(f) The right to enjoin, and any other remedy or right now or hereafter available to a Landlord against a defaulting tenant under the laws of the State of California or the equitable powers of its courts, and not otherwise specifically reserved herein.

16.3 Cumulative Remedies. The various rights and remedies reserved to Landlord, including those not specifically described herein, shall, to the extent that the exercise of such right and/or remedy does not result in a duplicative recovery, be cumulative and shall be in addition to every other right or remedy provided for in this Lease or now or hereafter existing at law or in equity and the exercise of the rights or remedies provided for in this Lease or now or hereafter existing at law or in equity shall not preclude the simultaneous or later exercise by Landlord of any or all other rights and remedies.

16.4 Waiver of Redemption by Tenant. Tenant hereby waives any right to relief against forfeiture of this Lease pursuant to California Code of Civil Procedure Section 1179.

16.5 Landlord's Right to Cure. If Tenant shall fail or neglect to do or perform any covenant or condition required under this Lease and such failure shall not be cured within any applicable grace period, Landlord may, on five (5) days' notice to Tenant, but shall not be required to, make any payment payable by Tenant hereunder, discharge any lien, take out, pay for and maintain any insurance required hereunder, or do or perform or cause to be done or performed any such other act or thing (entering upon the Premises for such purposes, if Landlord shall so elect), and Landlord shall not be or be held liable or in any way responsible for any loss, disturbance, inconvenience, annoyance or damage resulting to Tenant on account thereof. Tenant shall repay to Landlord within fifteen (15) days after demand all reasonable out-of-pocket cost and expense incurred by Landlord in connection with the cure, including, without limitation, compensation to the agents, consultants and contractors of Landlord and reasonable attorneys' fees and expenses. Landlord may act upon shorter notice or no notice at all if necessary in Landlord's reasonable judgment to meet an emergency situation or governmental or municipal time limitation or to protect Landlord's interest in the Premises. Landlord shall not be required to inquire into the correctness of the amount of validity or any tax or lien that may be paid by Landlord and Landlord shall be duly protected in paying the amount of any such tax or lien claimed and in such event Landlord also shall have the full authority, in Landlord's sole judgment and discretion and without prior notice to or approval by Tenant, to settle or compromise any such lien or tax. Any act or thing done by Landlord pursuant to the provisions of this Section shall not be or be construed as a waiver of any such failure by Tenant, or as a waiver of any term, covenant, agreement or condition herein contained or of the performance thereof.

16.6 Landlord's Default. Landlord shall be in default under this Lease if Landlord fails to perform obligations required of Landlord within thirty (30) days after written notice by Tenant to Landlord and to the holder of any first mortgage or deed of trust covering the Property whose name and address shall have heretofore been furnished to Tenant in writing, specifying wherein Landlord has failed to perform such obligations; provided, however, that if the nature of Landlord's obligations is such that more than thirty (30) days are required for performance, then Landlord shall not be in default if Landlord commences performance within such thirty (30) day period and thereafter diligently prosecutes the same to completion. Tenant shall be entitled to actual (but not

consequential) damages in the event of an uncured default by Landlord and shall be entitled to injunctive relief, but the provisions of Article 17 shall apply to any Landlord default and Tenant shall not have the right to terminate this Lease as a result of a Landlord default.

16.7 Tenant's Right to Cure. If Landlord shall fail to perform any maintenance or repair required by this Lease, which if not performed will materially and adversely affect Tenant's operations within the Premises, and such failure gives rise to a Landlord default after expiration of all applicable cure periods pursuant to Section 16.6, Tenant may, on five (5) Business Days' notice to Landlord, but shall not be required to, make or pay for any such maintenance or repair; provided that Tenant shall not perform any repair or maintenance that could be reasonably expected to void any applicable warranties covering such repair or maintenance. In the event Tenant exercises its rights under this Section 16.7, Tenant shall utilize the services of a qualified contractor who normally and regularly performs similar work in Class A buildings. Within thirty (30) days after receipt of a reasonably detailed invoice from Tenant of its costs of taking action which Tenant claims should have been taken by Landlord, Landlord shall reimburse Tenant the amount set forth in such invoice; provided, that Tenant shall not be entitled to reimbursement of any amounts that would otherwise be payable by Tenant to Landlord hereunder, including without limitation charges for Operating Expenses and TDM Fees. If Landlord delivers to Tenant within thirty (30) days after receipt of Tenant's invoice, a written objection to the payment of such invoice, setting forth in reasonable detail Landlord's reasons for its claim that such action did not have to be taken by Landlord pursuant to the terms of this Lease or that the charges are excessive (in which case Landlord shall pay the amount it contends would not have been excessive), then Tenant shall not be entitled to such reimbursement (except pursuant to a court order), but as Tenant's sole remedy, Tenant may proceed to claim a default by Landlord under this Lease.

17. LANDLORD'S RESERVED RIGHTS.

17.1 Control of Building and Common Area. Landlord reserves the right, at any time and from time to time, to make alterations, additions, repairs, replacements or improvements to all or any part of the Building (including the Building Structure and Building Systems), the Common Area and the Property; provided such changes do not materially interfere with Tenant's access to or use of the Building or the parking to which Tenant is entitled under this Lease, Landlord may make changes at any time and from time to time in the size, shape, location, use and extent of the Common Area, and no such change shall entitle Tenant to any abatement of rent or damages. Landlord shall at all times during the Term have the sole and exclusive control of the Building Systems, Building Structure and the Common Area. Landlord may temporarily close any portion of the Common Area for repairs, maintenance, replacements or alterations, to prevent a dedication or the accrual of prescriptive rights, or for any other reasonable purpose; provided, however, that Landlord shall use reasonable efforts not to materially adversely affect Tenant's use of or access to the Premises. Tenant's rights in and to the Common Area shall at all times be subject to the rights of Landlord and Tenant shall keep the Common Area free and clear of any obstructions created or permitted by Tenant or resulting from Tenant's operations.

17.2 Access.

(a) Landlord reserves (for itself and its agents, consultants, contractors and employees) the right to enter the Premises at all reasonable times, subject to Tenant's reasonable security procedures, and, except in cases of emergency, after giving Tenant reasonable notice (which such notice may be by electronic mail provided such electronic mail is acknowledged

by Tenant), to inspect the Premises (including, without limitation, environmental testing); to supply any service to be provided by Landlord hereunder; to show the Premises to prospective purchasers or mortgagees; to show the Premises to prospective tenants during the last year of the Term; to post notices of non-responsibility; and to repair or maintain the Premises and the Building as required by Section 9.1, without abatement of Rent, and may for that purpose erect, use and maintain necessary structures in and through the Premises and the Building where reasonably required by the character of the work to be performed. Notwithstanding the above, Landlord may not access any controlled document rooms, patient records or other secured area (i) without prior written notice to Tenant, except in the event of an emergency, (ii) unless accompanied by a Tenant designated representative. When entering the Premises, Landlord agrees to comply with Tenant's rules and policies intended to protect the privacy of its patients' protected health information as required by law, including without limitation The Health Insurance Portability and Accountability Act of 1996, as amended from time to time. Tenant hereby waives any claim for damages for any injury or inconvenience to or interference with Tenant's business, any loss of occupancy or quiet enjoyment of the Premises or any other loss occasioned thereby, except to the extent caused by the Active Negligence or willful misconduct of Landlord in the exercise of its rights, or its failure to comply with the security requirements of this Section 17.2(a); and provided that Landlord shall use reasonable efforts not to materially adversely affect Tenant's use of the Premises. All locks for all of the doors in, upon and about the Premises, excluding Tenant's vaults and safes or special security areas (designated in advance in writing by Tenant) shall at all times be keyed to a master system and Landlord shall at all times have and retain a key with which to unlock all of said doors. Landlord shall have the right to use any and all means that Landlord may deem necessary or proper to open said doors in an emergency in order to obtain entry to any portion of the Premises, and any such entry to the Premises or portions thereof obtained by Landlord by any of said means, or otherwise, shall not under any circumstances be construed or deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an eviction, actual or constructive, of Tenant from the Premises or any portion thereof.

(b) Landlord hereby reserves the right of Landlord, at all reasonable times and, following reasonable advance notice to Tenant, to permit the City, the County of Santa Clara, the Santa Clara Valley Water District, the Regional Water Quality Control Board, Department of Toxic Substances Control, or other governmental bodies, public or private utilities and any other persons or entities authorized by Landlord to enter upon the Premises for the purposes of the following: (i) installing, using, operating, maintaining, removing, relocating and replacing (A) underground wells, (B) water, oil, gas, steam, storm sewer, sanitary sewer and other pipe lines, and (C) telephone, electric, power and other lines, conduits, and facilities; (ii) flood control; (iii) maintenance of rights of way, (iv) performing any work, testing or monitoring in connection with any Regional Water Quality Control Board, Department of Toxic Substances Control, or other governmental requirements, including, without limitation, indoor air monitoring); and (v) remediation of Hazardous Substances in, on, or under, the Premises or any other property in the neighborhood of the Premises, whether related to the Pre-Existing Environmental Condition or otherwise.

17.3 Easements. Landlord reserves the right to grant or relocate all easements and rights of way which Landlord in its sole discretion may deem necessary or appropriate; provided that Tenant's rights to use the Property is not materially impeded.

17.4 Use of Additional Areas. Landlord reserves the exclusive right to use any air space above the Property, and the land beneath the Premises; provided that such use shall not materially impede Tenant's use of and access to the Premises.

17.5 Subordination. This Lease shall be subject and subordinate at all times to: (a) all reciprocal easement agreements, and any ground leases or underlying leases which may now exist or hereafter be executed affecting the Property, (b) the lien of any mortgage or deed of trust that may now exist or hereafter be executed in any amount for which the Property, or any ground leases or underlying leases, or Landlord's interest or estate in any of said items, is specified as security, and (c) any access agreements which may now exist or hereafter be executed affecting the Property. Notwithstanding the foregoing, Landlord shall have the right to subordinate or cause to be subordinated to this Lease any of the items referred to in clause (a) or (b) above, subject to compliance with the condition precedent set forth below. In the event that any ground lease or underlying lease terminates for any reason or any mortgage or deed of trust is foreclosed or a conveyance in lieu of foreclosure is made for any reason, (i) no person or entity which as a result of the foregoing succeeds to the interest of Landlord under this Lease, (a "***Successor"***) shall be liable for any default by Landlord or any other matter that occurred prior to the date the Successor succeeded to Landlord's interest in this Lease, and (ii) Tenant shall, notwithstanding any subordination, attorn to and become the tenant of the Successor, at the option of the Successor. Tenant covenants and agrees, however, to execute and deliver, upon demand by Landlord and in the form reasonably requested by Landlord, any additional documents evidencing the priority or subordination of this Lease with respect to any such ground leases, underlying leases, reciprocal easement agreements or similar documents or instruments, or with respect to the lien of any such mortgage or deed of trust and Tenant's failure to execute and deliver any such document within ten (10) Business Days after such demand by Landlord shall constitute an Event of Default without further notice. Landlord shall use commercially reasonable efforts to obtain the written agreement of the mortgagee or trustee named in any mortgage, deed of trust or other encumbrance, and any landlord under any ground lease or underlying lease, that so long as an Event of Default by Tenant is not in existence, neither this Lease nor any of Tenant's rights hereunder shall be terminated or modified, nor shall Tenant's possession of the Premises be disturbed or interfered with, by any trustee's sale or by an action or proceeding to foreclose said mortgage, deed of trust or other encumbrance. Landlord represents and warrants that, as of the Effective Date, there is no mortgage, ground lease or other such encumbrance on the Property. Notwithstanding anything to the contrary set forth above, the subordination of this Lease to any ground lease, mortgage, deed of trust or other encumbrance entered into following the Effective Date is conditioned upon Tenant, Landlord and the lien holder entering into a commercially reasonably Subordination, Non-Disturbance and Attornment Agreement providing, among other covenants, that so long as an Event of Default by Tenant is not in existence, neither this Lease nor any of Tenant's rights hereunder shall be terminated or modified, nor shall Tenant's possession of the Premises be disturbed or interfered with, by any trustee's sale or by an action or proceeding to foreclose said mortgage, deed of trust or other encumbrance.

18. LIMITATION OF LANDLORD'S LIABILITY.

18.1 Limitation. Landlord shall not be responsible for or liable to Tenant and Tenant hereby releases Landlord, waives all claims against Landlord and assumes the risk for any injury, loss or damage to any person or property in or about the Property by or from any cause whatsoever (other than Landlord's or the Landlord Parties' Active Negligence or willful misconduct) including, without limitation, (a) acts or omissions of persons occupying adjoining premises, (b) theft or vandalism, (c) burst, stopped or leaking water, gas, sewer or steam pipes, (d) loss of utility service, (e) accident, fire or casualty, (f) nuisance, and (g) work done by Landlord in the Property. There shall be no abatement of Rent and no liability of Landlord by reason of any injury to or interference with Tenant's business arising from the making of any repairs, alterations or

improvements to any portion of the Property or to fixtures, appurtenances and equipment in the Property or arising from the provision of (or interruption of or failure to provide) any utilities or services to the Premises or any inability for Tenant to access the Premises; provided, however, that in the event Landlord fails to perform its obligations to make repairs, alterations or improvements or provide any access, utilities or services or performs such obligations in a negligent manner in each case which results in Tenant being unable to operate its business at the Premises for a period of more than five (5) consecutive Business Days, then Tenant shall be entitled to an abatement of Rent commencing on the sixth (6th) Business Day Tenant is unable to operate and continuing until the Premises are again available for operation of Tenant's business. Such Rent abatement shall be Tenant's only remedy in the event of a negligent interference with Tenant's business and Tenant shall not be entitled to damages or to termination of this Lease arising from Landlord's repairs, alterations, improvements or provision of access, utilities or services. Tenant hereby waives and releases any right it may have to make repairs at Landlord's expense under Sections 1941 and 1942 of the California Civil Code, or under any similar law, statute or ordinance now or hereafter in effect.

18.2 Sale of Property. It is agreed that Landlord may at any time sell, assign or transfer its interest as landlord in and to this Lease, and may at any time sell, assign or transfer its interest in and to the Property. In the event of any transfer of Landlord's interest in this Lease or in the Property, the transferor shall be automatically relieved of any and all of Landlord's obligations and liabilities accruing from and after the date of such transfer; provided that the transferee assumes all of Landlord's obligations under this Lease. Tenant hereby agrees to attorn to Landlord's assignee, transferee, or purchaser from and after the date of notice to Tenant of such assignment, transfer or sale, in the same manner and with the same force and effect as though this Lease were made in the first instance by and between Tenant and the assignee, transferee or purchaser.

18.3 No Personal Liability. In the event of any default by Landlord hereunder, Tenant shall look only to Landlord's interest in the Property and rents therefrom and any available insurance proceeds for the satisfaction of Tenant's remedies, and no other property or assets of Landlord or any trustee, partner, member, officer or director thereof, disclosed or undisclosed, shall be subject to levy, execution or other enforcement procedure for the satisfaction of Tenant's remedies under or with respect to this Lease.

19. DESTRUCTION.

19.1 Landlord's Repair Obligation. If the Property or any portion thereof is damaged by fire or other casualty, Landlord shall repair the same (including the Base Building Work but not any Tenant Improvement Work and not any Tenant's Alterations); provided that (a) such repairs can be made under the laws and regulations of the federal, state and local governmental authorities having jurisdiction within eighteen (18) months after the date of such damage (or in the case of damage occurring during the last twelve (12) months of the Term, provided that such repairs can be made within ninety (90) days after the date of such damage), (b) such repairs are substantially covered (except for any deductible) by the proceeds of insurance maintained by Landlord or required to be maintained by Landlord under Section 14.4 of this Lease, and (c) the estimate cost of repairing such damage does not exceed fifty percent (50%) of the then replacement cost of the Building.

19.2 Notice. Landlord shall notify Tenant within sixty (60) days after the date of damage whether or not the conditions requiring Landlord's to reconstruct and repair as described in Section 19.1 are met. If such requirements are not met, Landlord shall have the option, exercisable within sixty (60) days after the date of such damage either to: (a) notify Tenant of Landlord's intention to repair such damage and Landlord's reasonable estimate of the date upon which such repairs shall be completed, in which event this Lease shall continue in full force and effect (unless terminated by Tenant pursuant to Section 19.3 below), or (b) notify Tenant of Landlord's election to terminate this Lease as of the date of the damage. If such notice to terminate is given by Landlord, this Lease shall terminate as of the date of such damage. If within ten (10) days after receipt of a notice from Landlord electing to terminate this Lease because of the unavailability of insurance proceeds (provided such unavailability is not due to Landlord's failure to secure and maintain the insurance required by this Lease), Tenant sends Landlord a notice electing to reimburse Landlord for the total cost of such repairs in excess of Landlord's available insurance proceeds, this Lease shall not terminate, and Landlord shall complete such repairs; provided that Landlord shall have the right to invoice Tenant on a monthly basis for Tenant's share of the repair costs, which Tenant shall pay within thirty (30) days after receipt. Further, in the event Landlord elects to terminate this Lease as provided in Section 19.1, Tenant shall have the right within thirty (30) days of receipt of Landlord's notice of termination to notify Landlord of Tenant's election to pay for the restoration of the Building and Premises, in which event this Lease shall continue in full force and effect, Landlord shall proceed to make such repairs as soon as reasonably possible, and Tenant shall pay to Landlord all costs of the repairs in excess of any insurance proceeds actually received by Landlord within thirty (30) days after written demand by Landlord. If Tenant does not give such notice within the thirty (30) day period, this Lease shall be cancelled and terminated as of the date of the occurrence of such damage.

19.3 Termination by Tenant. If Landlord elects to repair or is required to repair the damage and any such repair (a) is not commenced by Landlord within one hundred twenty (120) days after the occurrence of such damage or destruction, or (b) is not or cannot practicably be substantially completed by Landlord within eighteen (18) months after the occurrence of such damage or destruction (or in the case of damage occurring in the last twelve (12) months of the Term, within ninety (90) days), all as reasonably determined by Landlord's Contractor, then in either such event Tenant may, at its option, upon written notice to Landlord to be delivered within fifteen (15) days after receipt of Landlord's notice or the expiration of the 120-day commencement period, elect to terminate this Lease as of the date of the occurrence of such damage or destruction.

19.4 Rent Adjustment. In case of termination pursuant to Sections 19.2 or 19.3 above, the Base Rent and Operating Expenses shall be reduced by a proportionate amount based upon the extent to which such damage interferes with Tenant's ability to operate in the Premises, and Tenant shall pay such reduced Base Rent and Operating Expenses up to the date of vacation of the Premises; provided that Landlord receives all proceeds of Tenant's business interruption insurance up to the amount by which Base Rent and Operating Expenses are so reduced, less any rental loss insurance proceeds payable to Landlord from Landlord's insurance coverage on account of such casualty. If Landlord is required or elects to make repairs, and Tenant does not terminate this Lease pursuant to Section 19.3, this Lease shall remain in full force and effect except that Tenant shall be entitled to a proportionate reduction of Base Rent and Operating Expenses from the date of such casualty and during the period such repairs are being made by a proportionate amount based upon the extent to which such damage interferes with Tenant's ability to operate in the Premises; provided that Landlord receives all proceeds of Tenant's business interruption insurance up to the amount by which Base Rent and Operating Expenses are so reduced less any

rental loss insurance proceeds payable to Landlord from Landlord's insurance coverage on account of such casualty. The full amount of Base Rent and Operating Expenses shall again become payable immediately upon the completion of such work of repair, reconstruction or restoration that Landlord is obligated to complete; provided however that, if the damage includes Tenant Improvement Work that Tenant is obligated to repair or replace, the full amount of Base Rent and Operating Expenses shall again become payable on the earlier of (i) when Tenant completes Tenant's repairs or replacements, or (ii) ninety (90) days after the completion by Landlord of such work of repair, reconstruction or restoration that Landlord is obligated to complete and the delivery of the Premises to Tenant for its repair and restoration work. The repairs to be made by Landlord under this Article shall not include, and Landlord shall not be required to repair, any casualty damage to the Tenant Improvement Work, Tenant's Property or any Alterations.

19.5 Tenant Obligations. If Landlord elects or is required to repair, reconstruct or restore the Premises after any damage or destruction, and Tenant does not elect to terminate this Lease as provided herein, Tenant shall be responsible at its own expense for the repair and replacement of any of the Tenant Improvement Work, Tenant's Property and any Alterations which Tenant elects to replace.

19.6 No Claim. Tenant shall have no interest in or claim to any portion of the proceeds of any property insurance or self-insurance maintained by Landlord in connection with the damage. If Landlord is entitled and elects not to rebuild the Premises, Landlord shall relinquish to Tenant such claim as Landlord may have for any part of the proceeds of any insurance maintained by Tenant under Section 14.2 of this Lease.

19.7 No Damages. If Landlord is required or elects to make any repairs, reconstruction or restoration of any damage or destruction to the Premises under any of the provisions of this Article 19, Tenant shall not be entitled to any damages by reason of any inconvenience or loss sustained by Tenant as a result thereof. Except as expressly provided in Section 19.4, there shall be no reduction, change or abatement of any rental or other charge payable by Tenant to Landlord hereunder, or in the method of computing, accounting for or paying the same. Tenant hereby waives the provisions of Section 1932(2) and Section 1933(4) of the California Civil Code, or any other statute or law that may be in effect at the time of a casualty under which a lease is automatically terminated or a tenant is given the right to terminate a lease due to a casualty.

20. EMINENT DOMAIN.

20.1 Taking. If all or any part of the Premises shall be taken as a result of the exercise of the power of eminent domain or any transfer in lieu thereof, this Lease shall terminate as to the part so taken as of the date of taking or as of the date of final judgment, whichever is earlier, and, in the case of a partial taking of at least twenty-five percent (25%) of the Rentable Area of the Premises or parking areas servicing the Premises, either Landlord or Tenant shall have the right to terminate this Lease as to the balance of the Premises by written notice to the other within thirty (30) days after such date, provided, however, that a condition to the exercise of such right to terminate shall be that the portion of the Premises taken shall be of such extent and nature as substantially to handicap, impede or impair Tenant's use of the balance of the Premises. If any material part of the Common Area shall be taken as a result of the exercise of the power of eminent domain or any transfer in lieu thereof, whether or not the Premises are affected, Landlord shall have the right to terminate this Lease by written notice to Tenant within thirty (30) days of the date

of taking. If any material part of the Common Area shall be taken as a result of the exercise of the power of eminent domain or any transfer in lieu thereof, such that Tenant's access to or use of the Premises is materially adversely affected, Tenant shall have the right to terminate this Lease by written notice to Landlord within thirty (30) days of the date of taking.

20.2 Award. In the event of any taking of the Property, Landlord shall be entitled to any and all compensation, damages, income, rent, awards, or any interest therein whatsoever which may be paid or made in connection therewith. Nothing contained herein shall be deemed to prohibit Tenant from making a separate claim against the condemning authority for the taking of Tenant's Property, the unamortized cost of Tenant Improvement Work, the cost of removing Tenant's trade fixtures and removable property, and relocation expenses.

20.3 Partial Taking. In the event of a partial taking of the Premises which does not result in a termination of this Lease, the Base Rent and Operating Expenses shall be adjusted as follows:

(a) In the event of a partial taking, if this Lease is not terminated pursuant to this Article 20, Landlord shall repair, restore or reconstruct the Premises to a useable state; provided that Landlord shall not be required to expend any sums other than those received pursuant to Section 20.2;

(b) During the period between the date of the partial taking and the completion of any necessary repairs, reconstruction or restoration, Tenant shall be entitled to a reduction of Base Rent and Operating Expenses by a proportionate amount based upon the extent of interference with Tenant's operations in the Premises; and

(c) Upon completion of said repairs, reconstruction or restoration, and thereafter throughout the remainder of the Term, the Base Rent and Operating Expenses shall be recalculated based on the remaining total number of square feet of Rentable Area of the Premises.

20.4 Temporary Taking. Notwithstanding any other provision of this Article, if a taking occurs with respect to all or any portion of the Premises for a period of six (6) months or less, this Lease shall remain unaffected thereby and Tenant shall continue to pay Base Rent and Additional Rent and to perform all of the terms, conditions and covenants of this Lease, provided that Tenant shall have the right to terminate this Lease if the taking continues beyond six (6) months by giving Landlord notice of such termination within twenty (20) days following the expiration of such six-month period. If Tenant exercises such termination right, this Lease and the estate hereby granted shall terminate as of the thirtieth (30th) day following the giving of such notice. In the event of any such temporary taking, and if this Lease is not terminated, Tenant shall be entitled to receive that portion of any award which represents compensation for the use or occupancy of the Premises during the Term up to the total Base Rent and Additional Rent owing by Tenant for the period of the taking, and Landlord shall be entitled to receive the balance of any award.

20.5 Sale in Lieu of Condemnation. A voluntary sale by Landlord of all or any part of the Property to any public or quasi-public body, agency or person, corporate or otherwise, having the power of eminent domain, either under threat of condemnation or while condemnation proceedings are pending, shall be deemed to be a taking under the power of eminent domain for the purposes of this Article.

20.6 Waiver. Except as provided in this Article, Tenant hereby waives and releases any right it may have under any Applicable Law to terminate this Lease as a result of a taking, including without limitation Sections 1265.120 and 1265.130 of the California Code of Civil Procedure, or any similar law, statute or ordinance now or hereafter in effect.

21. SURRENDER.

21.1 Surrender. On or before the ninetieth (90th) day preceding the Expiration Date, Tenant shall notify Landlord in writing of the estimated date (the ***"Move-Out Date"***) upon which Tenant plans to surrender the Premises to Landlord. At least sixty (60) days prior to the Move-Out Date, Landlord and Tenant shall walk through the Premises to identify any repair and removal work to be performed by Tenant, provided that failure by any party to participate in the walk-through shall not relieve Tenant of any of its obligations hereunder. Prior to the Termination Date, Tenant shall repair at Tenant's sole cost, all damage caused by removal of Tenant's Property and any Alterations as required under this Lease, and shall leave the floor broom clean and the walls patched and paint-ready. Upon the Termination Date, Tenant shall surrender the Premises to Landlord in good order and repair, reasonable wear and tear and damage by casualty excepted, free and clear of all letting and occupancies and free of Tenant's Hazardous Substances as required pursuant to Article 13, with all applicable closure requirements satisfied and completed, and with all of Tenant's Property (including all movable equipment, furniture, trade fixtures and other personal property) removed from the Premises. Subject to Article 10, upon any termination of this Lease all improvements, except for Tenant's Property, shall automatically and without further act by Landlord or Tenant, become the property of Landlord, free and clear of any claim or interest therein by Tenant, and without payment therefore by Landlord.

21.2 Holding Over.

(a) If Tenant remains in possession of all or any part of the Premises after the Termination Date with Landlord's prior written consent: (i) Tenant's occupancy of the Premises shall be deemed a month-to-month tenancy (not a renewal or extension of the Term), terminable by either party upon 30 days' written notice to the other; (ii) the Base Rent during the holdover period shall be 125% of the greater of (x) the Base Rent in effect during the last month of the Term; and (y) Prevailing Market Rent; and (iii) Tenant's occupancy of the Premises otherwise shall be subject to all applicable terms and conditions of this Lease as if the Term had not expired or this Lease had not been terminated, as the case may be. Landlord's acceptance of Rent without all or any part of the increase due pursuant to clause (ii) above shall not be deemed or construed as a waiver by Landlord of its right to the entire increase in Base Rent due pursuant to clause (ii). Nothing in this Section 21.2(a) shall be deemed or construed as a consent by Lessor to any holding over by Landlord.

(b) If Tenant remains in possession of all or any part of the Premises after the Termination Date without Landlord's written consent: (i) the Base Rent during the holdover period shall be the greater of (x) 150% of the Base Rent in effect during the last month of the Term; and (y) the Prevailing Market Rent; (ii) Tenant's occupancy of the Premises shall be solely as a tenant at sufferance and no notice of termination shall be necessary in order to recover possession; (iii) Tenant's occupancy of the Premises otherwise shall be subject to all applicable terms and conditions of this Lease; and (iv) in addition to such other remedies as may be available to Landlord at law or in equity, Tenant shall indemnify, defend and hold Landlord harmless from and against any and all claims, damages, liabilities and costs arising from or related to Landlord's continued

possession, including without limitation claims, damages or losses incurred in connection with prospective or actual successor tenants, lost rents, lost development opportunities and reasonable attorneys', brokers' and consultants' fees, costs and expenses. Landlord's acceptance of Rent without all or any part of the increase due pursuant to clause (i) above shall not be deemed or construed as a waiver by Landlord of its right to the entire increase in Rent due pursuant to clause (ii). Without limiting the foregoing, if Tenant fails to remediate the Property from the effects of any Tenant Environmental Activity and complete full facility closure on or prior to the Termination Date and provide Landlord with satisfactory evidence of the same, then, from and after the Termination Date, then whether or not Tenant has vacated the Premises, Tenant shall be deemed to be holding over without the consent of Landlord and shall be subject to the provisions of this Section 21.2(b).

21.3 Notice of Lease Termination. At the expiration or earlier termination of this Lease, Tenant shall execute, acknowledge and deliver to Landlord, within ten (10) days after written demand from Landlord to Tenant, a notice of lease termination in the form attached as **Exhibit E** required by any reputable title company, licensed to operate in the State of California, to remove the cloud or encumbrance created by this Lease from the Property.

22. FINANCIAL STATEMENTS.

If Tenant's (or Tenant's parent's) financial statements are not publicly available through the S.E.C. or other regulatory agency in the United States or elsewhere, Tenant shall tender to Landlord within ten (10) Business Days after receipt of a written request any information reasonably requested by Landlord regarding the financial stability, credit worthiness or ability of Tenant to pay the Rent due under this Lease. Landlord shall be entitled to rely upon the information provided in determining whether or not to enter into this Lease or for the purpose of any financing or other transaction subsequently undertaken by Landlord. Tenant hereby represents and warrants to Landlord the following: (a) that all documents provided by Tenant to Landlord in connection with the negotiation of this Lease are true and correct copies of the originals, (b) Tenant has not withheld any information from Landlord that is material to Tenant's credit worthiness, financial condition or ability to perform its obligations hereunder, (c) all information supplied by Tenant to Landlord is true, correct and accurate, and (d) no part of the information supplied by Tenant to Landlord contains any misleading or fraudulent statements. A default under this Article shall be a non-curable default by Tenant and Landlord shall be entitled to pursue any right or remedy available to Landlord under the terms of this Lease or available to Landlord under the laws of the State of California. Landlord shall a be entitled to disclose Tenant's financial information to (i) its agents, employees and consultants, (ii) potential purchasers of an interest in the Property, and (iii) lenders contemplating making a loan to the Landlord to be secured by the Property, provided that such recipients are advised of the confidential nature of such information and agree to maintain such confidentiality provided that Landlord first execute a commercially reasonable non-disclosure agreement. Landlord shall also be entitled to disclose Tenant's confidential financial information to (i) its agents, employees and consultants, (ii) potential purchasers of an interest in the Property, and (iii) lenders contemplating making a loan to the Landlord to be secured by the Property, provided that such recipients are advised of the confidential nature of such information and agree to maintain such confidentiality. Nothing herein, however, shall require Tenant to disclose to Landlord any proprietary or confidential non-public information in violation of Applicable Laws and Tenant shall not be deemed in default under this Section 22 on account of withholding any proprietary or confidential nonpublic information as required by Applicable Laws or as advised by Tenant's legal counsel.

23. TENANT CERTIFICATES.

Tenant, at any time and from time to time within ten (10) Business Days after receipt of written notice from Landlord, shall execute, acknowledge and deliver to Landlord or to any party designated by Landlord (including prospective lenders, purchasers, ground lessees and others similarly situated), a certificate of Tenant stating, to the best of Tenant's knowledge: (a) that Tenant has accepted the Premises, (b) the Commencement Date and Expiration Date of this Lease, (c) that this Lease is unmodified and in full force and effect (or, if there have been modifications, that same is in full force and effect as modified and stating the modifications), (d) whether or not there are then existing any defenses against the enforcement of any of the obligations of Tenant under this Lease (and, if so, specifying same), (e) whether or not there are then existing any defaults by Landlord in the performance of its obligations under this Lease (and, if so, specifying same), (f) the dates, if any, to which the Base Rent and Operating Expenses have been paid, and (g) any other factual information relating to the rights and obligations under this Lease that may reasonably be required by any of such persons. Failure to deliver such certificate after receipt of a second five (5) Business Day notice shall constitute an Event of Default. At the request of Tenant, Landlord shall execute, acknowledge and deliver to Tenant a certificate with similar types of information and in the time period set forth above. Failure by either Landlord or Tenant to execute, acknowledge and deliver such certificate shall be conclusive evidence that this Lease is in full force and effect and has not been modified except as may be represented by the requesting party.

24. RULES AND REGULATIONS; SIGNS.

24.1 Rules and Regulations. Tenant shall faithfully observe and comply with all reasonable rules and regulations attached to this Lease as **Exhibit F**, and all reasonable modifications relating to Tenant's use of the Common Area and additions thereto from time to time put into effect by Landlord (the ***"Rules and Regulations"***) and provided in writing to Tenant. Landlord shall not enforce such Rules and Regulations in an unreasonable or discriminatory manner. In the event of any conflict between the terms of this Lease and the terms, covenants, agreements and conditions of the Rules and Regulations, this Lease shall control. Landlord shall not adopt any Rules or Regulations or modify the existing Rules and Regulations in such a way as to materially interfere with Tenant's use and enjoyment of the Premises or with the conduct of Tenant's business within the Premises. Landlord shall administer the Rules and Regulations in a fair and non-discriminatory manner.

24.2 Signs. Tenant shall have the right, at Tenant's sole cost and expense, to install Tenant's name on a multi-tenant monument sign on Porter Drive. Tenant shall also have the right to place a sign on the entrance doors to Tenant's Premises identifying Tenant. All signage to be installed by Tenant pursuant to the foregoing shall meet the requirements of Landlord's signage program for the Property (e.g., aesthetic appearance, size, etc.) and shall be subject to the prior written consent of Landlord, not to be unreasonably withheld, and, if required, the approval of the City.

25. INABILITY TO PERFORM.

If Landlord is unable to fulfill or is delayed in fulfilling any of Landlord's obligations under this Lease, by reason of acts of God, accidents, breakage, repairs, strikes, lockouts, other labor disputes, inability to obtain utilities or materials or by any other reason beyond Landlord's reasonable control, then such inability or delay by Landlord shall excuse the performance of

Landlord for a period equal to the duration of such prevention, delay or stoppage, and no such inability or delay by Landlord shall constitute an actual or constructive eviction, in whole or in part, or entitle Tenant to any abatement or diminution of Base Rent or Additional Rent, or relieve Tenant from any of its obligations under this Lease, or impose any liability upon Landlord or Landlord's Agents by reason of inconvenience, annoyance, interruption, injury or loss to or interference with Tenant's business or use and occupancy or quiet enjoyment of the Premises or any loss or damage occasioned thereby. If Tenant is unable to fulfill or is delayed in fulfilling any of Tenant's obligations under this Lease (other than the payment of Rent), by reason of acts of God, accidents, breakage, repairs, strikes, lockouts, other labor disputes, inability to obtain utilities or materials or by any other reason beyond Tenant's reasonable control, then such inability or delay by Tenant shall excuse the performance of Tenant for a period equal to the duration of such prevention, delay or stoppage. Tenant hereby waives and releases any right to terminate this Lease under Section 1932(1) of the California Civil Code, or any similar law, statute or ordinance now or hereafter in effect.

26. NOTICES.

Any notice, consent or other communication required or permitted under this Lease shall be in writing and shall be delivered by hand, sent by expedited courier, sent by prepaid registered or certified mail with return receipt requested, or sent by facsimile, and shall be deemed to have been given on the earliest of (a) receipt or refusal of receipt; (b) one Business Day after delivery to an air courier or reputable over-night delivery service (e.g., FedEx) for overnight expedited delivery service; (c) five (5) Business Days after the date deposited in the United States mail, registered or certified, with postage prepaid and return receipt requested (provided that such return receipt must indicate receipt at the address specified); or (d) on the day of its transmission by facsimile or electronic mail if transmitted during the business hours of the place of receipt, otherwise on the next Business Day, or in the case of electronic mail, upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, or return e-mail or other written acknowledgement from such recipient confirming receipt) provided that in either case a copy of such notice, consent or other communication is also delivered pursuant to clause (b) or (c) above. All notices shall be addressed as appropriate to the addresses given in the Basic Lease Information (or to such other or further addresses as the parties may designate by notice given in accordance with this Section).

27. QUIET ENJOYMENT.

Landlord covenants that subject to the other terms and conditions of this Lease, upon paying the Base Rent and Additional Rent and performing all of its obligations under this Lease, Tenant shall peaceably and quietly enjoy the Premises, subject to the terms and provisions of this Lease.

28. AUTHORITY.

28.1 Tenant's Authority. Tenant represents and warrants as follows: Tenant is an entity as identified in the introductory paragraph, duly formed and validly existing and in good standing under the laws of the state of organization specified in the introductory paragraph and qualified to do business in the State of California. Tenant has the power, legal capacity and authority to enter into and perform its obligations under this Lease and no approval or consent of any third party is required in connection with the execution and performance hereof, other than the approval of Tenant's parent, which approval has been duly obtained. The execution and performance of

Tenant's obligations under this Lease will not result in or constitute any default or event that would be, or with notice or the lapse of time would be, a default, breach or violation of the organizational instruments governing Tenant or any agreement or any order or decree of any court or other governmental authority to which Tenant is a party or to which it is subject. Tenant has taken all necessary action to authorize the execution, delivery and performance of this Lease and this Lease constitutes the legal, valid and binding obligation of Tenant. Upon Landlord's request, Tenant shall provide Landlord with evidence reasonably satisfactory to Landlord confirming the foregoing representations and warranties.

28.2 Landlord's Authority. Landlord represents and warrants as follows: Landlord has the power, legal capacity and authority to enter into and perform its obligations under this Lease and no approval or consent of any person is required in connection with the execution and performance hereof. The execution and performance of Landlord's obligations under this Lease will not result in or constitute any default or event that would be, or with notice or the lapse of time would be, a default, breach or violation of the organizational instruments governing Landlord or any agreement or any order or decree of any court or other governmental authority to which Landlord is a party or to which it is subject. Landlord has taken all necessary action to authorize the execution, delivery and performance of this Lease and this Lease constitutes the legal, valid and binding obligation of Landlord.

29. BROKERS.

Tenant and Landlord warrant that they have had dealings with only the real estate brokers or agents listed in Article 1 (the "***Broker***") in connection with the negotiation of this Lease and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Lease. The brokerage commission earned in connection with this transaction shall be paid by Landlord pursuant to a separate written agreement between Landlord and Broker. Tenant and Landlord shall indemnify, defend and hold the other harmless from and against all liabilities arising from any other claims of brokerage commissions or finder's fees based on Tenant's or Landlord's, as applicable, dealings or contacts with brokers or agents other than those listed in Article 1.

30. DISPUTE RESOLUTION.

30.1 Meet and Confer. The parties shall endeavor to resolve any disputes relating to this Lease through reasonable business-like dispute resolution procedures without resort to litigation. Accordingly, if a dispute arises regarding any matter other than the Tenant defaults described in Section 16.1, either party may call a special meeting of the parties by written request specifying the nature of the matter to be addressed. The meeting shall be held at the Premises, and shall be attended by representatives of Landlord and Tenant who have authority to resolve the dispute. Such representatives shall confer in a good faith attempt to resolve the dispute until they either succeed or one or both parties concludes that the dispute will not be resolved through one or more special meetings.

30.2 Mediation. If a matter in dispute is not resolved through the special meeting process, either party may initiate mediation by delivering written notice to the other. Both parties shall attend and participate in the mediation, which shall be non-binding and without prejudice to any other rights or remedies that either party may have. Unless the parties agree otherwise, the mediation proceeding shall be conducted in the San Francisco Bay Area, by an independent

mediator from the San Francisco office of JAMS (or any successor or mutually acceptable alternative, referred to hereafter as the "JAMS") in accordance with JAMS procedures, within thirty (30) days after the notice initiating mediation is delivered. The costs of the mediation shall be shared equally by both parties to the mediation, except that each party shall pay the fees, costs and expenses of its own legal counsel and consultants in connection with such mediation. Any voluntary settlement reached as a result of the mediation proceeding shall be reduced to writing. All mediation proceedings shall be subject to the provisions of California Evidence Code sections 1152 and 1152.5, and any amended, similar or successor laws.

30.3 General. The foregoing dispute resolution procedures shall not in any way affect any statutes of limitation relating to any dispute relating to this Lease. This dispute resolution procedure may be conducted before or during the pendency of any other legal proceedings, and either party shall be entitled to bring any legal or judicial action to enjoin an act or proposed act by the other party which is in dispute, or seek any other ancillary relief to preserve the status quo or protect the rights of either party, pending the commencement or completion of any mediation process.

31. MISCELLANEOUS.

31.1 Entire Agreement. This Lease, including the exhibits which are incorporated herein and made a part of this Lease, contains the entire agreement between the parties and all prior negotiations and agreements are merged herein. Tenant hereby acknowledges that neither Landlord nor Landlord's Agents have made any representations or warranties with respect to the Premises, the Property, or this Lease except as expressly set forth herein, and no rights, easements or licenses are or shall be acquired by Tenant by implication or otherwise unless expressly set forth herein.

31.2 No Waiver. No failure by Landlord or Tenant to insist upon the strict performance of any obligation of Tenant or Landlord under this Lease or to exercise any right, power or remedy consequent upon a breach thereof, no acceptance of full or partial Base Rent or Additional Rent during the continuance of any such breach by Landlord, or payment of Base Rent or Additional Rent by Tenant to Landlord, and no acceptance of the keys to or possession of the Premises prior to the expiration of the Term by any employee or agent of Landlord shall constitute a waiver of any such breach or of such term, covenant or condition or operate as a surrender of this Lease. No waiver of any breach shall affect or alter this Lease, but each and every term, covenant and condition of this Lease shall continue in full force and effect with respect to any other then-existing or subsequent breach thereof. The consent of Landlord or Tenant given in any instance under the terms of this Lease shall not relieve Tenant or Landlord, as applicable, of any obligation to secure the consent of the other in any other or future instance under the terms of this Lease.

31.3 Amendments, Modifications or Waivers. This Lease may only be amended, changed, terminated or modified by a written instrument signed by both Landlord and Tenant. Neither this Lease nor any term or provisions hereof may be changed, waived, discharged or terminated orally. A breach of this Lease shall not be waived except by a written instrument signed by the party against which the change, waiver, discharge or termination is sought.

31.4 Successors and Assigns. The terms, covenants and conditions contained in this Lease shall bind and inure to the benefit of Landlord and Tenant and, except as otherwise provided or limited herein, their respective personal representatives and successors and assigns.

31.5 Validity. If any provision of this Lease or the application thereof to any person, entity or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such provision to persons, entities or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each provision of this Lease shall be valid and be enforced to the full extent permitted by law.

31.6 Jurisdiction. This Lease shall be construed and enforced in accordance with the laws of the State of California. Any action that in any way involves the rights, duties and obligations of the parties under this Lease may (and if against Landlord, shall) be brought in the courts of the State of California or the United States District Court for the District of California, and the parties hereto hereby submit to the personal jurisdiction of said courts.

31.7 Attorneys' Fees. In the event that either Landlord or Tenant fails to perform any of its obligations under this Lease or in the event a dispute arises concerning the meaning or interpretation of any provision of this Lease, the defaulting party or the party not prevailing in such dispute, as the case may be, shall pay any and all costs and expenses incurred by the other party in enforcing or establishing its rights hereunder, including, without limitation, court costs, costs of arbitration and reasonable attorneys' fees.

31.8 Intentionally Omitted.

31.9 Light and Air. Tenant covenants and agrees that no diminution of light, air or view by any structure that may hereafter be erected (whether or not by Landlord) shall entitle Tenant to any reduction of the Base Rent or Additional Rent under this Lease, result in any liability of Landlord to Tenant, or in any other way affect this Lease or Tenant's obligations hereunder.

31.10 Lease Memorandum. Neither Landlord nor Tenant shall record this Lease or a short form memorandum hereof without the consent of the other.

31.11 Confidentiality. The parties agree that neither of them shall make public the terms and conditions of this Lease or the fact that they have entered into this Lease to any person other than a party's accountants, attorneys, lenders, brokers, prospective ground lessees, investors, consultants or financial advisors without first obtaining the written permission from the other party, except to the extent otherwise required by Applicable Law, including without limitation the securities laws of the United States and other jurisdictions.

31.12 Terms. The term "Premises" includes the space leased hereby and any improvements now or hereafter installed therein or attached thereto. The words "Landlord" and "Tenant" as used herein shall include the plural as well as the singular. If there is more than one Tenant or Landlord, the obligations under this Lease imposed on Tenant or Landlord shall be joint and several. The captions preceding the articles of this Lease have been inserted solely as a matter of convenience and such captions in no way define or limit the scope or intent of any provision of this Lease.

31.13 Review and Approval. The review, approval, inspection or examination by Landlord of any item to be reviewed, approved, inspected or examined by Landlord under the terms of this Lease or the exhibits attached hereto shall not constitute the assumption of any responsibility by Landlord for either the accuracy or sufficiency of any such item or the quality of suitability of such item for its intended use. Any such review, approval, inspection or examination by Landlord is for the sole purpose of protecting Landlord's interests in the Property and under this Lease, and no third parties, including, without limitation, Tenant or any person or entity claiming through or under Tenant, or the contractors, agents, servants, employees, visitors or licensees of Tenant or any such person or entity, shall have any rights hereunder with respect to such review, approval, inspection or examination by Landlord.

31.14 No Beneficiaries. This Lease shall not confer or be deemed to confer upon any person or entity other than the parties hereto, any right or interest, including without limitation, any third party status or any right to enforce any provision of this Lease.

31.15 Time of the Essence. Time is of the essence in respect of all provisions of this Lease in which a definite time for performance is specified. In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or holiday, such time for performance shall be extended to the next Business Day.

31.16 Modification of Lease. In the event of any ruling or threat by the Internal Revenue Service, or opinion of counsel, that all or part of the Rent paid or to be paid to Landlord under this Lease will be subject to the income tax or unrelated business taxable income, Tenant agrees to modify this Lease to avoid such tax; provided that such modifications will not result in any increase in Rent, or any increased obligations of Tenant under this Lease. Landlord will pay all Tenant's reasonable costs incurred in reviewing and negotiating any such lease modification, including reasonable attorneys' and accountants' fees.

31.17 Construction. This Lease has been negotiated extensively by Landlord and Tenant with and upon the advice of their respective legal counsel, all of whom have participated in the drafting hereof. Consequently, Landlord and Tenant agree that no party shall be deemed to be the drafter of this Lease and in the event this Lease is ever construed by a court of law, such court shall not construe this Lease or any provision of this Lease against any party as the drafter of the Lease.

31.18 Use of Name. Tenant acknowledges and agrees that the names ***"The Leland* Stanford *Junior University," "Stanford"*** and ***"Stanford University,"*** and all variations thereof, are proprietary to Landlord. Tenant shall not use any such name or any variation thereof or identify Landlord in any promotional advertising or other promotional materials to be disseminated to the public or any portion thereof or use any trademark, service mark, trade name or symbol of Landlord or that is associated with it, without Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion. Notwithstanding the foregoing, Tenant may use the term "Stanford Research Park" only to identify the location of the Premises.

31.19 Blocked Person. Tenant represents and warrants that neither Tenant nor any person or entity owning any direct or indirect membership interest or other equity ownership interest in Tenant is now, or ever has been, named on (or now is or ever has been acting directly or indirectly for or on behalf of any person or entity named on) the list of "Specially Designated Nationals and Blocked Persons" published by the Office of Foreign Assets Control of the United

States Department of the Treasury or any similar list maintained by the United States government or any other government (any person so named, a ***"Blocked Person"***). If Tenant, or any person or entity owning any direct or indirect membership interest or other equity ownership interest in Tenant, at any time becomes a Blocked Person or acts directly or indirectly for or on behalf of any Blocked Person, such event shall constitute an Event of Default under this Lease, unless within thirty (30) days after Tenant becomes aware of such Blocked Person or aware of actions taken directly or indirectly for or on behalf of such Blocked Person, Tenant initiates and diligently pursues steps to cause such Blocked Person to be removed from owning a direct or indirect membership or other equity ownership interest in Tenant or removed from the list of "Specially Designated Nationals and Blocked Persons."

31.20 Survival. The obligations of this Lease shall survive the expiration of the Term to the extent necessary to implement any requirement for the performance of obligations or forbearance of an act by either party hereto which has not been completed prior to the termination of this Lease. Such survival shall be to the extent reasonably necessary to fulfill the intent thereof, or if specified, to the extent of such specification, as same is reasonably necessary to perform the obligations and/or forbearance of an act set forth in such term, covenant or condition. Notwithstanding the foregoing, in the event a specific term, covenant or condition is expressly provided for in such a clear fashion as to indicate that such performance of an obligation or forbearance of an act is no longer required, then the specific shall govern over this general provisions of this Lease.

31.21 Counterparts. This Lease may be executed in counterparts, each of which shall be an original, and all of which together shall constitute one original of the Lease. Signature pages may be detached from the counterparts and attached to a single copy of this Agreement to physically form one document. Counterparts sent by fax or email shall be deemed originals for all purposes.

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease as of the Effective Date.

LANDLORD:

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

By: /s/ Tiffany Griego

Its: Managing Director, Asset Management

TENANT:

JAZZ PHARMACEUTICALS, INC.,
a Delaware corporation

By: /s/ Matthew Young

Its: CFO

GLOSSARY

As used in this Lease, the following terms shall have the following meanings, applicable, as appropriate, to both the singular and plural form of the terms defined below:

"Abated Rent" is defined in Section 16.2(g).

"Active Negligence" means the want of care in performing an act, as distinguished from inaction, which in a proper case may be negligence. Active Negligence occurs when a party has individually participated in an affirmative act of negligence.

"Actual Access Date" is defined in Section 2.4 of **Exhibit D**.

"ADA" is defined in Section 12.1.

"Added Costs" means the extra, incremental out-of-pocket costs to redevelop, upgrade, renovate, repair, rehabilitate, or remodel the existing improvements or construct new improvements at the Premises, or to make the Premises suitable for sale or tenant use, to the extent due to Tenant Environmental Activity, including the presence of residual Hazardous Substances after remediation. Added Costs may include, but is not limited to, the costs of any studies or risk assessments required by any government authority with jurisdiction, or those that are technically warranted and reasonably requested by subsequent lessee of the Premises or any portion thereof, including without limitation, the costs of any hazardous material contractor to perform work at the Premises, the costs for handling and disposal of any Hazardous Substances at the Premises, and the costs of any special requirements to control soil vapors or dewater the Premises as a means to remediate the Premises. Added Costs shall not include ordinary costs to redevelop, upgrade, renovate, repair, rehabilitate, or remodel the existing improvements or construct new improvements at the Premises, or to make the Premises suitable for use by another occupant, that would have been incurred absent the Tenant Environmental Activity.

"Additional Rent" is defined in Section 6.3.

"Adjustment Date" is defined in Section 6.1.

"Affiliate" is defined in Section 15.7.

"Alterations" are defined in Section 10.5.

"Applicable Laws" are defined in Section 12.1.

"ARB" is defined in Section 2.1(a) of **Exhibit D**.

"Assignment" is defined in Section 15.1.

"Bank" is defined in Section 6.5(c).

"Base Building Architect" means the architect for the Base Building Work, who shall be designated by Landlord.

"Base Building Construction Drawings" are defined in Section 2.1(c) of **Exhibit D**.

"Base Building Contractor" means the general contractor for the Base Building Work, who shall be designated by Landlord.

"Base Building Permit Submittal" is defined in Section 2.1(c) of **Exhibit D**.

"Base Building Plans" are defined in Section 2.1(b) of **Exhibit D**.

"Base Building Work" means the improvement work described in ***Attachment 1*** to **Exhibit D**. ***Attachment 1*** is comprised of ***Attachment 1A*** (Base Building Work Description) and ***Attachment 1B*** (Construction Responsibility Matrix), and references to ***Attachment 1*** shall be deemed to refer to both such components. The Base Building Work consists of (a) the Shell Components, (b) the Core Components, and (c) the Common Area Improvements.

"Base Rent" means the amount stated in Article 1, to be adjusted and payable in accordance with Article 6.

"Blocked Person" is defined in Section 31.19.

"Broker" is defined in Article 29.

"Building" is defined in Section 2.1.

"Building Structure" is defined in Section 9.1.

"Building Systems" are defined in Section 8.2(b).

"Business Days" means Monday through Friday, excluding federal and state legal holidays.

"Change of Control" is defined in Section 15.1.

"City" means the City of Palo Alto.

"Code Requirements" are defined in ***Attachment 1A*** to **Exhibit D**.

"Common Area Improvements" are described in ***Attachment 1*** to **Exhibit D**.

"Common Area" is defined in Section 2.2.

"Commencement Date" means the date specified in Article 1.

"Core" and/or ***"Core Components"*** are described in ***Attachment 1*** to **Exhibit D**.

"Early Termination Option" is defined in Section 5.4.

"Entitlement Efforts" is defined in Section 10.2.

"Environmental Audit" is defined in Section 13.7.

"Final Plans" are defined in Section 3.3(b) of **Exhibit D**.

"Formal ARB Submittal Plans" are defined in Section 2.1(a) of **Exhibit D**.

"Environmental Claims" means all claims, demands, suits, actions (including, without limitation, notices of noncompliance, charges, directives, and requests for information), causes of action, orders, judgments, settlements, damages, losses, diminutions in value, penalties, fines, actions, proceedings, obligations, liabilities (including strict liability), encumbrances, liens, costs (including, without limitation, costs of investigation and defense of any claim (including, Landlord's in-house counsel), whether or not such claim is ultimately defeated, and costs of any good faith settlement or judgment), and expenses of whatever kind or nature, contingent or otherwise, matured or unmatured, foreseeable or unforeseeable, including without limitation reasonable attorneys' and consultants' fees and disbursements, any of which are incurred at any time, arising out of or related to Environmental Requirements, including, without limitation:

(a) Damages for personal injury, or injury to property or natural resources occurring upon the Premises or off the Premises, foreseeable or unforeseeable, including, without limitation, consequential damages, lost profits, lost rents, the cost of demolition and rebuilding of any improvements on real property, interest and penalties;

(b) Claims brought by or on behalf of employees of Tenant;

(c) Fees incurred for the services of attorneys, consultants, contractors, experts, laboratories and all other costs incurred in connection with the investigation or remediation of Releases of Hazardous Substances (whether or not performed voluntarily) or violation of Environmental Requirements, including, but not limited to, preparation of feasibility studies or reports, or the performance of any cleanup, remediation, removal, response, abatement, containment, closure, restoration or monitoring work required by any federal, state or local governmental agency or political subdivision, reasonably necessary to restore full economic use of the Premises or any other property, or otherwise expended in connection with such conditions, and including without limitation any attorneys' fees, costs and expenses incurred in enforcing this Lease or collecting any sums due hereunder;

(d) Liability to any third person or governmental agency to indemnify such person or agency for costs expended in connection with the items referenced above; and

(e) Diminution in the value of the Premises, and damages for the loss of business and restriction on the use of, or adverse impact on the marketing of, rentable or usable space or any amenity of the Premises.

"Environmental Requirements" means all applicable present and future statutes, regulations, rules, ordinances, codes, common law, licenses, permits, orders, approvals, plans, authorizations, concessions, franchises, and similar items, and all amendments thereto, of all governmental agencies, departments, commissions, boards, bureaus or instrumentalities of the United States, California, and political subdivisions thereof, including but not limited to City, the County of Santa Clara, the Regional Water Quality Control Board, Department of Toxic Substances Control, California Department of Fish and Wildlife, United States Environmental Protection Agency, United States Fish and Wildlife Service, and Army Corps of Engineers, and all applicable judicial, administrative and regulatory decrees, judgments, orders and written directives relating to the

protection of human health, safety, wildlife or the environment, including, without limitation, (a) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Substances, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Substances; and (b) all requirements pertaining to occupational health, the health and safety of employees or the public. Environmental Requirements include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act; the Emergency Planning and Community Right-to-Know Act; the Hazardous Substances Transportation Act; the Resource Conservation and Recovery Act; the Solid Waste Disposal Act; the Clean Water Act; the Clean Air Act; the Toxic Substances Control Act; the Safe Drinking Water Act; the California Medical Waste Management Act and Radiation Control Law; the Occupational Safety and Health Act; the Federal Water Pollution Control Act; the Federal Insecticide, Fungicide and Rodenticide Act; the Endangered Species Act and the National Environmental Policy Act and any and all state or local law counterparts.

"Event of Default" is defined in Section 16.1.

"Exacerbation" means any direct, material adverse impact on a Pre-Existing Environmental Condition. Exacerbation includes, without limitation, actions which speed, redirect or enhance the migration of groundwater contamination at the Premises in a fashion that causes a material adverse impact (for example, by causing Hazardous Substances to migrate to deeper aquifers), actions which cause damage to or limit the effectiveness of any existing remediation systems or equipment, and actions which give rise to Environmental Claims.

"Excess Rent" is defined in Section 15.4.

"Expiration Date" means the date specified in Article 1.

"Hazardous Substance" means any substance, material or waste:

(a) the presence of which requires investigation or remediation under any Environmental Requirement;

(b) which is or becomes listed, regulated or defined as a "hazardous waste," "hazardous substance," "hazardous material", "toxic substance", "hazardous air pollutant", "pollutant," "infectious waste," "bio-hazardous waste", "medical waste", "radioactive material", "radioactive waste", or "contaminant" under any Environmental Requirement;

(c) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or otherwise hazardous to human health, safety, wildlife or the environment and is or becomes regulated under any Environmental Requirement;

(d) the presence or Release of which at, on, under or from the Premises causes or threatens to cause a nuisance upon the Premises or to surrounding properties or poses or threatens to pose a hazard to the environment or the health or safety of persons on or about the Premises; or

(e) the presence of which on adjacent properties could constitute a trespass by Tenant.

Without limitation of the foregoing, Hazardous Substances shall include gasoline, diesel fuel and other petroleum hydrocarbons and the additives and constituents thereto, including MTBE; polychlorinated biphenals (PCBs); asbestos and asbestos-containing material; lead; urea formaldehyde foam insulation; radon gas and microbial material (including mold).

"Interest Rate" means the annual compounded interest rate equal to a 400 basis points spread over the prime rate of interest published in the Wall Street Journal as of the first date any applicable interest accrues. The Interest Rate shall be reset each month that it is invoked such that the Interest Rate shall be the greater of the Interest Rate owed on the outstanding amount or the current Interest Rate as calculated by the preceding sentence. For the purpose of converting the Interest Rate into a daily compound interest rate, Landlord shall divide the Interest Rate by 365 days.

"Landlord" is defined in the introductory paragraph to this Lease.

"Landlord Parties" is defined in Section 13.4.

"Landlord's Agents" means Landlord's agents, employees and contractors.

"Landlord's Expense Statement" is defined in Section 8.3.

"Landlord's Unavoidable Delay" means any actual delay in the completion of the Base Building Work caused by: (a) Acts of God (including without limitation, lightning, earthquake, fire, storm, hurricane, tornado, flood, washout or rain affecting the job site, access to the site or the supply chain), explosion, strikes, lock-outs, inability to obtain necessary equipment, supplies or materials through ordinary sources by reason of regulation or order of any government or regulatory body, civil disturbance, act of a public enemy, war, riot, sabotage, blockade; (b) delays in obtaining any required entitlements, permits, inspections, approvals and final signoffs from governmental authorities; (c) the construction of the Tenant Improvement Work to the extent such construction is performed in a manner which is inconsistent with this Work Letter and impedes or damages the Base Building Work; (d) delay in the completion of the Final Plans and/or the construction of the Base Building Work to the extent caused by unforeseen changes in any Applicable Laws after the Effective Date (including, without limitation, the ADA); (e) Tenant's failure to meet the deadlines and schedules described in this Work Letter; or (f) any other similar cause beyond the reasonable control of Landlord, or any of its contractors or other representatives.

"L-C" is defined in Section 6.5(a)

"L-C Amount" is defined in Section 6.5(a).

"L-C Event" is defined in Section 6.5(b).

"Lines" is defined in Section 10.7.

"Losses" is defined in Section 14.1.

"Milestone Schedule" means the schedule for the design, approval and construction of the Base Building Work and the Tenant Improvement Work, as amended from time to time in accordance with **Exhibit D**. The initial Milestone Schedule is attached hereto as ***Attachment 2*** to **Exhibit D**.

"Modification Costs" are defined in Section 2.5 of **Exhibit D**.

"Move-Out Date" is defined in Section 21.1.

"Offer" is defined in Section 15.5.

"Offer Notice" is defined in Section 5.3.

"Operating Expenses" are defined in Section 8.2.

"Outside Completion Date" is defined in Section 4.4.

"Parking Area" is defined in Section 2.3.

"Permitted Transfer" is defined in Section 15.7.

"Permitted Transferee" is defined in Section 15.7.

"Permitted Use" is defined in Article 1.

"Pre-Existing Environmental Condition" is defined in Section 13.11.

"Preliminary Plans" are defined in Section 2.1(a) of **Exhibit D**.

"Premises" is defined in Section 1.

"Prevailing Market Rent" is defined in Exhibit C.

"Project" is defined in Section 2.1.

"Property" is defined in Section 2.1.

"Punch List Items" means any incomplete items, items requiring correction, or defective items in the construction of the Shell Components or Core Components that do not materially interfere with the ability of the Tenant Improvement Contractor to complete and perform the Tenant Improvement Work or for Tenant to legally occupy the Premises upon completion of the Tenant Improvement Work.

"Real Estate Taxes" are defined in Section 8.2(a).

"Release" with respect to Hazardous Substances, means any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Substances into the environment; provided that "Release" shall not include the migration, seepage or discharge on, over or across the Premises of any Hazardous Substance that originates off of the Premises.

"Remaining Substances" is defined in Section 13.5(d).

"Renewal Option" is defined in Section 5.2.

"Renewal Term" is defined in Section 5.2.

"Rent" is defined in Section 6.3.

"Rentable Area" means the Gross Floor Area of the Building, as defined in Chapter 18 of the City's Zoning Ordinance. The definition includes, but is not limited to, calculating the total area of all floors of a building measured to the outside surfaces of exterior walls, and includes all of the following: (i) halls, (ii) stairways, (iii) elevators shafts, (iv) service and mechanical equipment rooms, (v) basement, cellar or attic areas deemed usable by the Director of Planning and Community Environment, (vi) open or roofed porches, arcades, plazas, balconies, courts, walkways, breezeways or porticos if located above the ground floor and used for required access, and (vii) permanently roofed, but either partially enclosed or unenclosed, building features used for sales, service, display, storage or similar uses. Rentable Area shall also include any amenity space in the Building.

"ROFO" is defined in Section 5.3.

"*ROFO Premises*" is defined in Section 5.3.

"Rules and Regulations" is defined in Section 24.1**.**

"Security Deposit Laws" is defined in Section 6.5(d).

"Scheduled Access Date" means the date specified in Article 1, subject to extension for a Landlord's Unavoidable Delay.

"Shell" and/or ***"Shell Components"*** are described in ***Attachment 1*** to **Exhibit D**.

"Space Plan" is defined in Section 3.3(a) of **Exhibit D**.

"Sublease" is defined in Section 15.1.

"Substantial Completion" or ***"Substantially Complete"*** means the substantial completion of the Shell Components and Core Components, as certified by the Base Building Architect by a factually correct notice to Tenant confirming that the Shell Components and Core Components have been substantially completed in all material respects in accordance with Section 2 of **Exhibit D,** such that the only additional work to be completed by the Base Building Contractor is Punch List Items.

"Substantial Completion Inspection" is defined in Section 2.7 of **Exhibit D**.

"Successor" is defined in Section 17.5.

"Supplemental Audit" is defined in Section 13.7.

"TDM Fees" is defined in Section 7.3.

"Tenant" is defined in the introductory paragraph to this Lease.

"Tenant Delay" means any delay in the completion of the Base Building Work to the extent caused or contributed to by (i) any failure of Tenant to comply with the approval schedules set forth herein; (ii) any Tenant Modification; or (iii) Tenant's failure to make any payment as and when

required under **Exhibit D**; provided that no act or omission by Tenant or Tenant's Agents shall be deemed to cause a Tenant Delay unless Landlord provides Tenant with written notice of the specific act or omission and Tenant fails to cure the same within five (5) Business Days thereafter.

"Tenant Environmental Activity" means (a) any use, treatment, keeping, handling, storage, transport, sale or Release at, on, under or from the Premises of any Hazardous Substance during the Term by Tenant or any Tenant Agent, or (b) the Exacerbation of any Pre-Existing Environmental Condition, as defined in Section 13.11, to the extent such Exacerbation is the result of, or is related to the acts or omissions of Tenant or Tenant's Agents, subtenants or invitees on or about the Premises during the Term.

"Tenant Improvement Allowance" is specified in Article 1.

"Tenant Improvement Contract" means the contract with the Tenant Improvement Contractor for the construction of the Tenant Improvement Work.

"Tenant Improvement Contractor" means the general contractor for the construction of the Tenant Improvement Work, who shall be selected by Tenant and approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Subject to Landlord's foregoing approval right, Tenant shall have the right to solicit multiple bids prior to selection of the Tenant Improvement Contractor.

"Tenant Improvement Costs" means the actual costs of the Tenant Improvement Work, including the fees and expenses payable to Tenant's Architect, consultants and third party managers, design and development costs, fees for the Tenant Improvement Permits and construction costs. Tenant Improvement Costs shall not include, and the Tenant Improvement Allowance shall not be spent on, furniture, demountable partitions or other personal property.

"Tenant Improvement Permits" means all permits, licenses and other approvals necessary to construct the Tenant Improvement Work in compliance with all Applicable Laws.

"Tenant Improvement Plans" are defined in Section 3.3(b) of **Exhibit D**.

"Tenant Improvement Work" means all work required to finish the Premises to a condition acceptable for the conduct of Tenant's business and not specifically included in the Base Building Work.

"Tenant Modifications" are defined in Section 2.5 of **Exhibit D**.

"Tenant Obligations" is defined in Section 9.3.

"Tenant Systems" is defined in Section 9.3.

"Tenant's Agents" is defined in Section 2.1.

"Tenant's Architect" means the licensed architect engaged by Tenant, and approved by Landlord in its reasonable discretion, to develop the Space Plan and working drawings for, and to oversee the construction of, the Tenant Improvement Work.

"Tenant's Architect Agreement" means the agreement between Tenant and Tenant's Architect for the design and oversight of the Tenant Improvement Work.

"Tenant's Property" is defined in Section 10.9.

"Tenant's Unavoidable Delay" means any actual delay in the completion of the Tenant Improvement Work caused by: (a) Acts of God (including without limitation, lightning, earthquake, fire, storm, hurricane, tornado, flood, washout or rain affecting the job site, access to the site or the supply chain), explosion, strikes, lock-outs, inability to obtain necessary equipment, supplies or materials through ordinary sources by reason of regulation or order of any government or regulatory body, civil disturbance, act of a public enemy, war, riot, sabotage, blockade; (b) the construction of the Shell Components and Core Components to the extent such construction is performed in a manner which is inconsistent with this Work Letter and impedes or damages the Tenant Improvement Work; (c) delay in the construction of the Tenant Improvement Work to the extent caused by unforeseen changes in any Applicable Laws after the Effective Date (including, without limitation, the ADA); (d) Landlord's failure to meet the Scheduled Access Date; (e) any defects in the Shell Components or Core Components that materially adversely affect the construction of the Tenant Improvement Work, including without limitation Tenant's ability to obtain building permits, permit sign-offs and/or a certificate of occupancy; or (f) any other similar cause beyond the reasonable control of Tenant, or any of its contractors or other representatives. Tenant's Unavoidable Delay shall not include (i) Tenant's financial inability; (ii) economic downturn; (iii) delays in Tenant's obtaining any required entitlements, permits, inspections, approvals and final signoffs from governmental authorities, except to the extent arising due to Landlord's failure to complete construction of the Shell Components or the Core Components.

"Term" is defined in Article 1 and Section 5.1.

"Termination Date" is defined in Section 5.1.

"Transfer" is defined in Section 15.5.

"Transfer Costs" is defined in Section 15.4.

"Transfer Notice" is defined in Section 15.2.

"Transferee" is defined in Section 15.2.

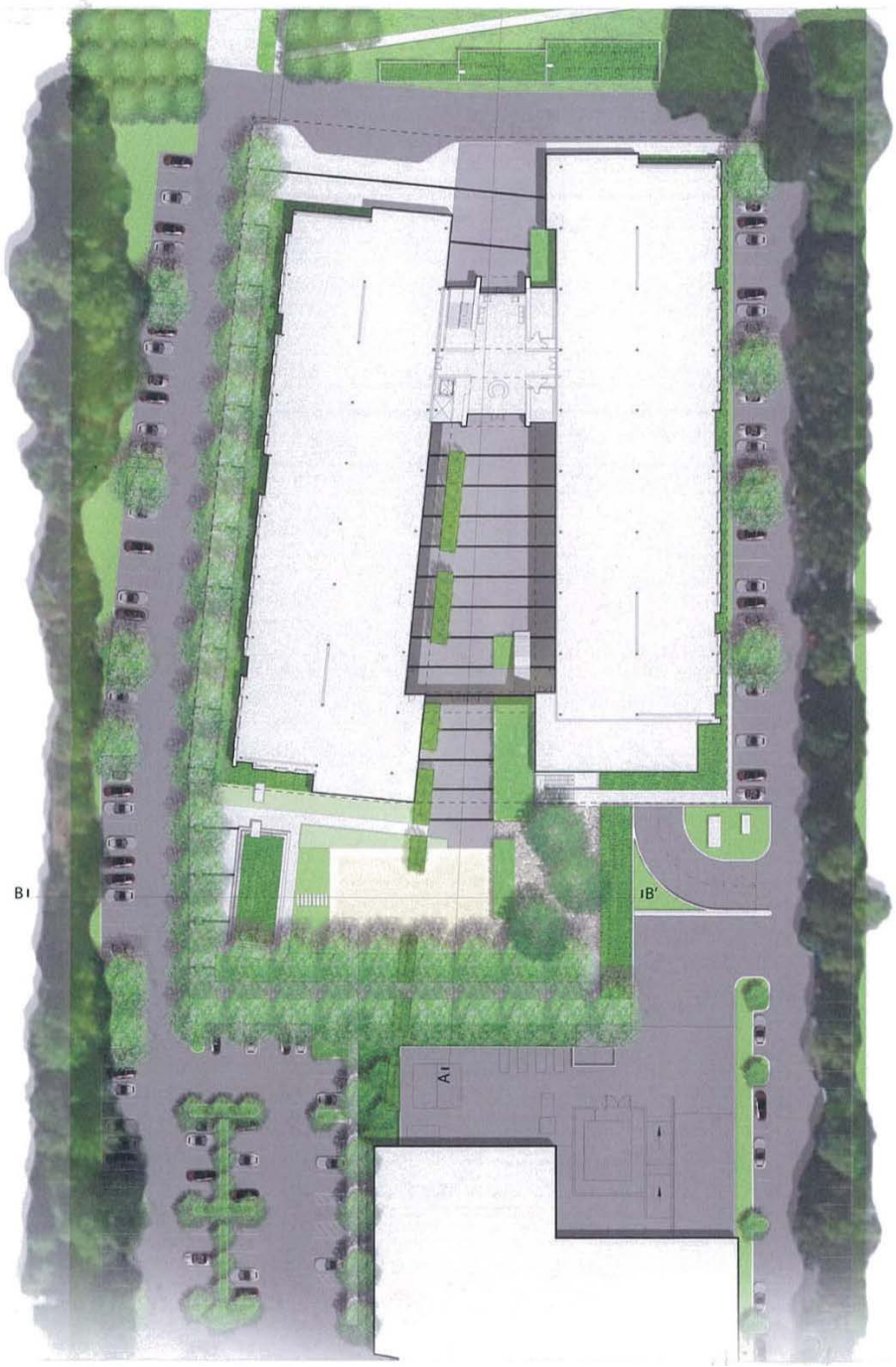
"Transportation Demand Management" is a set of programs and policies that respond to real and perceived barriers to taking trips by transit, bicycling, walking or carpooling/vanpooling, and that use market signals to reduce drive-alone trips. Transportation Demand Management strategies include information and education, incentives, physical changes, technology and pricing. Transportation Demand Management programs may be implemented by Landlord, the City or other governmental agency.

"Triggering Event" is defined in Section 13.10.

"Unrestricted Use" means a condition allowing any use of real property, including without limitation residential, hospital or day care, without any engineering controls or deed restrictions.

EXHIBIT A

TENTATIVE SITE PLAN OF PREMISES



SITE PLAN
SCALE 1"=20'-0"

EXHIBIT B

NOTICE OF COMMENCEMENT DATE,
EXPIRATION DATE, BASE RENT AND RENTABLE AREA

_____, 2014

_____
_____

Attention:_____

Re: Lease between The Board of Trustees of the Leland Stanford Junior University (Landlord), and _____ (Tenant), for premises located at _____, Palo Alto, California

Gentlemen/Ladies:

This letter will confirm the following for all purposes under the Lease:

The Tenant Improvement Allowance is $_____
The Commencement Date is _____
The Expiration Date is _____
The Rentable Area of the Premises is _____
The Base Rent for the initial Term is as follows:

Period During Lease Term	Monthly Base Rent per sq. ft. of Rentable Area	Monthly Base Rent
_____ - _____	$5.50	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____
_____ - _____	$_____	$_____

Please acknowledge your acceptance of this letter by signing and returning two copies of this letter.

Very truly yours,

The Board of Trustees of the
Leland Stanford Junior University

By: _____

Its: _____

EXHIBIT C

DETERMINATION OF PREVAILING MARKET RENT

The term ***"Prevailing Market Rent"*** means the base monthly rent per rentable square foot (net of all expenses) for direct leases from the landlord (as opposed to subleases) of space of comparable size and location to the Premises and in buildings similar in age and quality to the Premises for a comparable term, taking into account any additional rent and all other payments or escalations then being charged and allowances and economic concessions being given in the Stanford Research Park for such comparable space over a comparable term. The Prevailing Market Rent shall be determined by Landlord and Landlord shall give Tenant written notice of such determination not later than thirty (30) days after delivery by Tenant of Tenant's notice of exercise of the Renewal Option. If Tenant disputes Landlord's determination of the Prevailing Market Rent, Tenant shall so notify Landlord within ten (10) Business Days following Landlord's notice to Tenant of Landlord's determination and, in such case, the Prevailing Market Rent shall be determined as follows:

(a) Within thirty (30) days following Tenant's notice to Landlord that it disputes Landlord's determination of the Prevailing Market Rent, Landlord and Tenant shall meet no less than two (2) times, at a mutually agreeable time and place, to attempt to agree upon the Prevailing Market Rent.

(b) If within this 30-day period Landlord and Tenant cannot reach agreement as to the Prevailing Market Rent, they shall each select one appraiser to determine the Prevailing Market Rent. Each such appraiser shall arrive at a determination of the Prevailing Market Rent and submit his or her conclusions to Landlord and Tenant within thirty (30) days after the expiration of the 30-day consultation period described in (a) above.

(c) If only one appraisal is submitted within the requisite time period, it shall be deemed to be the Prevailing Market Rent. If both appraisals are submitted within such time period, and if the two appraisals so submitted differ by less than ten (10) percent of the higher of the two, the average of the two shall be the Prevailing Market Rent. If the two appraisals differ by more than ten (10) percent of the higher of the two, then the two appraisers shall immediately select a third appraiser who will within thirty (30) days of his or her selection make a determination of the Prevailing Market Rent and submit such determination to Landlord and Tenant. This third appraisal will then be averaged with the closer of the previous two appraisals and the result shall be the Prevailing Market Rent.

(d) All appraisers specified pursuant hereto shall be members of the American Institute of Real Estate Appraisers with not less than five (5) years' experience appraising office, research and development and industrial properties in the San Francisco/Peninsula/South Bay area. Each party shall pay the cost of the appraiser selected by such party and one-half of the cost of the third appraiser plus one-half of any other costs incurred in the determination.

EXHIBIT D

WORK LETTER

The purpose of this **Exhibit D** is to delineate the responsibilities of Landlord and Tenant with respect to the design and construction of the Base Building Work and the Tenant Improvement Work, subject to the satisfaction of the contingencies set forth in Section 4 of the Lease.

1. Definitions. Terms defined in the Lease, including without limitation, the exhibits thereto, and not otherwise defined in this **Exhibit D** shall have the meanings assigned in the Lease. As used herein, the following terms shall have the following meanings:

"Actual Access Date" is defined in Section 2.4 below.

"ARB" is defined in Section 2.1(a) below.

"Base Building Architect" means the architect for the Base Building Work, who shall be designated by Landlord.

"Base Building Construction Drawings" are defined in Section 2.1(c) below.

"Base Building Contractor" means the general contractor for the Base Building Work, who shall be designated by Landlord.

"Base Building Permit Submittal" is defined in Section 2.1(c) below.

"Base Building Plans" are defined in Section 2.1(b) below.

"Base Building Work" means the improvement work described in ***Attachment 1*** to this **Exhibit D**. ***Attachment 1*** is comprised of ***Attachment 1A*** (Base Building Work Description) and ***Attachment 1B*** (Construction Responsibility Matrix), and references to ***Attachment 1*** shall be deemed to refer to both such components. The Base Building Work consists of (a) the Shell Components, (b) the Core Components, and (c) the Common Area Improvements.

"Code Requirements" are defined in ***Attachment 1A*** to this **Exhibit D**.

"Common Area Improvements" are described in ***Attachment 1*** to this **Exhibit D**.

"Core" and/or ***"Core Components"*** are described in ***Attachment 1*** to this **Exhibit D**.

"Final Plans" are defined in Section 3.3(b) below.

"Formal ARB Submittal Plans" are defined in Section 2.1(a) below.

"Landlord's Unavoidable Delay" means any actual delay in the completion of the Base Building Work caused by: (a) Acts of God (including without limitation, lightning, earthquake, fire, storm, hurricane, tornado, flood, washout or rain affecting the job site, access to the site or the supply chain), explosion, strikes, lock-outs, inability to obtain necessary equipment, supplies or materials through ordinary sources by reason of regulation or order of any government or regulatory body, civil disturbance, act of a public enemy, war, riot, sabotage, blockade; (b) delays in obtaining

any required entitlements, permits, inspections, approvals and final signoffs from governmental authorities; (c) the construction of the Tenant Improvement Work to the extent such construction is performed in a manner which is inconsistent with this Work Letter and impedes or damages the Base Building Work; (d) delay in the completion of the Final Plans and/or the construction of the Base Building Work to the extent caused by unforeseen changes in any Applicable Laws after the Effective Date (including, without limitation, the ADA); (e) Tenant's failure to meet the deadlines and schedules described in this Work Letter; or (f) any other similar cause beyond the reasonable control of Landlord, or any of its contractors or other representatives.

"Milestone Schedule" means the schedule for the design, approval and construction of the Base Building Work and the Tenant Improvement Work, as amended from time to time in accordance with this **Exhibit D**. The initial Milestone Schedule is attached hereto as ***Attachment 2*** to this **Exhibit D**.

"Modification Costs" are defined in Section 2.5 below.

"Preliminary Plans" are defined in Section 2.1(a) below.

"Punch List Items" means any incomplete items, items requiring correction, or defective items in the construction of the Shell Components or Core Components that do not materially interfere with the ability of the Tenant Improvement Contractor to perform and complete the Tenant Improvement Work or for Tenant to legally occupy the Premises upon completion of the Tenant Improvement Work.

"Scheduled Access Date" means the date specified in Article 1 of the Lease, subject to extension for a Landlord's Unavoidable Delay.

"Shell" and/or ***"Shell Components"*** are described in ***Attachment 1*** to this **Exhibit D**.

"Space Plan" is defined in Section 3.3(a) below.

"Substantial Completion" or ***"Substantially Complete"*** means the substantial completion of the Shell Components and Core Components, as certified by the Base Building Architect by a factually correct notice to Tenant confirming that the Shell Components and Core Components have been substantially completed in all material respects in accordance with Section 2 of this **Exhibit D,** such that the only additional work to be completed by the Base Building Contractor is Punch List Items.

"Substantial Completion Inspection" is defined in Section 2.7 below.

"Tenant Delay" means any delay in the completion of the Base Building Work to the extent caused or contributed to by (i) any failure of Tenant to comply with the approval schedules set forth herein; (ii) any Tenant Modification; or (iii) Tenant's failure to make any payment as and when required under this **Exhibit D**; provided that no act or omission by Tenant or Tenant's Agents shall be deemed to cause a Tenant Delay unless Landlord provides Tenant with written notice of the specific act or omission and Tenant fails to cure the same within five (5) Business Days thereafter.

"Tenant Improvement Allowance" means the amount set forth in Article 1 of the Lease, as adjusted pursuant to Section 5.1 below.

"Tenant Improvement Contract" means the contract with the Tenant Improvement Contractor for the construction of the Tenant Improvement Work.

"Tenant Improvement Contractor" means the general contractor for the construction of the Tenant Improvement Work, who shall be selected by Tenant and approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Subject to Landlord's foregoing approval right, Tenant shall have the right to solicit multiple bids prior to selection of the Tenant Improvement Contractor.

"Tenant Improvement Costs" means the actual costs of the Tenant Improvement Work, including the fees and expenses payable to Tenant's Architect, consultants and third party managers, design and development costs, fees for the Tenant Improvement Permits and construction costs. Tenant Improvement Costs shall not include, and the Tenant Improvement Allowance shall not be spent on, furniture, demountable partitions or other personal property.

"Tenant Improvement Permits" means all permits, licenses and other approvals necessary to construct the Tenant Improvement Work in compliance with all Applicable Laws.

"Tenant Improvement Plans" are defined in Section 3.3(b) below.

"Tenant Improvement Work" means all work required to finish the Premises to a condition acceptable for the conduct of Tenant's business and not specifically included in the Base Building Work.

"Tenant Modifications" are defined in Section 2.5 below.

"Tenant's Architect" means the licensed architect engaged by Tenant, and approved by Landlord in its reasonable discretion, to develop the Space Plan and working drawings for, and to oversee the construction of, the Tenant Improvement Work.

"Tenant's Architect Agreement" means the agreement between Tenant and Tenant's Architect for the design and oversight of the Tenant Improvement Work.

"Tenant's Unavoidable Delay" means any actual delay in the completion of the Tenant Improvement Work caused by: (a) Acts of God (including without limitation, lightning, earthquake, fire, storm, hurricane, tornado, flood, washout or rain affecting the job site, access to the site or the supply chain), explosion, strikes, lock-outs, inability to obtain necessary equipment, supplies or materials through ordinary sources by reason of regulation or order of any government or regulatory body, civil disturbance, act of a public enemy, war, riot, sabotage, blockade; (b) the construction of the Shell Components and Core Components to the extent such construction is performed in a manner which is inconsistent with this Work Letter and impedes or damages the Tenant Improvement Work; (c) delay in the construction of the Tenant Improvement Work to the extent caused by unforeseen changes in any Applicable Laws after the Effective Date (including, without limitation, the ADA); (d) Landlord's failure to meet the Scheduled Access Date; (e) any defects in the Shell Components or Core Components that materially adversely affect the construction of the Tenant Improvement Work, including without limitation Tenant's ability to obtain building permits, permit sign-offs and/or a certificate of occupancy; or (f) any other similar cause beyond the reasonable control of Tenant, or any of its contractors or other representatives. Tenant's Unavoidable Delay shall not include (i) Tenant's financial inability; (ii) economic downturn; (iii) delays in Tenant's obtaining any required entitlements, permits, inspections, approvals and final

signoffs from governmental authorities, except to the extent arising due to Landlord's failure to complete construction of the Shell Components or the Core Components.

2. Design and Construction of Base Building Work. Landlord shall diligently prosecute the design, approval by governmental authorities, and construction of the Base Building Work and cause the Base Building Work to be performed in a first class manner (in consideration of the prominence of the location of the Property in the Stanford Research Park), in compliance in all material respects with the approved Preliminary Plans, Base Building Plans, Base Building Construction Drawings, and all Applicable Laws (including, without limitation, the ADA). Tenant acknowledges that Landlord intends to construct the Base Building Work so that the Shell Components and Core Components are reasonably equivalent to LEED Gold status version 3 (which may include the acquisition of utility services from renewable resources). Landlord agrees to pursue all other reasonable LEED points before proposing utility services from renewable resources.

2.1 Preliminary Plans; Base Building Plans.

(a) **Preliminary Plans.** Prior to its submittal to the City, Landlord shall deliver to Tenant the proposed submittal to the City's Architectural Review Board (***"ARB"***) for the preliminary ARB hearing regarding the entitlement and development of the Building, which submittal package shall be referred to in this **Exhibit D** as the ***"Preliminary Plans"***. Tenant shall either approve the same, or deliver to Landlord in writing Tenant's specific questions, concerns or requested changes within ten (10) Business Days after receipt. Failure of Tenant to deliver to Landlord such written notice within said period shall constitute approval of the Preliminary Plans by Tenant.

(i) If Tenant's requested changes are unacceptable to Landlord, Landlord and Tenant shall meet together to explore reasonable alternatives and to agree to mutually acceptable changes to the Preliminary Plans within ten (10) Business Days after delivery to Landlord of Tenant's requested changes. Tenant acknowledges that the design and construction of the Building is under Landlord's control as the owner of the Building, and that Tenant's right to object to the Preliminary Plans may be based only on one or both of the following: (A) that they include a design element that materially interferes with Tenant's planned use of the Premises; provided that Tenant has provided to Landlord in writing sufficient details regarding Tenant's planned use to allow Landlord to accommodate such planned use, or (B) that they are not in conformity with the requirements and specifications contained in ***Attachment 1***). If Landlord and Tenant cannot agree to mutually acceptable changes within such ten (10) Business Day period, then Landlord shall have the final decision in its sole discretion whether or not to include such changes in the Formal ARB Submittal Plans.

(ii) If Tenant desires that some or all of the requested changes that Landlord does not accept be constructed by Landlord as Tenant Modifications (as defined in Section 2.5 below), the provisions of Section 2.5 shall apply. Landlord and Tenant shall meet and confer on a regular basis regarding the refinement of the Preliminary Plans in order to allow Landlord to complete the "formal" ARB submittal package by the milestone date set forth in ***Attachment 2***, which submittal package shall be referred to in this **Exhibit D** as the ***"Formal ARB Submittal Plans"***.

(b) **Base Building Plans.** Once the Preliminary Plans are final pursuant to the process described in subsection (a) above (whether in their original form, or with changes that Landlord has agreed to construct (whether as part of the Base Building Work or as a Tenant Modification), Landlord shall cause to be prepared (i) a site plan showing the location and dimensions of the Base Building Work, (ii) design development documents for the Base Building Work including, but not limited to: plans showing the proposed building elevations, and appropriate details as to Building Shell, Core Improvements and Common Area Improvements, including the proposed location, configuration, dimensions, composition and installation thereof, and (iii) such other information reasonably necessary for Tenant to develop the Space Plan (the ***"Base Building Plans"***). Landlord shall deliver the Base Building Plans to Tenant as soon as reasonably practical after approval of the Preliminary Plans, but in no event later than one hundred twenty (120) days after City approval of the Formal ARB Submittal Plans.

(i) Within fifteen (15) Business Days after Tenant's receipt of the Base Building Plans, Tenant shall either approve the same, or deliver to Landlord in writing Tenant's specific objections thereto, together with Tenant's proposed solution to each such objection. Failure of Tenant to deliver to Landlord written notice of its objections within said period shall constitute approval of the Base Building Plans by Tenant. Tenant's right to object to the Base Building Plans shall be limited to those aspects that either (A) change the design of the Building so that the modified design materially interferes with Tenant's planned use of the Premises (as described by Tenant in writing pursuant to Section 2.1(a)(i) above), or (B) include other changes that are not in conformity with the requirements and specifications contained in the Preliminary Plans or ***Attachment 1***. In the event Tenant objects to aspects other than those permitted above, then any changes based upon such objections shall be a Tenant Modification; provided such changes are approved by Landlord in its sole discretion.

(ii) If Landlord agrees with Tenant's objections and proposed solutions, if any, to the Base Building Plans (whether as part of the Base Building Work or a Tenant Modification), Landlord shall instruct the Base Building Architect to make appropriate revisions thereto. If Tenant's requested changes are unacceptable to Landlord, Landlord shall designate by written notice to Tenant the specific items that are not acceptable, and the reasons for such determination. Landlord and Tenant shall meet together to explore and identify reasonable alternatives and to agree to mutually acceptable changes to the Base Building Plans within ten (10) Business Days after delivery to Landlord of Tenant's requested changes. If Landlord and Tenant cannot agree to mutually acceptable changes within such ten (10) Business Day period, then Landlord shall have the final decision in its sole discretion whether or not to further modify the Base Building Plans as requested by Tenant.

(c) **Permit Submittal and Construction Drawings.** Concurrently with Landlord's first submittal to the City for review, approval and issuance of the building permit, Landlord shall deliver to Tenant the permit submittal plans (the ***"Base Building Permit Submittal"***). Within fifteen (15) Business Days after Tenant's receipt of the Base Building Permit Submittal, Tenant shall either approve the same, or deliver to Landlord in writing Tenant's specific objections thereto, together with Tenant's proposed solution to each such objection. Failure of Tenant to deliver to Landlord written notice of its objections within said period shall constitute approval of the Base Building Permit Submittal by Tenant. Tenant's right to object to the Base Building Permit Submittal shall be limited to those aspects that either (A) change the design of the Building so that the modified design materially interferes with Tenant's planned use of the Premises (as identified in writing to Landlord pursuant to Section 2.1(a)(i) above), or (B) include other changes that are

not in conformity with the requirements and specifications contained in the approved Base Building Plans or ***Attachment 1***. In the event Tenant objects to aspects other than those permitted above, then any changes based upon such objections shall be a Tenant Modification if approved by Landlord in its sole discretion. If Landlord agrees with Tenant's objections and proposed solutions, if any, to the Base Building Permit Submittal, Landlord shall instruct the Base Building Architect to make appropriate revisions thereto (whether as part of the Base Building Work or a Tenant Modification). If Tenant's requested changes are unacceptable to Landlord, Landlord shall designate by written notice to Tenant the specific items that are not acceptable, and the reasons for such determination. Landlord shall have the final decision in its sole discretion whether or not to further modify the Base Building Permit Submittal requested by Tenant. Once the building permit has been issued, Landlord shall deliver to Tenant the final City-approved working drawings for the construction of the Base Building Work (the ***"Base Building Construction Drawings"***), which will include changes made in response to City plan check comments.

2.2 Schedule; Coordination. During the development and construction of the Base Building Work, and when certain milestones are achieved, Landlord shall distribute to Tenant updates to the Milestone Schedule that are prepared in connection with the Base Building Work, and Landlord and Tenant shall participate in regularly scheduled meetings to coordinate the Base Building Work with the Tenant Improvement Work. Landlord shall keep Tenant informed of all material changes in the Milestone Schedule so that Tenant may coordinate its construction work accordingly.

2.3 Tenant's Project Manager. Tenant shall enter into a contract with a third-party project manager reasonably approved by Landlord, and shall use commercially reasonable efforts to do so within sixty (60) days after the Effective Date of the Lease. Tenant's project manager will participate in meetings when requested to do so by Landlord, and otherwise provide project management services to Tenant. If Tenant's project manager is not granted decision-making authority on behalf of Tenant, Tenant shall also designate a representative who does have decision-making authority, and such representative shall also participate in any requested meetings. Tenant's designated project manager or other representative shall be the only person authorized to communicate with Landlord or to request Tenant Modifications.

2.4 Early Access and Joint Construction. Landlord shall allow Tenant early access to the Premises for the construction of the Tenant Improvement Work as early in the process of constructing the Base Building Work as is reasonably possible; provided that (a) such early access will not interfere with the timely completion of the Base Building Work, and (b) such early access will not delay any critical dates for the Substantial Completion of the Base Building Work. As of the Effective Date, the parties anticipate that Tenant will be permitted early access to the Premises for the construction of the Tenant Improvement Work on or before the Scheduled Access Date set forth in Article 1 of the Lease.

(a) Landlord shall use commercially reasonable efforts to provide Tenant with at least thirty (30) days prior written notice of the date that the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work (the ***"Actual Access Date"***), but in no event shall the Actual Access Date occur until Tenant has received written notice of such date. Representatives of Landlord and Tenant shall accompany the Base Building Contractor and the Tenant Improvement Contractor on a walk-through and inspection of the Premises to determine if the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work, which shall occur no later than three (3) Business

Days prior to the Actual Access Date. Tenant shall have three (3) Business Days after the walk-through to deliver written notice to Landlord if Tenant disagrees that the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work, and to provide a reasonably detailed list of all items that it considers insufficiently complete. In the event of such disagreement, (i) Landlord shall use commercially reasonable efforts to complete its work with respect to the unfinished items set forth on Tenant's list, (ii) on or prior to completion of such work, Landlord shall notify Tenant in writing of a proposed date for a subsequent walk-through and inspection of the Premises and (iii) on that date, or such other date as may be mutually agreed between Landlord and Tenant, representatives of Landlord and Tenant shall accompany the Base Building Contractor and the Tenant Improvement Contractor on a subsequent walk-through and inspection of the Premises to determine if the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work. If Tenant disagrees that the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work after such subsequent walk-through then, within three (3) Business Days thereafter, the parties and their respective contractors shall meet and confer in good faith regarding such disagreement. Neither party shall delay or suspend the construction process hereunder on account of such disagreement, and shall continue to perform the Base Building Work or Tenant Improvement Work as provided in this **Exhibit D**. Notwithstanding anything to the contrary set forth in the Lease or this **Exhibit D**, the Actual Access Date shall not occur until the parties have agreed that the Tenant Improvement Contractor may commence and proceed with construction of the Tenant Improvement Work.

(b) As of the Actual Access Date, Tenant shall deliver to Landlord evidence of the insurance that Tenant is required to maintain pursuant to the Lease, and Tenant's indemnity obligations shall become effective. Tenant and Tenant's Agents shall comply with all requirements of the Lease that are applicable during the early access period (e.g. no waste or nuisance, liability for Tenant Environmental Activity, Tenant's indemnity obligations, etc.). Tenant and Landlord shall use commercially reasonable efforts to avoid interference with the work that will be occurring by each party concurrently on the Property and shall cause their respective contractors, sub-contractors and suppliers to reasonably coordinate and cooperate so that neither party's work unreasonably interferes with the construction of the other party's work.

2.5 Tenant Modifications. Any modifications to the Shell Components and Core Components requested by Tenant other than those modifications related to matters over which Tenant has approval rights pursuant to Section 2.1 above, and any such modifications subsequently requested by Tenant and approved by Landlord in its sole discretion during the course of construction pursuant to this Section 2.5 (collectively, ***"Tenant Modifications"***) shall be designed and constructed at Tenant's sole cost and expense. If Tenant desires any Tenant Modifications to the Base Building Work from the final Base Building Plans in order to accommodate the Tenant Improvement Work, Tenant shall deliver a request in writing to Landlord for Landlord's review and approval. Landlord's construction representative shall review such Tenant Modification request and approve or deny such request within ten (10) Business Days after receipt of such request, and if such request is denied, shall state in writing the reason for such denial. If such request is denied, then Landlord and Tenant shall meet and confer within five (5) Business Days to attempt to resolve any issues which they have as to such requested Tenant Modification; provided that Landlord shall have the final decision in its sole discretion whether or not to proceed with the proposed Tenant Modification. If Landlord approves Tenant's request for Tenant Modifications, Landlord shall prepare and deliver to Tenant an estimate of the incremental increased cost of designing and constructing such modifications, if any (the ***"Modification Costs"***). Tenant shall have five (5) Business Days

after receipt of such estimate to revoke its request for the proposed Tenant Modifications by written notice to Landlord or to request that Landlord modify such Tenant Modification to reduce the Modification Costs. Actual Modification Costs paid to third parties shall be deducted from the Tenant Improvement Allowance, such that the Tenant Improvement Allowance shall be reduced by the total amount of all Modification Costs. Tenant shall have no right to any further Tenant Modifications once the Tenant Improvement Allowance has been fully paid by Landlord unless Tenant agrees to pay Landlord for such costs as and when invoices for such costs are delivered to Tenant by Landlord or the Base Building Contractor. If Tenant Modifications delay Substantial Completion of the Shell Components or Core Components, Substantial Completion shall be deemed to have occurred on the date Substantial Completion would have occurred but for the Tenant Modifications.

2.6 Landlord Changes. During construction of the Base Building Work, Landlord shall deliver to Tenant copies of any proposed changes to the Base Building Work from the final Base Building Plans that Landlord reasonably determines could have a material adverse impact on the design and construction of the Tenant Improvement Work. Tenant shall review such proposed change within five (5) Business Days after receipt of notice, and if the Tenant reasonably objects to the proposed change, shall state in writing the reason for such denial. Failure to deliver notice of objections by 5:00 p.m. local time on the fifth (5th) Business Day shall constitute Tenant's approval of same. If Landlord intends to proceed with the change despite Tenant's objection, Landlord and Tenant shall meet within five (5) Business Days to attempt to resolve Tenant's objection; provided that Landlord shall have the final decision in its sole discretion whether or not to proceed with the proposed change.

2.7 Substantial Completion. Landlord shall diligently prosecute the construction of the Base Building Work and use diligent efforts to achieve Substantial Completion of the Shell Components and Core Components by the dates identified in the Milestone Schedule, subject to Landlord's Unavoidable Delays. Landlord shall notify Tenant in writing when Landlord believes that Substantial Completion of the Shell Components and Core Components has occurred (or will occur on a specified date). Representatives of Landlord and Tenant shall accompany the Base Building Architect and the Base Building Contractor on a walk-through and inspection of the Premises (the ***"Substantial Completion Inspection"***) when the Base Building Architect and Base Building Contractor determine if Substantial Completion of the Shell Components and Core Components has occurred. The Base Building Architect shall certify in writing the date of Substantial Completion, and Landlord shall cause a copy of such certification to be delivered to Tenant. Within five (5) Business Days after the Substantial Completion Inspection, Landlord shall send to Tenant a written list of the Punch List Items identified during the Substantial Completion Inspection. Tenant shall have five (5) Business Days after receipt to send a written notice to Landlord requesting that additional Punch List Items be added, which Landlord shall approve or disapprove in its reasonable discretion. Upon the completion of all Punch List Items, Tenant shall sign the acceptance attached as ***Attachment 3*** to this **Exhibit D**. Tenant's failure to notify Landlord in writing of any reasonable grounds for not acknowledging acceptance within five (5) Business Days after such walk-through shall be deemed to be acceptance of the work whether or not Tenant executes ***Attachment 3***. Substantial Completion and Tenant's acceptance of the Premises shall not be conditioned upon completion of all Common Area Improvements or Punch List Items unless such Common Area Improvements or Punch List Items materially adversely affect the construction of the Tenant Improvement Work or Tenant's ability to obtain permits, permit sign-offs, or a certificate of occupancy.

2.8 Punch List Items and Final Completion. Landlord shall use commercially reasonable efforts to cause the completion of the Punch List Items within ninety (90) days after Substantial Completion, subject to Landlord's Unavoidable Delay. Completion of the Punch List Items shall be undertaken so as to minimize any material interference with Tenant's construction of the Tenant Improvement Work and Tenant's occupancy of the Premises. Landlord shall notify Tenant upon receipt by Landlord of notice from the Base Building Contractor that final completion has occurred. Representatives of Landlord and Tenant shall accompany the Base Building Architect and the Base Building Contractor on a walk-through and inspection of the Premises to determine if final completion has occurred. If there are any remaining Punch List Items, Landlord shall cause the diligent and prompt completion of such items and the parties shall conduct an additional walk through and inspection to determine if final completion has occurred.

2.9 Warranties. Landlord shall enforce all warranties pertaining to the Base Building Work at Landlord's sole cost and expense.

3. Design and Construction of the Tenant Improvement Work.

3.1 Tenant Responsibility. Tenant shall be responsible for the design and construction of the Tenant Improvement Work and shall cause the construction of the Tenant Improvement Work in a first class manner and in compliance with all Applicable Laws. Tenant agrees and acknowledges that in order to achieve the equivalent of LEED Gold status version 3 for the Building, Tenant will use commercially reasonable efforts to incorporate sustainable features in the Tenant Improvement Work, including those related to the use of renewable energy resources as required to obtain and maintain LEED Gold Standard.

3.2 Integration with Lease. Without limitation of any other provision of the Lease or this **Exhibit D**, all of the provisions of Article 9 (Alterations by Tenant) and Article 10 (Liens) shall apply to the Tenant Improvement Work, to the extent not inconsistent with the provisions of this **Exhibit D**.

3.3 Development of Plans - Tenant.

(a) No later than one hundred twenty (120) days after Landlord has delivered to Tenant the final, approved Base Building Plans, Tenant shall submit to Landlord, for Landlord's approval, a basic space plan (the ***"Space Plan"***) prepared by Tenant's Architect for the layout of the Tenant Improvement Work consistent with the design of the Base Building Work. The Space Plan shall include at a minimum, the interior improvement layouts and location of the wall and partition structures for the Tenant Improvement Work, the location and size of the generator pad, and the location, type and weight of all rooftop equipment. Within fifteen (15) Business Days after Landlord receives the Space Plan, Landlord shall either approve the Space Plan or disapprove the Space Plan and, in the event of disapproval, furnish to Tenant a reasonably detailed written statement outlining the reasons for such disapproval. Landlord and Tenant shall then meet together to explore and identify reasonable alternatives and to agree to mutually acceptable changes to the Space Plan during the five (5) Business Days after delivery of Landlord's notice of disapproval. In the event of such disapproval, or if the parties agree upon mutually acceptable changes, Tenant shall make the changes necessary in order to resolve Landlord's objections and shall return the Space Plan to Landlord. Landlord shall approve or reasonably disapprove such changes within ten (10) Business Days after Landlord receives the revised Space Plan. This procedure shall be

repeated until the Space Plan is finally approved by Landlord and written approval has been received by Tenant.

(b) Within one hundred fifty (150) days after Landlord approves Tenant's Space Plan, and Landlord has provided Tenant with the Base Building Construction Drawings, Tenant shall submit to Landlord complete plans and specifications for the Tenant Improvement Work, based upon the approved Space Plan, including, without limitation, mechanical and electrical drawings (collectively the ***"Tenant Improvement Plans"***), for Landlord's approval. The Tenant Improvement Plans shall be in a form sufficient to secure necessary Tenant Improvement Permits. Tenant shall use diligent efforts to obtain, on a timely basis, all Tenant Improvement Permits. Landlord shall, within twenty (20) Business Days after receipt of the Tenant Improvement Plans, approve the same or designate by written notice to Tenant the specific changes reasonably required to be made to the Tenant Improvement Plans. Tenant shall promptly within ten (10) Business Days make the necessary changes and shall return the revised Tenant Improvement Plans to Landlord. Landlord shall approve or disapprove the revised Tenant Improvement Plans within ten (10) Business Days after receipt by Landlord. This procedure shall be repeated until the Tenant Improvement Plans are finally approved by Landlord and Tenant has received Landlord's written approval thereof. The Tenant Improvement Plans may be submitted by Tenant in one or more stages and at one or more times, and the time periods for Landlord's approval shall apply with respect to each such portion submitted; provided that Landlord may withhold approval if in Landlord's reasonable judgment the portion submitted is not sufficient for Landlord to approve or disapprove such portion. The final Tenant Improvement Plans approved by Landlord, including any changes, additions or alterations thereto approved by Landlord and Tenant as provided in Section 3.5 below, are herein referred to as the ***"Final Plans"***.

(c) Landlord's approval of the Space Plan, Tenant Improvement Plans or Final Plans shall not be deemed to be a representation or warranty by Landlord as to the adequacy or accuracy of such plans, and Landlord shall have no liability therefor. If Landlord fails to deliver to Tenant written notice of its approval or disapproval hereunder within the applicable time periods set forth above, Tenant shall have the right to send Landlord a written request for approval, and if Landlord fails to respond to such written request within ten (10) Business Days after receipt of the request, Landlord shall be deemed to have approved the item for which request was sought.

3.4 Landlord Consultants. Landlord shall have the right to engage third-party consultants to review the Space Plan and Tenant Improvement Plans, and Tenant shall reimburse Landlord for the cost of such consultants within twenty (20) days after receipt of one or more invoices from Landlord reasonably detailing such costs; provided that in no event shall such costs exceed the sum of Twelve Thousand Dollars ($12,000) and at Tenant's request, such costs shall be deducted from the Tenant Improvement Allowance. Other than the foregoing, Landlord shall not charge a supervisory or management fee in connection with the construction of the Tenant Improvement Work.

3.5 Tenant Changes. If Tenant requests any change, addition or alteration in the Tenant Improvement Plans or Final Plans, Tenant's Architect shall prepare plans and specifications with respect to such change, addition or alteration, which plans and specifications shall be submitted to Landlord for Landlord's review and approval. The procedure set forth in Section 3.3(a) above shall apply to any such change, addition or alteration, except Landlord shall be required to approve or reject such change, addition or alteration within five (5) Business Days.

4. Construction of the Tenant Improvement Work.

4.1 Construction of Tenant Improvement Work. Tenant shall construct the Tenant Improvement Work in accordance with all Applicable Laws and the Final Plans and the requirements of Article 10 of the Lease, to the extent not inconsistent with the provisions of this **Exhibit D**.

(a) Tenant shall promptly commence the construction of the Tenant Improvement Work after the Actual Access Date, and thereafter diligently prosecute construction of the Tenant Improvement Work to completion.

(b) Landlord's written approval shall be obtained prior to undertaking any work that deviates in any material respect from the Final Plans approved by Landlord.

(c) Subject to any Tenant's Unavoidable Delays and Substantial Completion of all Base Building Work by Landlord, Tenant shall use commercially reasonable efforts to complete the Tenant Improvement Work and obtain a temporary certificate of occupancy from the City no later than two hundred seventy (270) days after the Actual Access Date. Tenant shall promptly deliver to Landlord a copy of the temporary certificate of occupancy, along with the permit card showing additional work needed to obtain a final certificate of occupancy. Tenant shall secure a final certificate of occupancy from the City with respect to the Premises within sixty (60) days after the later to occur of (i) completion of the Tenant Improvement Work and (ii) Substantial Completion of the Shell Components and Core Components by Landlord. If Tenant fails to occupy the Premises for the conduct of Tenant's business by the first anniversary of the Commencement Date (subject to any Tenant's Unavoidable Delays), Landlord shall have the right to terminate the Lease by written notice to Tenant delivered within ten (10) days following such anniversary date, and Landlord shall promptly return to Tenant the Letter of Credit.

4.2 Evidence of Insurance. Prior to commencement of construction of the Tenant Improvement Work, Tenant shall obtain and deliver to Landlord certificates of insurance for all policies of insurance required to be maintained by Tenant under the Lease.

5. Payment of Tenant Improvement Costs.

5.1 Tenant Improvement Allowance. Landlord shall provide to Tenant the Tenant Improvement Allowance (as defined in Article 1 of the Lease), which shall be applied to the payment of the Tenant Improvement Costs as provided herein. Regardless of the status of completion of the Tenant Improvement Work, any balance of the Tenant Improvement Allowance not expended by Tenant as provided in the following provisions of this Section 5 by the first (1st) anniversary of the Actual Access Date shall be forfeited.

5.2 Tenant Improvement Costs. Any Tenant Improvement Costs in excess of the Tenant Improvement Allowance shall be paid by Tenant. Any portion of the Tenant Improvement Allowance that is expended by Tenant for the Tenant Improvement Work shall be disbursed as provided below.

5.3 Use of Tenant Improvement Allowance. The Tenant Improvement Allowance may be used for commercially reasonable architectural, engineering, and project management fees, a LEED consultant engaged by Tenant, construction and installation of the Tenant Improvement Work, and cabling and signage, but not for any items of personal property,

including, without limitation, furniture, demountable partitions, fixtures or equipment. The Tenant Improvement Allowance may not be used to fund overtime costs.

5.4 Conditions to First Disbursement. As a condition to the first disbursement of the Tenant Improvement Allowance, Tenant shall have satisfied all of the following conditions:

(a) Tenant shall have delivered to Landlord a duly executed copy of the contract with Tenant's Architect and the Tenant Improvement Contract;

(b) The Final Plans shall have been completed and approved as provided above;

(c) Tenant shall have obtained, delivered to Landlord, and be in compliance with all Tenant Improvement Permits;

(d) Tenant shall have delivered to Landlord the total budget, which shall become the basis for calculating Landlord's pro rata contribution towards the Tenant Improvement Work draws, and construction schedule for the Tenant Improvement Work, including an estimated cash flow schedule that describes the timing and amounts of Tenant's projected Tenant Improvement Allowance draw requests and each party's pro rata contribution towards the draw requests; and

(e) Tenant shall have provided Landlord with any other information reasonably requested by Landlord.

Notwithstanding anything to the contrary in this Work Letter, upon the parties approval of the Tenant Improvement Plans and Tenant's delivery of reasonably detailed invoices, Landlord shall disburse up to $250,000 of the Tenant Improvement Allowance to reimburse Tenant for design, project management, permitting fees and any other pre-construction costs and activities without any requirement for Tenant to satisfy the requirements set forth in Section 5.4 (a) – (e) above.

5.5 Disbursements of Tenant Improvement Allowance. Disbursements of installments of the Tenant Improvement Allowance will be made by check payable to Tenant within thirty (30) days after receipt by Landlord of the Draw Certifications required under Section 5.6 below, but not more frequently than monthly. Landlord's disbursements shall be conditioned upon the following: (a) all contingencies for the benefit of Tenant pursuant to Article 4 of the Lease shall have been satisfied or waived; (b) no Event of Default by Tenant shall exist under the Lease; (c) no lien shall have been filed with respect to the Tenant Improvement Work that has not been released or bonded over; (d) Tenant shall be in compliance with the Tenant Improvement Permits, (e) all insurance required of Tenant under the Lease shall be in full force and effect; and (f) Tenant shall have paid its pro rata portion of the Tenant Improvement Costs to be funded, such that Landlord's payment of the Tenant Improvement Allowance installment is not in excess of its share of the total Tenant Improvement Costs. By way of example, if the Tenant Improvement Allowance is $1,000,000 and the total Tenant Improvement Costs are $3,000,000, each payment by Landlord of an installment of the Tenant Improvement Allowance shall be one third (1/3) of the total Improvement Costs being paid for each disbursement during the construction of the Tenant Improvement Work. Landlord shall also have the right to hold back five percent (5%) of the Tenant Improvement Allowance pending Tenant's delivery of the items set forth in Section 5.7, which amount shall be paid to Tenant within ten (10) Business Days after Landlord's acceptance of the Tenant Improvement Work.

5.6 Documentation. As a condition to each funding, Tenant shall deliver to Landlord all of the following:

(a) Tenant's Construction Draw Certificate in the form of ***Attachment 4*** to this **Exhibit D** (with capitalized terms used therein without definition having the meanings ascribed to them in the Lease);

(b) The Tenant Improvement Contractor's Certificate in the form of ***Attachment 5*** hereto;

(c) Conditional and unconditional lien releases, as applicable, in the form required under California Civil Code Section 3262 from all contractors, subcontractors and materialmen who shall have furnished materials or supplies or performed work or services in connection with the Tenant Improvement Work.

5.7 Final Certification. Upon final completion of the Tenant Improvement Work, and as a condition to Landlord's acceptance of the Tenant Improvement Work as completed, Tenant shall provide Landlord with the following:

(a) certifications from the Tenant Improvement Contractor and Tenant's Architect that the Tenant Improvement Work has been finally completed in accordance with the Final Plans;

(b) copies of final lien releases from all contractors and subcontractors;

(c) all operating permits and hazardous material permits issued with respect to Tenant's use and occupancy of the Premises;

(d) the final certificate of occupancy issued by the City;

(e) copies of all warranties for the Tenant Improvement Work and any components thereof, and

(f) a copy of Tenant's punch list for the Tenant Improvement Work.

6. Notices. All notices to be delivered pursuant to this Work Letter shall be delivered in the manner set forth in Article 26 of the Lease.

Attachment 1A to Exhibit D

BASE BUILDING WORK DESCRIPTION

The components and systems described herein will be included in the design of the Building. Landlord shall design and construct the Base Building Work (consisting of the Shell Components, the Common Area Improvements and the Core Components listed below) in compliance with Applicable Laws, including without limitation all City and uniform building codes (collectively, "***Code Requirements***").

A. Shell Components

1. Structure

a) The foundation and structural frame and all metal work

b) The foundation and structural framing are to be designed to support a live load of 100 psf reducible; exit facilities and stairways designed to support a live load of 100 psf non-reducible. Any structural upgrades required for vibration sensitive equipment shall be a Tenant Modification. The design shall include fireproofing pursuant to Code Requirements. The slab to underside of steel structure height within the Premises shall accommodate a minimum 10'-0" finished ceiling height throughout with a minimum interstitial space of 24" predominately, with exception for occasional rainwater leaders or other critical utilities.

c) Stairs shall meet Code Requirements; exit stairs will be concrete filled metal pan stairs; steel to be prime painted only. Floor finishes on stairs shall be Tenant Improvement Work. The Building's handrails and guardrails during construction will be temporary; permanent handrails are part of Core Components. Any lobby stair, if applicable, and associated handrails shall be Tenant Improvement Work unless such stair is required to meet Code Requirements. Stairs will be located to provide egress to meet Code Requirements for a typical Tenant Modification.

d) The Building's Shell will be constructed to be water-tight.

e) Concrete floors on the interior of the building (not including the garage) will meet the flatness tolerances provided in specification ACI 117-10, Section 4 as published by the American Concrete Institute.

f) Landlord shall coordinate with Tenant to allow for reasonable access through window sections on each floor of the Building which Tenant can use to move large items (e.g. furniture) into the Building. Tenant will be responsible to complete the windows after access is no longer required.

2. Exterior Facade

a) Base design intent includes inoperable windows. Windows shall include dual glazing, low-e emissive, and/or tinted glass as may be required to meet Title 24 requirements for the Building's envelope. Glazing materials may include, but not be limited to, ceramic frit, spandrel glass, or translucent glass. A storefront entry shall be provided.

b) The exterior doors and hardware shall be configured with exiting hardware pursuant to Code Requirements. Hardware modifications and/or upgrades to be compatible with Tenant's security system shall be a Tenant Modification or Tenant Improvement Work. Exterior doors shall include one main entrance (storefront) from street and two secondary entrance/egress doors for the Building.

c) Drywall adaptors are not included with the curtain wall system. Landlord will coordinate with tenant to incorporate adaptors if requested as part of the Tenant Modification.

3. Roof

a) The roof membrane system shall consist of either a TPO roofing system or a 4-ply built-up roof (cap sheet plus 3-ply) and insulation on metal deck over rolled steel members. Membrane system will be constructed equal to a 15-year bondable product. Landlord will provide a 15-year manufacturer's warranty.

b) The roof supporting structural steel shall be designed to allow for structural modifications included in Core Components.

c) Roof access will be provided for the building by ship's ladder up to a roof hatch. In the event the building design has two distinct wings, access will be provided for each wing.

4. Fire and Life Safety

a) The fire and life safety shall be designed in accordance with Code Requirements. A remote fire alarm panel which will monitor PIV flow shall include panel, PIV flow switch and tamper switch. In addition, one manual pull station and one bell will be provided. All other alarm system modifications shall be Tenant Improvement Work, unless otherwise specified as a Core Component below.

b) The Shell Components shall include an overhead fire sprinkler system throughout the Building's interior (ordinary hazard, group 2: 0.2 gpm over 1,500 square feet). Upright heads and plugged tees shall be provided in a standard grid pattern. The system shall be designed to NFPA 13.

5. Garage

a) Garage will be constructed as part of the Shell Components to meet Code Requirements.

b) Bike lockers will be provided to meet Code Requirements.

c) Electric car charging stations will be provided to meet Code Requirements.

d) Garage entry will include overhead roll-up door with open grate material required to provide for fresh air intake.

e) Garage entry will include conduit rough-in for use by Tenant card reader.

B. Common Area Improvements

1) All soft and hard landscaping and irrigation shall be designed to meet Code Requirements and shall include bike racks and bike lockers pursuant to Code Requirements. All site furnishings that are not required by Code Requirements or are not of a permanent nature shall be part of the Tenant Improvement Work.

2) Monument and up-lighting shall be provided for the Tenant-provided sign. Sign shall be Tenant Improvement Work.

3) One roofed trash enclosure shall be provided to service the Building, which will house required dumpsters and recycling bins.

4) One transformer pad; space for future Tenant-provided generator (size approximately 500 kW) will be provided adjacent to the electrical transformer. Concrete pad for generator, other equipment, and any enclosure of said transformer, generators or equipment shall be included in the Tenant Improvement Work.

5) Water, sewer, and gas shall be provided and sized for standard office loads. The domestic water shall be terminated within the Building at the inside face of the exterior wall. A sewer gut line and related venting shall be provided at a depth to accept remote fixtures and terminated at each restroom core location. The natural gas meter and piping for Core heating equipment will be provided and sized only for standard office building heating requirements. Additional piping connections or upsized distribution of natural gas piping shall be a Tenant Modification. Extensions to the utilities and additional piping, conduit, wire and equipment are part of the Tenant Improvement Work.

6) Electrical service shall be provided typical of an office building in the Silicon Valley. Office building load shall be designed to accommodate 8.9 watts/sf, based on: 0.9 watts/sf for lighting; 3.0 watts/sf for general receptacles; 5.0 watts/sf for HVAC. A 1600A, 277/480V, 3PH electrical service consisting of underground pull section, City of Palo Alto Electrical metering provisions, 80% rated main breaker (maximum amperage 1280A), and Core/Shell/tenant improvement distribution provisions. In addition, house panels and transformers for the Shell will be included with circuits for site lighting, landscape lighting, and irrigation controllers. Service conduits shall

be run from City electric vaults to main electrical room for new service. Any additional conduit and/or wiring inside and outside the Building are part of Tenant Improvement Work.

7) Two 4” conduits shall be provided from existing telecommunications vault to the electrical room MPOE.

8) A storm drain system shall be provided in compliance with Code Requirements.

9) Roof drainage, excluding canopies, shall be piped to storm drainage system. Overflow drainage shall be piped to face of wall or provided in overflow scuppers in compliance with Code Requirements and the design intent of the Building.

10) Parking lot and garage lighting in compliance with Code Requirements with time clock and photocell. All fixtures that occur adjacent to property lines to have proper cut-off of light spillover.

11) Exterior lighting will be provided along entry/egress to/from the Building. Additional lighting shall be a Tenant Modification.

12) An asphaltic concrete parking lot will be provided in compliance with Code Requirements.

13) Exterior handrails will be provided in compliance with Code Requirements.

14) Landlord to provide the greater of (a) six (6) or (b) the minimum number required by Code Requirements double headed charging stations for vehicles all of which will be located in the garage if allowed by City of Palo Alto.

15) Exterior hose bibs with quick disconnects shall be provided at a rate of one per perimeter building face plus two in the courtyard.

16) Exterior convenience power duplex outlets shall be provided at a rate of one per perimeter building face plus two in the courtyard.

17) At grade receiving area will be provided. Landlord will coordinate with Tenant to design either overhead door or a pair of hollow metal doors.

C. Core Components

1. Elevator and Stairs

a) The Building will include one passenger elevator adjacent to the main entry of the Building. The elevator shall be designed to Code Requirements and have a 3,500 pound load capacity. The elevator cab height shall be 9’-6”, and it shall be large

enough to accommodate a City-approved emergency gurney/stretcher. The base cab finish shall be from the standard selection of elevator company, including plastic laminate wall panels, lighting/ceiling, steel tubular ADA compliant handrail, protective blanket pads, and ADA compliant telephone. Passenger elevator flooring shall be stone or comparable. Upgraded finishes shall be a Tenant Modification. Elevator shall return to first floor upon power failure. Landlord will provide certification by the State for elevator operation. An additional freight elevator can be included as part of the Core but Tenant shall reimburse Landlord for 50% of the incremental cost of the elevator subcontract.

b) Stairways between floors shall be provided to meet Code Requirements for office occupancy. Stair enclosures will be provided for stairways between garage and 1st floor. Finish will be Level 4 sheetrock and prime painted. Floor finishes on the stairs and paint on the risers shall be Tenant Improvement Work. A 2 ½ inch standard painted steel piperail shall be included in the Core.

2. Mechanical (HVAC)

a) Core HVAC system shall be provided typical of a sustainable office building in the Silicon Valley. Core HVAC installed capacity shall include tenant contributions to the cooling load based on: 0.7 watts/sf for lighting; 1.5 watts/sf for general receptacles; 200 sf/person occupancy density; 0.15 CFM/sf outdoor ventilation air.

b) The Core shall include two (2) AC units (Trane, Carrier, McQuay, or equivalent) to serve the Building, total installed cooling capacity of approximately 200 tons. The current conceptual plan includes two (2) units, however, a third unit may be utilized to serve the lobby as a separate zone. The AC units will have variable air volume capability including variable speed supply air fans and supply air temperature control, 100% outside air capability with integrated air-side economizers and power exhaust, and building static pressure control capability. The units shall comply with Code Requirements.

c) Heating for the Building shall be either rooftop packaged gas-fired blower furnaces, or rooftop packaged gas-fired boilers, and shall be sized to provide the heating indoor design temperature of 70°F on a 30°F design heating day with design ventilation air supply.

d) All necessary components in rooftop AC units shall be internally isolated on engineered 2-inch deflection seismic isolation systems.

e) The Core HVAC systems will be equipped with pre-installed, pre-wired, self-contained factory controls. The Tenant Improvement Work shall include all necessary hardware and software interface components to fully integrate the pre-installed unit controls with the Building’s management system that is included in the Tenant Improvement Work.

f) Exhaust and make-up air systems shall be provided for each restroom core to meet Code Requirements. Exhaust systems shall be comprised of rooftop exhaust fans, exhaust ductwork and ceiling-mounted exhaust grilles. Make-up air systems shall be comprised of ceiling-mounted make-up air grilles and make-up air duct from the grilles to the perimeter of the restroom core for future connection to tenant improvement HVAC work.

g) All medium and low pressure distribution ductwork, variable air volume terminal units, hot water reheat piping (if applicable), air distribution devices, zone temperature controls, duct and piping insulation, fire and fire/smoke dampers, air and water balancing, and other mechanical devices and services as necessary to provide complete, operable HVAC systems shall be Tenant Improvement Work. The Core Components shall include necessary roof ductwork and piping from HVAC units to roof penetrations, which will be points of connection for Tenant distribution duct and piping.

h) Modification to the Shell structural steel to support HVAC equipment is included as a Core Component. Incremental loads and upgrade to structure to carry those loads beyond normal code-required roof live load shall be a Tenant Modification.

i) Plumbing services provided as part of the Core construction shall include natural gas and condensate drain piping as required for Base Building rooftop HVAC systems.

3. Electrical

a) One electrical service shall be provided as part of Common Area Improvements (see Section B.6 in this Attachment 1A).

b) House panels and transformers shall be provided for the Core with feeders for (2) 30-hp elevators and two (2) HVAC units. In addition, power will be extended to two (2) heaters; power and lighting to stairwells and restroom cores. All other distribution wiring, panels, and breakers shall be considered Tenant Improvement Work.

c) Electrical Room shall accommodate telephone service entrance as part of the Shell construction (see Section B.7 in this Attachment 1A). All other telephone closets, conduit, cabling, and equipment shall be considered Tenant Improvement Work.

d) Power for passenger and freight elevators.

4. Plumbing & Toilet Core

a) Plumbing will be designed to accommodate the Core fixtures. The plumbing system gut line will be designed to accept a Tenant fixture at remote locations.

b) The Building's plumbing shall include plumbing fixtures for all Core facilities. Domestic water service shall be roughed-in and completed to all necessary plumbing fixtures to meet Code Requirements. In addition to the Core facilities, the domestic water service shall have a capacity sufficient to add supplemental tenant facilities within office environment standard loads (e.g. coffee pantries and lunchrooms).

c) The Core Components shall include men's rooms, women's rooms, shower facilities (located on the first floor and separated by gender), and janitor's sinks to meet Code Requirements. The base finishes shall consist of ceramic tile on the wet walls, a ceramic tile floor (American Olean or equivalent), granite, engineered stone or comparable countertops and backsplash, and plastic laminate or painted metal toilet partitions. Tenant shall be allowed to review the proposed restroom and shower finishes and provide suggestions for any changes; Landlord will consider changes but maintain the final determination of finishes. Any upgraded finishes shall be a Tenant Modification. The Core Components shall include water and sanitary sewer service plumbing roughed-in and fully finished to Core facilities including fixtures, floor drains, and hose bibs as required.

d) Exhaust air shall be provided for the toilet core as per Section 2.f above. Tenant to tie-in the Building's HVAC system to the supply air grilles constructed with the Core.

e) Lighting shall consist of recessed downlights or other similar quality lighting for toilet core with wiring provided to a junction box in an adjacent space for future connection to the Tenant Improvement Work.

f) Convenience outlets shall be provided pursuant to Code Requirements with wiring provided to a junction box in an adjacent space for future connection to the Tenant Improvement Work.

g) All Core elements shall be provided in taped, textured and painted finish (Level 4) at the Core side of the wall. Tenant side of the wall will be provided with Level 4 finish and prime painted.

h) Water pressure will be provided to meet Code Requirements and to meet the pressure requirements of equipment in the building or on the roof that would be typical of a standard office.

5. Others

a) All code-required graphics and signs installed in the Shell and Core will be a standard purchased sign.

b) The Core area fire and life safety fire sprinkler system shall include dropped tees with semi-recessed heads. Adjustments to head locations triggered by Tenant's interior design shall be Tenant Improvement Work. All other drops and heads for concealed spaces and interior improvements shall be Tenant Improvement Work.

c) Roof screen and roof screen supports shall be a Core Component. Roof screens will be sized to accommodate base HVAC system. Additional roof screen required by tenant shall be a Tenant Modification and will need to be coordinated with the aesthetic design of the Building.

Attachment 1B to Exhibit D
Construction Responsibility Matrix
3170 Porter Drive

December 16, 2014

		ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
1		**GRADING & PAVING**					
	A	SITE DEMOLITION	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	STRIP SITE OF ORGANIC MATERIAL & STORAGE	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	ROUGH/FINISH GRADING - PARKING LOT AREA	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	ROUGH/FINISH GRADING - LANDSCAPE/HARDSCAPE AREA	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
	E	ROUGH/FINISH GRADING - SIDEWALK AREAS	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
	F	CONSTRUCT BUILDING PAD	OWNER	OWNER	SHELL	CIVIL	SHELL
	G	ASPHALT PATCH / PAVE / SEAL COAT EXISTING AS REQUIRED	OWNER	OWNER	SHELL	CIVIL	SHELL
	H	SPEED BUMPS	NONE	NONE	NONE	NONE	NONE
	I	TENANT REVISIONS TO SITE (e.g. Exit Walks; Loading Dock)	TENANT	OWNER	T.I.	CIVIL/LAND	SHELL
2		**PARKING LOT & GARAGE STRIPING/ SIGNAGE**					
	A	PARKING STALL STRIPING (INCLUDING ADA)	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	DIRECTIONAL ARROW STRIPING	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	RED CURB AT FIRE LANE	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	VISITOR STALL STRIPING	OWNER	OWNER	SHELL	CIVIL	SHELL
	E	HANDICAP STALL SIGNAGE	OWNER	OWNER	SHELL	CIVIL	SHELL
	F	"NO PARKING" AT FIRE LANE DRIVEWAY SIGNAGE	OWNER	OWNER	SHELL	CIVIL	SHELL
	G	OTHER STRIPING / SIGNAGE	TENANT	OWNER	T.I.	CIVIL	SHELL
3		**STORM DRAINAGE**					
	A	OFFSITE STORM FROM MAIN TO PROPERTY LINE	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	STANDARD ONSITE STORM DRAINAGE	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	LANDSCAPE / AREA DRAINS	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	ROOF DRAIN PIPING FROM BLDG TO STORM SYSTEM	OWNER	OWNER	SHELL	CIVIL	SHELL
	E	DRAINAGE REVISIONS DUE TO T.I. REVISIONS	TENANT	OWNER	T.I.	CIVIL	SHELL
4		**SANITARY SEWER - SITE**					
	A	SEWER CONNECTION FROM OFFSITE MAIN TO PROPERTY LINE	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	ONSITE SANITARY PIPING FROM PROPERTY LINE TO BUILDING	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	ONSITE SANITARY CODE REQUIRED CLEAN OUTS	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	ONSITE SANITARY MONITORING MAN HOLE (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
	E	ONSITE/OFFSITE REV. DUE TO T.I. SPECIALTIES (e.g. Cafeteria)	TENANT	OWNER	T.I.	CIVIL	SHELL
5		**UNDERGROUND FIRE PROTECTION**					
	A	WATER CONNECTION FROM OFFSITE MAIN TO FIRE SERVICE	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	FIRE SERVICE BACKFLOW DEVICE	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	ONSITE FIRE SERVICE PIPING INTO BUILDING (6" A.F.F.)	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	ONSITE FIRE HYDRANTS (AS REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
	E	FIRE DEPARTMENT CONNECTIONS / P.I.V.	OWNER	OWNER	SHELL	CIVIL	SHELL
	F	CATHODIC PROTECTION (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
6		**DOMESTIC WATER SERVICE**					
	A	OFFSITE WATER FROM OFFSITE MAIN TO PROPERTY LINE	OWNER	OWNER	SHELL	CIVIL	SHELL
	B	DOMESTIC WATER SERVICE METER	OWNER	OWNER	SHELL	CIVIL	SHELL
	C	DOMESTIC WATER SERVICE BACKFLOW PREVENTER	OWNER	OWNER	SHELL	CIVIL	SHELL
	D	ONSITE DOMESTIC WATER PIPING STUBBED INTO BUILDING	OWNER	OWNER	SHELL	CIVIL	SHELL
7		**LANDSCAPING**					
	A	LANDSCAPE PLANTINGS	OWNER	OWNER	SHELL	LAND	SHELL
	B	TREE PROTECTION	OWNER	OWNER	SHELL	LAND	SHELL
	C	TREE RELOCATION	OWNER	OWNER	SHELL	LAND	SHELL
	D	REVISIONS TO PLANTINGS/TREES DUE TO TENANT SCOPE	TENANT	OWNER	T.I.	CIVIL	SHELL

	ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
8	**IRRIGATION SYSTEM**					
A	OFFSITE WATER FROM OFFSITE MAIN TO METER (Near Property Line)	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
B	IRRIGATION WATER METER	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
C	IRRIGATION WATER SERVICE BACKFLOW PREVENTER	OWNER	OWNER	SHELL	LAND	SHELL
D	IRRIGATION WATER PIPING	OWNER	OWNER	SHELL	LAND	SHELL
E	POWER TO IRRIGATION CONTROLLER	OWNER	OWNER	SHELL	LAND/ELEC	SHELL
F	REVISIONS TO IRRIGATION DUE TO TENANT SCOPE	TENANT	OWNER	T.I.	CIVIL	SHELL
9	**SITE CONCRETE**					
A	OFFSITE CONCRETE WORK (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
B	DRIVEWAY APPROACHES (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
C	CITY SIDEWALKS (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL	SHELL
D	PARKING LOT CURB & GUTTERS (WHERE APPLICABLE)	OWNER	OWNER	SHELL	CIVIL	SHELL
E	SIDEWALKS LEADING TO SHELL DOORS	OWNER	OWNER	SHELL	ARCH/LAND	SHELL
F	EXTERIOR CONCRETE STAIRS/STEPS (SHELL SCOPE ONLY)	OWNER	OWNER	SHELL	ARCH/LAND	SHELL
G	ADA RAMPS (SHELL SCOPE ONLY)	OWNER	OWNER	SHELL	ARCH/LAND	SHELL
H	TRANSFORMER PAD	OWNER	OWNER	SHELL	ARCH/LAND	SHELL
I	UTILITY PADS (ACCESSORY AREAS FOR TENANT EQUIPMENT)	TENANT	TENANT	T.I.	(TENANT)	TBD
J	SIDEWALKS/RAMPS/STEPS/RAILS FOR ADDTL. TENANT WALKS	TENANT	TENANT	T.I.	ARCH/LAND	SHELL
10	**SITE ACCESSORIES**					
A	BICYCLE RACKS	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
B	BICYCLE LOCKERS	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
C	ASH URNS	TENANT	TENANT	T.I.	ARCH/LAND	SHELL
D	TRASH RECEPTACLES	TENANT	TENANT	T.I.	ARCH/LAND	SHELL
E	SITE FURNITURE	TENANT	TENANT	T.I.	(TENANT)	T.I.
F	BUS STOPS AND SHELTERS (IF REQUIRED)	OWNER	OWNER	SHELL	CIVIL/LAND	SHELL
G	EXTERIOR HANDRAILS (SHELL SCOPE ONLY)	OWNER	OWNER	SHELL	ARCH/LAND	SHELL
11	**TRASH ENCLOSURE**					
A	TRASH ENCLOSURE FOUNDATION, WALLS, ROOF	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
B	TRASH ENCLOSURE GATES / DOORS	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
C	TRASH ENCLOSURE FIRE PROTECTION	OWNER	OWNER	SHELL	ARCH	SHELL
D	ADDITIONAL TRASH ENCLOSURES AND RELATED ITEMS	TENANT	OWNER	T.I.	ARCH/LAND	SHELL
12	**NATURAL GAS PIPING**					
A	UNDERGROUND GAS PIPING FROM OFFSITE MAIN TO METER	OWNER	OWNER	SHELL	CIVIL	SHELL
B	GAS METER	OWNER	OWNER	SHELL	CIVIL	SHELL
C	GAS PIPING - METER TO CORE EQUIPMENT	OWNER	OWNER	CORE	PLUMB/HVAC	CORE
13	**SITE ELECTRICAL WORK**					
A	TELECOMM. CONDUITS FROM STREET TO TELE/ELEC ROOM	OWNER	OWNER	SHELL	ELEC	SHELL
B	PRIMARY POWER CONDUITS FROM STREET TO TRANSFORMER	OWNER	OWNER	SHELL	ELEC	SHELL
C	PRIMARY POWER CONDUITS FROM TRANSFORMER TO BLDG.	OWNER	OWNER	SHELL	ELEC	SHELL
D	GARAGE LIGHTING	OWNER	OWNER	SHELL	ELEC	SHELL
E	PARKING LOT LIGHTING	OWNER	OWNER	SHELL	ELEC/LAND	SHELL
F	EXTERIOR BUILDING LIGHTING	OWNER	OWNER	SHELL	ELEC/ARCH	SHELL
G	PEDESTRIAN LIGHTING (SHELL ONLY)	OWNER	OWNER	SHELL	ELEC/LAND	SHELL
H	IRRIGATION CONTROLLER POWER (SEE #8-E)					
I	MONUMENT SIGN CONDUIT / J-BOX FOR UPLIGHTS	OWNER	OWNER	SHELL	ELEC	SHELL
J	MONUMENT SIGN LIGHT FIXTURES & WIRE	OWNER	OWNER	T.I.	ELEC	SHELL
K	PANELS / BREAKERS FOR SITE ELECTRICAL ITEMS	OWNER	OWNER	SHELL	ELEC	SHELL
L	TIME CLOCKS / PHOTOCELLS FOR SITE LIGHTING	OWNER	OWNER	SHELL	ELEC	SHELL
M	TENANT LIGHTING REVISIONS	TENANT	OWNER	T.I.	ELEC	SHELL
N	TELEPHONE SERVICE, CABLE, WIRE, EQUIP. (From Street to Bldg.)	TENANT	TENANT	T.I.	(TENANT)	T.I.
O	LANDSCAPE LIGHTING	OWNER	OWNER	SHELL	ELEC/LAND	SHELL

	ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
14	**BUILDING FOUNDATIONS**					
A	SHELL CONSTRUCTION	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
B	TENANT REVISIONS	TENANT	OWNER	T.I.	ARCH/STRUCT	SHELL
15	**FLOOR SLABS**					
A	STANDARD SLAB-ON-GRADE CONSTRUCTION	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
B	STANDARD 2ND FLOOR SLAB CONSTRUCTION	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
C	SLAB DEPRESSIONS FOR T.I. FEATURES	TENANT	OWNER	T.I.	ARCH/STRUCT	SHELL
D	ADDTL. 2ND FLOOR SLAB LOAD, DEFLECT., VIBRATION CRITERIA	TENANT	OWNER	T.I.	ARCH/STRUCT	SHELL
E	SLAB OPENINGS FOR T.I. FEATURES	TENANT	OWNER	T.I.	ARCH/STRUCT	SHELL
16	**ROOF CONSTRUCTION**					
A	STANDARD ROOF CONSTRUCTION (ROLLED STEEL MEMBERS)	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
B	UNDER ROOF HVAC EQUIPMENT SUPPORT MEMBERS	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
C	ROOF OPENING FOR HVAC SYSTEM	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
D	UNDER ROOF SUPPORT MEMBERS FOR T.I. SPECIALTIES	TENANT	TENANT	T.I	(TENANT)	TBD
E	ROOF OPENING FOR T.I. SPECIALTIES	TENANT	TENANT	T.I.	(TENANT)	TBD
17	**EXTERIOR ARCHITECTURAL SHEET METAL**					
A	FLASHING / SHEET METAL FOR SHELL ITEM	OWNER	OWNER	SHELL	ARCH	SHELL
B	FLASHING / SHEET METAL FOR T.I. ITEM	TENANT	TENANT	T.I.	ARCH	SHELL
18	**ROOFING MEMBRANE**					
A	CRICKETS FOR SHELL PURPOSES	OWNER	OWNER	SHELL	ARCH	SHELL
B	CRICKETS FOR T.I. PURPOSES	TENANT	TENANT	T.I.	(TENANT)	TBD
C	UNDERLAYMENT BOARDS/BARRIERS	OWNER	OWNER	SHELL	ARCH	SHELL
D	ROOFING MEMBRANE	OWNER	OWNER	SHELL	ARCH	SHELL
E	ROOFING OF BASE HVAC EQUIPMENT	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
F	SKYLIGHTS / ROOFING OF SKYLIGHTS (SHELL SCOPE ONLY)	OWNER	OWNER	SHELL	ARCH	TBD
G	ROOFING OF ROOF SCREEN SUPPORTS	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
H	ROOFING OF OTHER T.I. PENETRATIONS	TENANT	TENANT	T.I.	(TENANT)	TBD
I	ROOF INSULATION	OWNER	OWNER	SHELL	ARCH	SHELL
19	**ROOF SCREEN**					
A	UNDER-ROOF STRUCTURAL SUPPORT	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
B	CONNECTION OF FRAME TO SHELL STRUCTURE	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
C	SCREEN MATERIAL, FRAMING, BRACING	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
D	PAINTING OF SCREENING MEMBERS	OWNER	OWNER	CORE	ARCH	SHELL
E	ROOFING /FLASHING OF ATTACHMENT OF ROOF SCREEN	OWNER	OWNER	CORE	ARCH	SHELL
F	ROOF SCREEN GATES	OWNER	OWNER	CORE	ARCH	SHELL
20	**EXTERIOR WALLS**					
A	EXTERIOR GLASS & GLAZING	OWNER	OWNER	SHELL	ARCH	SHELL
B	GYP. BOARD ADAPTERS TO EXTERIOR GLASS SYSTEM	TENANT	TENANT	T.I.	ARCH	SHELL
C	EXTERIOR PRECAST CONCRETE AND/OR GFRC PANELS	OWNER	OWNER	SHELL	ARCH	SHELL
D	FIRE CAULKING OF 2ND FL. SLAB/PANEL JOINT	OWNER	OWNER	SHELL	ARCH	OWNER
E	GYP. BOARD & METAL STUDS ON INTERIOR FACE OF PERIMETER	TENANT	TENANT	T.I.	(TENANT)	T.I.
F	INSULATION @ EXTERIOR PERIMETER WALLS	OWNER	OWNER	SHELL	ARCH	OWNER
G	PREP. & PAINTING OF INTERIOR FACE OF PERIMETER WALLS	TENANT	TENANT	T.I.	(TENANT)	T.I.
21	**EXTERIOR DOORS AND HARDWARE**					
A	SHELL PERIMETER DOORS WITH OWNER'S STD. HARDWARE	OWNER	OWNER	SHELL	ARCH	SHELL
B	T.I. PERIMETER DOORS & HARDWARE	TENANT	TENANT	T.I.	ARCH	SHELL
C	T.I. UPGRADES TO SHELL PERIMETER DOOR HARDWARE	TENANT	TENANT	T.I.	ARCH	SHELL

	ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
22	**INTERIOR STAIRS & RELATED OPENINGS**					
A	STAIR FOUNDATION	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
B	STEEL PAN STAIR	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
C	CONCRETE FILL IN PANS AND LANDING	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
D	STRUCTURAL STEEL SYSTEM FOR STAIR OPENING	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
E	CONNECTION OF THE STAIR TO THE STRUCTURAL STEEL SYSTEM	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
F	TEMPORARY GUARD RAILS (COURSE OF CONSTRUCTION)	OWNER	OWNER	SHELL	ARCH/STRUCT	SHELL
G	HANDRAILS/ GUARDRAILS FOR STAIRS & OPENINGS (PERMANENT)	TENANT	TBD	T.I.	ARCH	TBD
H	STAIRWELL ENCLOSURE (GARAGE TO 1ST FLOOR ONLY)	OWNER	OWNER	CORE	ARCH	SHELL
I	PAINTING OF STAIRS, RAILS AND WALLS	TENANT	TENANT	T.I.	(TENANT)	T.I.
J	FLOOR FINISHES ON STAIRS	TENANT	TENANT	T.I.	(TENANT)	T.I.
23	**PASSENGER ELEVATOR - BASE = ONE (1)**					
A	ELEVATOR PIT, LADDER, WATERPROOFING	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
B	ELEVATOR PIT SUMP / SUMP DRAINAGE (AS REQUIRED)	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
C	ELEVATOR SHAFT	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
D	MOD. TO STRUCTURAL STEEL SYSTEM FOR 2ND FLOOR OPENING	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
E	ELEVATOR GUIDE RAIL SUPPORTS	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
F	ELEVATOR CAB (STANDARD FINISHES)	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
G	ELEVATOR TELEPHONE (INCL. MONITORING SERVICE), ADA COMPLIAN	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
H	ELEVATOR CAB UPGRADES	TENANT	OWNER	T.I.	ARCH	SHELL
I	ADDITIONAL ELEVATOR = ONE FREIGHT (1)	OWNER	OWNER	SHARED	ARCH/STRUCT	SHELL
24	**RESTROOM CORE CONSTRUCTION**					
A	INTERIOR WALLS	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
B	INTERIOR DOORS/FRAMES/HARDWARE, PARTITIONS, ACCESSORIES	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
C	INTERIOR CEILINGS	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
D	FLOOR COVERINGS - CERAMIC TILE	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
E	WALL COVERINGS (CERAMIC TILE ON WET WALLS ONLY;PAINT)	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
25	**LOBBY CONSTRUCTION**					
A	INTERIOR WALLS	TENANT	TENANT	T.I.	(TENANT)	T.I.
B	INTERIOR DOORS, FRAMES & HARDWARE	TENANT	TENANT	T.I.	(TENANT)	T.I.
C	INTERIOR CEILINGS	TENANT	TENANT	T.I.	(TENANT)	T.I.
D	FLOOR COVERINGS	TENANT	TENANT	T.I.	(TENANT)	T.I.
E	WALL COVERINGS	TENANT	TENANT	T.I.	(TENANT)	T.I.
26	**MILLWORK**					
A	RESTROOM COUNTERTOPS	OWNER	OWNER	CORE	ARCH	SHELL
B	BALANCE T.I. CASEWORK & MILLWORK	TENANT	TENANT	T.I.	(TENANT)	T.I.
27	**OVERHEAD FIRE SPRINKLER SYSTEM**					
A	RISER AND MAIN DRAIN PIPING	OWNER	OWNER	SHELL	FIRE	SHELL
B	OVERHEAD PIPING AND HEADS (DENSITY - 0.2 GPM / 1,500 SF)	OWNER	OWNER	SHELL	FIRE	SHELL
C	CEILING DROPS FOR CORE RESTROOM	OWNER	OWNER	CORE	ARCH	SHELL
D	SPRINKLER HEADS FOR BASE CORE RESTROOMS - FULL HT WALLS	OWNER	OWNER	CORE	ARCH	SHELL
E	CEILING DROPS T.I.	TENANT	TENANT	T.I.	(TENANT)	T.I.
F	SPRINKLER HEADS FOR T.I. FULL HT WALLS	TENANT	TENANT	T.I.	(TENANT)	T.I.
G	SPRINKLER HEADS FOR EXTERIOR SOFFITED AREAS	OWNER	OWNER	SHELL	ARCH/FIRE	SHELL

	ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
28	**PLUMBING**					
A	ROOF DRAINS	OWNER	OWNER	SHELL	ARCH/PLUMB	SHELL
B	UNDERSLAB SANITARY SEWER GUT LINE (CORE ONLY)	OWNER	OWNER	SHELL	PLUMB	SHELL
C	TOILET ROOM PLUMBING ROUGH-IN	OWNER	OWNER	CORE	ARCH/PLUMB	SHELL
D	TOILET ROOM PLUMBING FIXTURES (STANDARD)	OWNER	OWNER	CORE	ARCH	SHELL
E	ROUGH-IN FOR ALL OTHER UNDERSLAB PLUMBING	TENANT	TENANT	T.I.	(TENANT)	TBD
F	PLUMBING FOR OTHER INTERIOR ITEMS	TENANT	TENANT	T.I.	(TENANT)	T.I.
G	BASE HVAC SYSTEM ROOFTOP CONDENSATE PIPING	OWNER	OWNER	CORE	HVAC/PLUMB	SHELL
H	PROCESS PIPING	TENANT	TENANT	T.I.	(TENANT)	T.I.
29	**HVAC SYSTEMS**					
A	HVAC SYSTEM HEATING / COOLING EQUIPMENT (BASE SYSTEM)	OWNER	OWNER	CORE	HVAC	SHELL
B	PENETRATION FOR VERTICAL DUCT FROM UNIT TO 1ST FLOOR	OWNER	OWNER	CORE	ARCH/STRUCT	SHELL
C	HORIZONTAL DUCT DISTRIBUTION FROM RISER	TENANT	TENANT	T.I.	(TENANT)	T.I.
D	INTERFACE CARD FOR HVAC UNITS TO OPERATE WITH TENANT BMS	TENANT	TENANT	T.I.	(TENANT)	T.I.
E	HVAC SYSTEM CONTROLS, BMS SYSTEM	TENANT	TENANT	T.I.	(TENANT)	T.I.
F	HVAC SYSTEM BALANCING	TENANT	TENANT	T.I.	(TENANT)	T.I.
G	DISTRIBUTION FOR RESTROOM CORE HVAC	TENANT	TENANT	T.I.	(TENANT)	T.I.
30	**ELECTRICAL & DATA**					
A	SITE ELECTRICAL (SEE #13)					
B	U.G. PULL SECTION; HOUSE PANEL; TENANT METER SECTIONS	OWNER	OWNER	SHELL	ELEC	TBD
C	DISTRIBUTION SECTION (ONLY FOR HVAC UNITS & ELEVATOR)	OWNER	OWNER	CORE	ELEC	SHELL
D	EMERGENCY GENERATOR	TENANT	TENANT	T.I.	(TENANT)	T.I.
E	LIGHT FIXTURES FOR TOILET CORE & STAIRWELLS	OWNER	OWNER	CORE	ELEC	SHELL
F	POWER FOR TOILET CORE & STAIRWELLS (COORD. W/T.I.)	TENANT	TENANT	T.I.	ELEC	TBD
G	INTERIOR POWER DISTRIBUTION/SUB-PANELS & TRANSFORMERS	TENANT	TENANT	T.I.	ELEC	T.I.
H	TELEPHONE & DATA CABLING	TENANT	TENANT	T.I.	ELEC	T.I.
I	PAGING SYSTEMS	TENANT	TENANT	T.I.	ELEC	T.I.
J	SECURITY SYSTEMS	TENANT	TENANT	T.I.	ELEC	T.I.
K	FIRE ALARM SYSTEMS (RISER & PIV MONITORING ONLY)	OWNER	OWNER	SHELL	ELEC	SHELL
L	SPECIAL GROUNDING REQUIREMENTS	TENANT	TENANT	T.I.	ELEC	T.I.
M	ELEVATOR & HVAC POWER	OWNER	OWNER	CORE	ELEC	SHELL
31	**SPECIAL INSPECTION COSTS**					
A	SHELL ITEMS	OWNER	OWNER	SHELL	N/A	N/A
B	CORE ITEMS	OWNER	OWNER	CORE	N/A	N/A
C	T.I. ITEMS	TENANT	TENANT	T.I.	N/A	N/A
32	**G.C., SUPERVISION, CLEAN-UP & OTHER JOB OVERHEAD COSTS**					
A	SHELL ITEMS	OWNER	OWNER	SHELL	N/A	N/A
B	CORE ITEMS	OWNER	OWNER	CORE	N/A	N/A
C	T.I. ITEMS	TENANT	TENANT	T.I.	N/A	N/A
33	**PLAN CHECK AND BUILDING PERMIT FEES**					
A	PLAN CHECK & BUILDING PERMIT FEES - SHELL VALUE	OWNER	OWNER	SHELL	N/A	N/A
B	PLAN CHECK & BUILDING PERMIT FEES - CORE VALUE	OWNER	OWNER	CORE	N/A	N/A
C	PLAN CHECK & BUILDING PERMIT FEES - TENANT DRAWINGS	TENANT	TENANT	T.I.	N/A	N/A
D	FIRE DEPARTMENT PLAN CHECK FEES - SHELL	OWNER	OWNER	SHELL	N/A	N/A
E	FIRE DEPARTMENT PLAN CHECK FEES - CORE	OWNER	OWNER	CORE	N/A	N/A
F	FIRE DEPARTMENT PLAN CHECK FEES - T.I.	TENANT	TENANT	T.I.	N/A	N/A

	ITEM DESCRIPTION	Design Cost Responsibility	Construction Responsibility	Cost Type	Design Responsibility	Dwg. Package Where Shown
34	**MISCELLANEOUS FEES**					
A	SANITARY, STORM SEWER SHELL FEES	OWNER	OWNER	SHELL	N/A	N/A
B	UTILITY SHELL FEES (GAS; ELEC.; DOM. WATER; FIRE WATER)	OWNER	OWNER	SHELL	N/A	N/A
C	UTILITY/ PLANT FEES ASSOC. W/ T.I. PLUMBING	TENANT	TENANT	T.I.	N/A	N/A
D	SCHOOL FEE - SHELL (OFFICE OCCUPANCY)	OWNER	OWNER	SHELL	N/A	N/A
E	TRAFFIC FEE - SHELL (OFFICE OCCUPANCY)	OWNER	OWNER	SHELL	N/A	N/A
F	HOUSING FEE - SHELL (OFFICE OCCUPANCY)	OWNER	OWNER	SHELL	N/A	N/A
G	SCHOOL, TRAFFIC, HOUSING, OTHER FEES (SPECIAL TI OCCUPANCY)	TENANT	TENANT	T.I.	N/A	N/A
35	**DRAWING PACKAGE DESIGN FEES**					
A	SHELL COST ITEMS (INCLUDING ARCH., STRUCT., MEP ENG.)	OWNER	OWNER	SHELL	N/A	N/A
B	CORE COST ITEMS (INCLUDING ARCH., STRUCT., MEP ENG.)	OWNER	OWNER	CORE	N/A	N/A
C	T.I. COST ITEMS	TENANT	TENANT	T.I.	N/A	N/A

ABBREVIATIONS USED:

(TENANT)	=	TENANT DESIGNATED CONSULTANT
ARBO	=	ARBORIST
ARCH	=	ARCHITECT
BLDG	=	BUILDING
CIVIL	=	CIVIL ENGINEER
CONST.	=	CONSTRUCTION
CORE	=	CORE ITEM
ELEC	=	ELECTRICAL ENGINEER
FIRE	=	FIRE SPRINKLER ENGINEER
HVAC	=	HEATING VENTING & AIR-COND. ENGR
LAND	=	LANDSCAPE ARCHITECT
N/A	=	NOT APPLICABLE
P.L.	=	PROPERTY LINE
PLUMB	=	PLUMBING MECHANICAL ENGINEER
SHARED	=	COST SHARED 50/50 - TENANT/OWNER
SOIL	=	GEOTECNICAL ENGINEER
SOUND	=	SOUND ENGINEER
STRUCT	=	STRUCTURAL ENGINEER
TEMP.	=	TEMPORARY
T.I.	=	TENANT IMPROVEMENT
TBD	=	TO BE DETERMINED
ARCH/CIVIL	=	ARCH AND CIVIL (TYPICAL)

Attachment 2 to Exhibit D

MILESTONE SCHEDULE

In the event of any conflict between this Schedule and the Lease/Work Letter, the Lease/Work letter shall control.

Milestone	**Target Date** (Non-binding)	**Milestone Date**
1. Tenant's Project Manager. (Exhibit D, Section 2.3)	February 19, 2015	Within 60 days after the Effective Date
2. Landlord's delivery of Preliminary Plans to Tenant. (Exhibit D, Section 2.1(a))	March 5, 2015	Before submittal to the City
3. Tenant's comments to or approval of Preliminary Plans. (Exhibit D, Section 2.1(a))	March 19, 2015	Within 10 Business Days of Tenant's receipt of the Preliminary Plans
3b. Landlord's delivery of Preliminary Plans to City (Exhibit D, Section 2.1(a))	April 5, 2015	
4. Landlord's delivery of Formal ARB Submittal Plans. (Exhibit D, Section 2.1(a)(ii))	June 5, 2015	Concurrent with submittal to the City
5. Landlord's delivery of Base Building Plans to Tenant. (Exhibit D, Section 2.1(b))	July 19, 2015	Within 120 days after City's approval of the Formal ARB Submittal Plans
6. Tenant's comments to or approval of Base Building Plans. (Exhibit D, Section 2.1(b)(i))	August 7, 2015	Within 15 Business Days after Tenant's receipt of the Base Building Plans
7. Tenant's delivery of Space Plan to Landlord. (Exhibit D, Section 3.3(a))	November 19, 2015	No later than 120 days after Landlord delivers final, approved Base Building Plans
8. Landlord's comments to or approval of Tenant's Space Plan. (Exhibit D, Section 3.3 (a))	December 10 , 2015	Within 15 Business Days after Landlord's receipt of Tenant's Space Plan

Milestone	**Target Date** (Non-binding)	**Milestone Date**
9. Landlord's delivery of Base Building Permit Submittal to Tenant. (Exhibit D, Section 2.1(c))	November 2, 2015	Concurrent with submittal to the City
10. Tenant's comments to or approval of Base Building Permit Submittal. (Exhibit D Section 2.1(c))	November 23, 2015	Within 15 Business Days after Tenant's receipt of the Base Building Permit Submittal
11. Tenant shall increase the Letter of Credit. (Section 6.5(a))	December 9, 2015	Within 15 Business Days after Landlord notifies Tenant that Landlord has commenced construction of the Base Building Work
12. Landlord's delivery of Base Building Construction Drawings to Tenant. (Exhibit D, Section 2.1(c))	February 23, 2016	Once the building permit has been issued by the City
13. Landlord's Termination Right. (Section 4.1)	March 1, 2016	If Landlord determines that the City will cause the design of the Building to be materially altered from the Preliminary Plan, or if Landlord determines that the Project will be cost-prohibitive
14. Tenant's delivery of Tenant Improvement Plans to Landlord. (Exhibit D, Section 3.3(b))	April 6, 2016	Within 150 days after Landlord approves Tenant's Space Plan and Landlord has provided Tenant with Base Building Construction Drawings
15. Landlord's approval of Tenant Improvement Plans. (Exhibit D, Section 3.3 (b))	April 27, 2016	Within 20 Business Days after Landlord's receipt of Tenant Improvement Plans
16. Landlord's notice of Actual Access Date to Tenant. (Exhibit D, Section 2.4(a))	January 23 , 2017	At least 30 days prior to Actual Access Date
17. Scheduled Access Date. (Article 1 and Exhibit D, Section 2.4(a))	February 23, 2017	Subject to change as set forth in Exhibit D, Section 2.5

Milestone	**Target Date** (Non-binding)	**Milestone Date**
18. Tenant's delivery of evidence of insurance. (Section 10.6, 14.2 and Exhibit D, Section 2.4(b))	February 23, 2017	As of the Actual Access Date
19. Substantial Completion – Shell Components and Core Components . (Exhibit D, Section 2.7)	July 7, 2017	16.5 months after start of construction
20. Landlord's completion of Punch List. (Exhibit D, Section 2.8)	October 7, 2017	Within 90 days of Substantial Completion
21. Initial Disbursement of Tenant Improvement Allowance. (Exhibit D, Section 5.4, 5.5 and 5.6)		Subject to Tenant's fulfillment of all requirements set forth in Exhibit D, Section 5.4, 5.5 and 5.6
22. Final Disbursement of Tenant Improvement Allowance. (Exhibit D, Section 5.7)		Subject to Tenant's fulfillment of all requirements set forth in Exhibit D, Section 5.7
23. Tenant's anticipated occupancy. (Exhibit D, Section 4.1(b))	October 23, 2017	270 days after Actual Access Date Tenant shall deliver items required under Section 13.2 and any other relevant sections
24. Commencement Date. (Articles 1 and 6)	August 23, 2017	The earlier of (a) Tenant's occupancy of the Premises for the conduct of business, and (b) 180 days after the Actual Access Date as defined in the Lease, but in no event earlier than the date which Landlord achieves Substantial Completion of the Base Building Work.
25. Abated Rent period ends. (Article 1 and Section 6.2)	November 23, 2017	Base Rent (but not Additional Rent) shall be abated for a total of 3 full calendar months after the Commencement Date.

Milestone	**Target Date** (Non-binding)	**Milestone Date**
26. Expiration of Tenant Improvement Allowance. (Exhibit D, Section 5.1)	February 23, 2018	1st Anniversary of the Actual Access Date
27. Failure to Achieve Substantial Completion: Outside Completion Date. (Section 4.3)		Tenant shall have the right to terminate the Lease if Landlord does not achieve Substantial Completion by July 1, 2018.
28. Tenant's Failure to Achieve Occupancy. (Exhibit D, Section 4.1(c)	August 23, 2018	Landlord shall have the right to terminate the Lease if Tenant does not achieve Occupancy by the first anniversary of the Commencement Date.

Attachment 3 to Exhibit D

ACCEPTANCE FORM

This Acceptance Form is executed with reference to that certain Lease dated as of _____, 201 by and between by and between THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY (***"Landlord"***), and _____ (***"Tenant"***). Terms defined in the Lease and the exhibits thereto shall have the same meaning when used herein.

Tenant hereby certifies to Landlord that Tenant has inspected the Premises as of _____ (the ***"Date of Substantial Completion Inspection"***) and that the Shell Components and Core Components are Substantially Complete except only for Punch List Items listed in Base Building Architect's Certificate of Substantial Completion as supplemented by the Tenant's punch list for the Tenant Improvement Work showing the Punch List Items a copy of which is attached hereto. Tenant further acknowledges that Tenant hereby accepts the Premises in its existing AS-IS condition, in accordance with and subject to the provisions of the Lease, and subject only to the completion of any Punch List Items.

The person executing this Acceptance Form on behalf of Tenant represents and warrants to Landlord that such person is duly authorized to execute this Acceptance Form and that this Acceptance Form has been duly authorized, executed and delivered on behalf of Tenant.

THIS ACCEPTANCE FORM is executed by Tenant as of the Date of Inspection.

TENANT

_____

By: _____
Its: _____

By: _____
Its: _____

Attachment 4 to Exhibit D

TENANT'S CONSTRUCTION DRAW CERTIFICATION

General Contractor: _____

Design Architect: _____

1. Original Contract Amount:	$_____
2. Additions to Contract:	$_____
3. Deductions from Contract:	$_____
4. Adjusted Amount of Contract:	$_____
5. Total Completed or Stored to Date:	$_____
6. Total Retainage:	$_____
7. Total Earned Less Retainage:	$_____
8. Previous Payments:	$_____
9. Current Payment Due:	$_____

TENANT CERTIFICATION

To induce Landlord to disburse proceeds of the Tenant Improvement Work pursuant to the Lease, Tenant hereby certifies to Landlord as follows:

A. The amount shown on Line 9 above as Current Payment Due is the actual amount presently payable to the General Contractor.

B. No Event of Default presently exists.

C. Tenant has no knowledge of and has received no notices of liens or claims of lien either filed or threatened against the premises, except:

_____

_____

D. All amounts shown on Line 8 above and in the column entitled "Previous Payments" in the Disbursement Request Summary for this Draw Request have been paid by Tenant.

E. Tenant approves all work and materials for which payment is due (as shown on Line 9 above) and confirms that to Tenant's knowledge and belief such work and materials conform with the Tenant Improvement Plans, as defined in the Lease, as they may be modified by written change orders in compliance with the requirements of the Lease.

F. The following list identifies those change order requests or proposals which have been submitted by the Tenant Improvement Contractor but are pending approval:

_____

_____

G. All permits, approvals and authorizations required by all governmental authorities for the work covered by this draw request, the work which was the subject of previous draw requests, and the work that is currently ongoing have been obtained.

H. Approximately ____% of the Tenant Improvement Work has been completed as of this date.

TENANT:

_____

By: _____
Its: _____
Date: _____

PAYMENT REQUEST

(Attached to and forming a part of Tenant's Construction Draw Certification)

DISBURSEMENT NO. _____

DATE: _____

Item No.	Description	Original Estimate	Revised Estimate Date	Disbursed to Date	This Request	Total Disbursed	% Est. Disb.	% Comp

Total:

Contingencies Reserve:

Total Funds Available:

Attachment 5 to Exhibit D

CONTRACTOR'S CONSTRUCTION DRAW CERTIFICATION

Project Name: _____

Date: _____

Location: _____

Draw No: _____

Landlord: The Board of Trustees of the Leland Stanford Junior University

Tenant: _____

General Contractor: _____

Design Architect: _____

1. Original Contract Amount $_____
2. Additions to Contract $_____
3. Deductions from Contract $_____
4. Adjusted Amount of Contract $_____
5. Total Completed or Stored to Date $_____
6. Total Retainage $_____
7. Total Earned Less Retainage $_____
8. Previous Payments $_____
9. Current Payment Due $_____

GENERAL CONTRACTOR CERTIFICATION

To induce Landlord to make a disbursement of the Tenant Improvement Allowance pursuant to its Lease with Tenant, the undersigned (General Contractor) certifies to Landlord as follows:

(a) The information contained in all documents and supporting papers prepared or signed by General Contractor and submitted to Landlord are true and correct.

(b) The amount shown on Line 9 of the Draw Request Certification is the amount presently due and payable under the contract with Tenant.

(c) The amount shown on Line 8 of the Draw Request Certification has been received by the General Contractor and applied to the amount due under the contract with Tenant.

(d) All work performed to date conforms with the contract with Tenant and the Plans and Specifications prepared and coordinated by the Design Architect.

(e) There have been no change orders to the contract, proposed or approved, except: _____.

(f) All subcontracted items and material/equipment items are shown in the Application for Payment breakdown accompanying this Draw Request.

(g) All subcontractors and materialmen have been paid all amounts due to them to date, as described in Line 8 above.

_____

By: _____
Its: _____

EXHIBIT E

NOTICE OF LEASE TERMINATION

Recording Requested by and When Recorded, Return to: The Board of Trustees of the Leland Stanford Junior University Land, Buildings and Real Estate 3160 Porter Drive, Suite 200 Palo Alto, CA 94304 Attn: Managing Director, Real Estate	

Space above this line for Recorder's use)

NOTICE OF LEASE TERMINATION

The Board of Trustees of the Leland Stanford Junior University (***"Landlord"***) and _____, a _____ (***"Tenant"***), entered into that certain Commercial Lease dated as of _____, _____ (the **"*Lease*"**).

Pursuant to the Lease, Landlord leased to Tenant, and Tenant leased from Landlord, that certain property commonly known as 3170 Porter Drive, Palo Alto, California 94304 described on the attached **Exhibit A**. By signing below, Tenant certifies that the Lease expired pursuant to its terms on _____, 20__.

TENANT:

_____,
a _____

By: _____

Its: _____

[ACKNOWLEDGEMENT AND EXHIBIT A TO BE ATTACHED]

EXHIBIT F

RULES AND REGULATIONS

Tenant shall comply with the following rules and regulations (as modified or supplemented from time to time, the *"**Rules and Regulations**"*). Landlord shall not be responsible to Tenant for the nonperformance of any of the Rules and Regulations by any other tenants or occupants of the Project. In the event of any conflict between the Rules and Regulations and the other provisions of this Lease, the latter shall control.

1. Tenant shall not alter any lock or install any new or additional locks or bolts on any doors or windows of the Premises without obtaining Landlord's prior consent (which consent shall not be unreasonably withheld, conditioned or delayed). Tenant shall bear the cost of any lock changes or repairs required by Tenant. Upon the termination of this Lease, Tenant shall restore to Landlord all keys of stores, offices and toilet rooms furnished to or otherwise procured by Tenant, and if any such keys are lost, Tenant shall pay Landlord the cost of replacing them or of changing the applicable locks if Landlord deems such changes necessary.

2. Employees of Landlord shall not perform any work or do anything outside their regular duties unless under special instructions from Landlord.

3. The toilet rooms, urinals, wash bowls and other apparatus shall not be used for any purpose other than that for which they were constructed, and no foreign substance shall be thrown therein. Notwithstanding Sections 7 and 10.4 of this Lease, Tenant shall bear the expense of any breakage, stoppage or damage resulting from any violation of this rule by Tenant or any of its employees, agents, contractors, invitees or licensees.

4. Tenant shall not overload the floor of the Premises, or mark, drive nails or screws or drill into the partitions, woodwork or drywall of the Premises, or otherwise deface the Premises, without Landlord's prior consent.

5. Except for vending machines intended for the sole use of Tenant's employees and invitees, no vending machine or machines other than fractional horsepower office machines shall be installed, maintained or operated in the Premises without Landlord's prior consent.

6. Tenant shall not, without Landlord's prior consent, use any method of heating or air conditioning other than that supplied by Landlord.

7. Tenant shall store all its trash and garbage inside the Premises or in areas designated by Landlord for such storage in the Common Area. No material shall be placed in the trash or garbage receptacles if, under Law, it may not be disposed of in the ordinary and customary manner of disposing of trash and garbage in the vicinity of the Building. All trash, garbage and refuse disposal shall be made only through entryways and elevators provided for such purposes at such times as Landlord shall designate. Tenant shall comply with Landlord's recycling program, if any.

8. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any governmental agency.

9. Tenant must comply with the State of California “No-Smoking” law set forth in California Labor Code Section 6404.5 and with any local “No-Smoking” ordinance that is not superseded by such law.

Schedule 9.8

Back-up Generator and Rooftop Equipment

1. **Additional Equipment**. Landlord and Tenant acknowledge and agree that during the Term of this Lease, Tenant shall be permitted to access, install, replace, remove, operate and maintain the following equipment (the “***Additional Equipment***”) subject to the provisions of this Schedule 9.8:

   (a) a backup generator and related appurtenances (collectively, the "***Generator Equipment***"), such Generator Equipment to be located within an enclosed equipment area (the "***Generator Equipment Area***") as designated by Landlord; and

   (b) a satellite antenna not exceeding three (3) feet in height or microwave dish not exceeding two (2) feet in diameter (the "***Antenna***") on the rooftop of the Building at a location reasonably determined by Landlord (the “***Rooftop Equipment Area***”), including the cabling and connecting equipment (collectively, the "***Connecting Equipment***" and, together with the Antenna, the "***Rooftop Equipment***").

2. **Design Considerations**. The Additional Equipment shall be properly screened from view for aesthetic reasons, and must not be visible from street level. Tenant, at Tenant's sole cost and expense, shall install and maintain such fencing and other protective equipment and/or visual screening on or about the Additional Equipment as Landlord may reasonably determine. The Additional Equipment shall be clearly marked to show the name, address, telephone number of the person to contact in case of emergency.

3. **Approval of Plans.** Prior to the commencement of any work in relation to the Additional Equipment, Tenant shall, at its sole cost and expense, prepare and deliver to Landlord construction drawings and specifications, detailing the location and size of the Additional Equipment and specifically describing the proposed construction and work. No such work shall commence until Landlord has given its written consent to the applicable location, construction or installation drawings, which consent shall not be unreasonably withheld or delayed. In no event shall Landlord’s consent be deemed a representation that the Additional Equipment will not cause interference with other systems in the Building or that the work shown on Tenant’s drawings complies with Applicable Laws.

4. **Disturbance of Existing Surfaces.** Tenant shall in no event cut, drill, or bore through any structural components of the Building, and shall patch, fill and cover with approved materials to match surrounding surfaces wherever Tenant has cut, drilled or bored in the Building or Common Area with Landlord’s prior written consent. Landlord reserves the right to require that Tenant use construction contractors of Landlord’s choice whenever Tenant cuts, drills or bores into the Building’s or Common Area’s existing surfaces, all at Tenant’s sole cost and expense.

5. **Manner of Construction.** Tenant agrees that installation and construction of the Additional Equipment shall be performed in accordance by licensed contractors approved by Landlord and otherwise in accordance with Article 10 of this Lease. Tenant shall ensure that the Additional Equipment is secured firmly to the Building or Common Area, where applicable, and engineered to withstand reasonably anticipated winds, storms and earth movements, as applicable. Tenant shall, at its sole cost and expense, repair or refinish any surface of the Building or Common Area that is damaged by or during the installation of the Additional Equipment. If Tenant fails to repair or refinish any such damage within ten (10) Business Days following notice from Landlord (or three (3) Business Days if such failure impacts other tenants of the Property), Landlord may, in its sole discretion, repair or refinish such damage and Tenant shall reimburse Landlord for all costs and expenses incurred in such repair or refinishing.

6. **Permits and Licenses.** Tenant shall obtain, at its sole cost and expense, prior to construction and work, all permits, licenses, approvals, zoning variances and the like, as necessary to install and operate the Additional Equipment, including but not limited to approvals from the Federal Communications Commission, Federal Aviation Administration, and state and local entities having jurisdiction ("***Governmental Approvals***"). Copies of all Governmental Approvals shall be delivered to Landlord prior to commencement of construction and work. The Additional Equipment and Tenant's use, operation and maintenance thereof shall comply with all Applicable Laws (including OSHA requirements, applicable building and fire codes and any required conditional use permit). Landlord makes no representation that any such Laws permit such installation and operation, and Tenant shall be solely responsible to determine the feasibility and legality of installing the Additional Equipment.

7. **No Interference.** Tenant shall not during construction or otherwise, in Landlord's sole judgment, in any way obstruct access to any portion of the Property by Landlord or other tenants or licensees of Landlord or any other occupant of the Property. If such conditions shall occur, Tenant shall take corrective action as promptly as feasible, but in no event more than twenty-four (24) hours following notice by Landlord of such conditions. Tenant shall not use the Additional Equipment in any way which interferes with the use of the Property by Landlord, or other tenants or licensees of Landlord. Such interference shall be deemed a material breach by the Tenant under this Lease, and Tenant shall, within five (5) days of written notice from Landlord, be responsible for terminating said interference. In the event any such interference does not cease within five (5) days of Landlord's written notice, Tenant acknowledges that continuing interference may cause irreparable injury and Tenant shall immediately cease all operation of the applicable Additional Equipment.

8. **Changes.** Tenant may only amend the drawings and specifications approved by Landlord, or modify the Additional Equipment as installed, with Landlord's prior written consent, which consent shall not unreasonably be conditioned, withheld or delayed. Following Landlord's consent to such amendments, all terms and conditions of this Schedule 9.8 shall apply.

9. **Utilities.** Landlord shall have no responsibility and shall not be obligated to provide any utilities, including, but not limited to, electricity or other power for the operation of the Additional Equipment. If Landlord elects not to provide such utilities, Tenant shall procure utility services to be used in connection with the Additional Equipment with the appropriate local utility companies, which arrangements, other than the cost and expense, shall be subject to the prior written approval of Landlord which approval shall not unreasonably be conditioned, withheld or delayed. Tenant shall pay for the cost of all utility services in connection with the Additional

Equipment, or shall reimburse Landlord for the cost of any such services that are not separately metered.

10. **Insurance; Maintenance**. Tenant shall be responsible for insuring the Additional Equipment pursuant to Article 14 of this Lease and Landlord shall have no responsibility therefor. Tenant shall be solely responsible for and shall pay all costs, expenses and taxes incurred in connection with the ownership, installation, operation, maintenance, use and removal of the Additional Equipment and the appurtenant equipment located in or on the Building, including all installation or “hook-up” costs. Tenant shall keep and maintain the Additional Equipment in good condition and repair, promptly making all necessary repairs and replacements, whether ordinary or extraordinary, in accordance with the applicable provisions of Section 9.3 of this Lease, and to the reasonable satisfaction of Landlord including, but not limited to, repairing any damage (and replacing any property so damaged) caused by Tenant or any of Tenant's Agents. Tenant's repair responsibilities shall include the requirement that Tenant keep in full force and effect, during the Term of the Lease, a contract for preventative maintenance meeting, at a minimum, the manufacturer's recommended standards of service. Tenant shall promptly repair any damage to the Building or the Property caused by Tenant or the use, operation, repair, maintenance, or alteration of the Additional Equipment.

11. **Health Hazard.** If Landlord, in its reasonable judgment, believes that any Additional Equipment poses a human health or environmental hazard that cannot be remediated or has not been remediated within ten (10) days after Tenant has been notified thereof, then Tenant shall immediately cease all operation of such Additional Equipment. To the best of Tenant's knowledge, Tenant represents to Landlord that the use of the Additional Equipment will not pose a human health or environmental hazard.

12. **Books and Records.** Tenant shall maintain all reports, inventory and other records, test results, permits and all other data and information required under Applicable Laws for the installation, use and operation of the Additional Equipment, and upon request of Landlord, shall provide a copy of all such reports, records, test results and other information without cost or expense to Landlord.

13. **Removal.** Upon termination of the Lease by expiration of time or otherwise, Tenant, at its sole cost and expense, shall remove the Additional Equipment and shall restore the Property to its condition existing prior to the installation of the Additional Equipment, ordinary wear and tear excepted. Tenant shall further repair, at its sole cost and expense, any damage or destruction caused by the removal of the Additional Equipment. Restoration and repair required to be performed by Tenant shall be completed under the supervision of a representative of Landlord at such time and in such manner that is reasonably satisfactory to Landlord. Landlord, at Landlord’s option, exercised by written notice given to Tenant, shall have the right to perform any repairs, removal and restoration required hereunder at Tenant’s sole cost and expense and such expense shall be reimbursed to Landlord promptly upon demand by Landlord. Notwithstanding anything contained herein, Tenant shall not remove, and shall not be reimbursed for the cost of, any Additional Equipment which is affixed to, embedded in or permanently attached in or to the Building, including, but not limited to, cables and other wiring, unless Landlord directs otherwise.

14. **Limitation of Liability; Indemnity.** Neither Landlord nor the Landlord Parties shall be liable or responsible to Tenant for (a) any loss or damage to the Additional Equipment (b) interference

with Tenant's operations or any loss of business or profits or (c) any interference with Tenant's operation of the Additional Equipment caused by Landlord's repair, maintenance or replacement of any structural elements of the Building (including the roof), except in each case to the extent arising out of Landlord's or Landlord's Agents' gross negligence or willful misconduct. Landlord shall be entitled to suspend operation of any Additional Equipment temporarily if such temporarily suspended operation is reasonably necessary for the performance of Landlord's repair, maintenance or replacement activities. Tenant hereby agrees to indemnify, defend and hold Landlord and the Landlord Parties harmless from and against any and all claims, costs, damages, expenses and liabilities (including reasonable attorneys' fees) arising out of or related to the installation, operation, use, maintenance or removal of the Additional Equipment, except to the extent arising out of Landlord's or Landlord's Agents' Active Negligence or willful misconduct.

15. **No Assignment.** Tenant may not assign, lease, rent, sublet or otherwise transfer any of its interest in the Additional Equipment except together with the remainder of all of the Premises in accordance with Article 15 of this Lease.

16. **Termination of Lease**. If this Lease terminates or expires for any reason, Tenant's rights with respect to the Additional Equipment shall also terminate concurrently therewith unless otherwise agreed in writing by Landlord in its sole and absolute discretion.

17. **Provisions Applicable to Generator Equipment:**

    a. The Generator Equipment shall not cause excessive noise or unreasonably disturb other occupants of the Property and, in the event the Generator Equipment is unreasonably noisy or unreasonably disturbs other occupants of the Property, then such noise and/or disturbance shall be deemed an interference with Landlord's use of the Property that must be eliminated within five (5) days after written notice from Landlord, as provided above.

    b. If requested by Landlord, Tenant shall obtain for the benefit of Landlord a separate policy of environmental insurance to provide coverage against any and all damage to property or injury or death to persons as a result of the Generator Equipment, and Tenant shall provide written evidence of such coverage within ten (10) days after request by Landlord.

18. **Provisions Applicable to Rooftop Equipment:**

    a. The Rooftop Equipment shall be used and operated solely by Tenant.

    b. The Antenna may not protrude above a height equal to the highest point of the Building structure. The weight of the Rooftop Equipment shall not exceed the load limits of the Building. Use of a non-penetrating load frame mount with ballast will ordinarily be used for any Rooftop Equipment, although a penetrating mount may be approved by Landlord on a case-by-case basis. Tenant shall use only non-rusting hardware with respect to the installation of the Rooftop Equipment, such as stainless steel or hot-dipped galvanized bolts, nuts, washers and clamps.

c. Tenant, at Tenant's sole cost and expense, shall be responsible for any modifications to the rooftop, risers, utility areas or other facilities or portions of the Building which may be necessary to accommodate the Rooftop Equipment.

d. It is expressly understood that Landlord retains the right to use the roof of the Building for any purpose whatsoever (including granting rights to third parties to utilize any portion of the roof not utilized by Tenant).

e. Tenant covenants and agrees that the Rooftop Equipment (i) shall not cause or create any unreasonable interference with the operation or use by any occupant of the Property whatsoever, of other transmitting and receiving devices, antennae, televisions, radios and stereo equipment in place as of the date of installation of the Rooftop Equipment, (ii) shall comply with all non-interference rules of the Federal Communications Commission ("**FCC**") and (iii) shall not preclude the installation and operation by other tenants of the Property of similar equipment on their buildings or create any interference with the operation, access to, or the servicing of, the Building's HVAC equipment. If in the future equipment is installed at the Property which interferes with the operation of the Rooftop Equipment, Tenant agrees to reasonably cooperate with such other user to resolve such interference in a mutually acceptable manner, subject to and in accordance with the rules of the FCC. If any testing, sampling or disclosures relating to the Rooftop Equipment are required to satisfy OSHA or other governmental agencies (including for radio frequency [RF] or electromagnetic field [EMF] emissions), Tenant shall pay the costs of any such required tests and studies (or its prorata share thereof if the cost is properly shared by other rooftop users). Landlord shall have no liability or responsibility for the maintenance or compliance with laws of any towers, antennas or structures, including, without limitation, compliance with Part 17 of the FCC Rules.

f. Tenant shall promptly pay all taxes and license fees imposed by any federal, state or local governmental agency or authority in connection with the installation, operation and maintenance of the Rooftop Equipment.

g. Tenant understands and agrees that the structural integrity of the load bearing capability of the roof of the Building, the moisture resistance of the Building membrane, and the ability of Landlord to use all parts of the Property are of critical importance to Landlord. Tenant, therefore, agrees that the specifications and drawings that it will provide shall be of sufficient specificity to ensure that these concerns are addressed, and Tenant further agrees and commits that the actual installation of the Rooftop Equipment shall be in accordance with those approved specifications and drawings. Tenant warrants that the installation of the Rooftop Equipment shall not impair, adversely affect, or void any roofing warranty benefiting the Building. No manner of construction will be approved if it has the effect of impairing the Building's existing roof warranty.

h. Tenant shall secure the approval of Landlord's fire insurance underwriter prior to installation of any Rooftop Equipment, shall provide copies of the same to Landlord and shall comply with all requirements issued by said fire insurance underwriter. Landlord shall cooperate with Tenant in attempting to obtain the approval of Landlord's fire insurance underwriter and shall submit such documentation to the underwriter as Tenant

may reasonably request. Tenant shall provide all installation specifications and drawings required for the securing of said approvals.

i. Landlord agrees that Tenant's authorized representatives and contractors shall have reasonable access to the rooftop of the Building for the purposes of installing, maintaining, operating and repairing the Rooftop Equipment. Only authorized engineers, employees or properly authorized contractors, subcontractors, and agents of Tenant, other authorized regulatory inspectors, or persons under their direct supervision and control will be permitted to enter the Building, and only upon conditions set forth herein. In exercising its right of access to the roof, Tenant agrees to cooperate and comply with any reasonable security procedures, access requirements and rules and regulations utilized by Landlord for the Building and further agrees not to unduly disturb or interfere with the business or other activities of Landlord or of other tenants or occupants of the Property.

j. Except in the event of an emergency, Tenant shall give at least twenty-four (24) hours' notice to Landlord of its intent to enter the rooftop of the Building. At the time that such notice is given, Tenant shall inform Landlord of the identity of contractors who will be accessing the rooftop, the reasons for entry, and the expected duration of the work to be performed. In the event of an emergency, Tenant shall give to Landlord as much advance notice as reasonably possible of its intent to enter the rooftop and, within twenty-four (24) hours following such entry, shall provide to Landlord a written report detailing the nature of such emergency, the corrective actions taken, and other such information as may reasonably be requested by Landlord.

k. Landlord shall have the right, at its option and from time to time, upon not less than thirty (30) days prior notice to Tenant, to relocate the Rooftop Equipment to another location in the Building adequate to afford equivalent service to Tenant. Landlord shall pay the costs of relocation reasonably incurred by Tenant in connection with such substituted location, subject to adequate substantiation of such costs.

l. Landlord shall have the right to terminate Tenant's rights with respect to the Rooftop Equipment and the Rooftop Equipment Area upon three (3) months prior written notice in the event Landlord determines that (i) Tenant's use unreasonably interferes with an essential Building system or function, which interference cannot be remedied; or (ii) the operation of the Rooftop Equipment unreasonably interferes with the equipment or operations of any of the existing tenants, licensees, or occupants of the Property with prior rights to use rooftop equipment. In connection with such termination, no amounts will be refunded or otherwise paid to Tenant and Tenant shall remain responsible for removing Tenant's Rooftop Equipment and restoring the Building in accordance with the terms hereof.

Schedule 13.1

Hazardous Substances Questionnaire

[See attached.]

Schedule 13.11

3170 Porter Drive Order[i]

Responsible Party	Lead Agency	Order Number and Date
Lockheed Martin ("LMSSC")	Dept. of Toxic Substance Control	HSA 90/91-020, 6/13/91

Indices

- List of reports for 3170 Porter Drive, dated from January 1988 through January 2014.

Reports

- Remedial Investigation Report for 3170 Porter Drive dated May 1992
- Addendum to Volume I of the Remedial Investigation Report dated July 1993
- Feasibility Study, 3170 Porter Drive dated August 1992
- Final Remedial Action Plan dated March 1994
- Baseline Public Health and Environmental Evaluation for 3170 Porter Drive dated November 1992
- Revised Public Health and Environmental Evaluation of Matadero Creek dated March 31, 1993
- November 2010 Groundwater Monitoring Report and 2010 Five Year Review Report
- May 2013 Combined Semi-Annual Status and Monitoring Report
- Groundwater Monitoring Report and 2013 Annual Performance Evaluation Report, November 2013
- Semi Annual Groundwater Monitoring Report and Project Status Report June 2013
- November 2013 Groundwater Annual Report and 2013 Annual Performance Evaluation Report January 2014

Fact Sheet

- No 1, dated January 26, 1994 for the LMSSC site located at 3170 Porter Drive

Environmental Access Agreements

1. Between the Board of Trustees and the Leland Stanford Junior University and LMSSC, dated December 14, 1992, for the following sites, 3170 Porter Drive, 3172-3174 Porter Drive, 3176 Porter Drive and 3277 Miranda Avenue (includes amendments).

2. First Amendment between Stanford University and LMSSC, dated March 28, 1994.

3. Environmental Access Agreements for Additional Activities between Stanford and Lockheed: April 2, 1993; July 14, 1994; August 1, 1994; November 11, 1994 and September 28, 1995.

[i] This property is within the study are of the remediation efforts associated with 3170 Porter Drive; available on the RWQCB database Geotracker. http://geotracker.waterboards.ca.gov/

Hillview Porter Regional Order[ii]

Responsible Party	Lead Agency	Order Number and Date
Hillview Porter Regional Group	Dept. of Toxic Substance Substance Control	HSA 88/89-016, 6/30/97

Lead Agency	Order Number and Date
Dept. of Toxic Substance Substance Control	HSA 88/89-016, 12/9/88 (superseded)

Indices

- List of reports for HVP, dated from October 1987 through September 15, 2014

Reports

- Remedial Investigation for HVP, by Brown and Caldwell, dated May 1994.
- Feasibility Study for HVP, by Brown and Caldwell, dated February 1994.
- November 2008 Groundwater Monitoring Report and 2008 Annual Performance Evaluation Report
- 2012 Consolidated Report for Hillview-Porter Region June 28, 2013
- May 2013 Combined Semi-Annual Status and Monitoring Report
- Semi Annual Groundwater Monitoring Report and Project Status (HVP/3170 Porter Drive) June 24, 2013
- Semi Annual Groundwater Monitoring Report (Dec 2012 – May 2013) dated June 28, 2014
- Combined Semi-Annual Status and Monitoring Report (Dec 2012 – May 2013) dated July 2013
- 2013 Consolidated Annual Report for Hillview-Porter dated September 15, 2014

Fact Sheets

- No 19, dated April 2001 for the Hillview Porter Regional Program

Agency Correspondence--Stanford Internal Reports[iii]

- Lockheed's Facility Closure Report for hazardous materials and radiologic decommissioning
- DTSC's letter regarding redevelopment dated October 7, 2014.
- Haley & Aldrich Technical Memo for redevelopment dated September 15, 2014
- Groundwater Treatment System As-builts

[ii] This property is also within the Hillview-Porter Study Area; a regional study area. Information available on Geotracker.

[iii] These reports are the relevant documents regarding facility closure and the redevelopment

Exhibit 10.15B

PERSONAL, PRIVATE AND CONFIDENTIAL

Monday, 08 December 2014

Iain McGill

Re: Amendment to Employment Agreement (the "Amendment")

Dear Iain:

As discussed, I am pleased to formally notify you that the Company has approved a Change in Control severance arrangement for you. The terms and conditions of this Change in Control severance arrangement are set forth in the attached Schedule 3. Both you and the Company hereby agree that your current Employment Agreement with the Company (the "**Employment Agreement**") is amended as specified below, effective as of the date that you return this fully signed Amendment.

Changes to your Employment Agreement

1. The reference to clause 1.6 in clauses 4.1, 4.4 and 4.5 shall be deleted and replaced with a reference to clause 1.5.

2. Clauses 5.1 and 5.2 shall be deleted in their entirety and shall be replaced with the following wording: "*Employee shall be eligible for certain Severance Benefits, the terms of which are set out at Schedule 3 of this Agreement*".

3. A new Schedule 3 shall be incorporated into your Employment Agreement the terms of which are set out as an annexure to this letter.

In all other respects, the remaining terms and conditions of your Employment Agreement are unaffected and shall continue in full force.

To amend your Employment Agreement as provided above, please sign and date the Amendment in the space provided below, and return it to me at your earliest convenience.

Do not hesitate to let me know if you have any questions.

Best regards,

/s/ Heather McGaughey
Heather McGaughey
Senior Vice President, Human Resources

REVIEWED, UNDERSTOOD AND AGREED:

/s/ Iain McGill
Iain McGill

SCHEDULE 3

1. **Covered Termination:** The Executive will be eligible for the Severance Benefits in the event of a Covered Termination which is effective on or within twelve (12) months following a Change in Control, subject to the requirements set forth in this Schedule.

2. **Severance Benefits:** The Severance Benefits will consist of cash severance payment and payments for continued health care insurance coverage, as follows:

    a. **Cash Severance Benefits:** A lump sum cash severance payment will be paid to the Executive in an amount equal to the sum of the following three components (the "**Severance Payment**"): (1) Executive's annual basic salary in effect as of the effective date of the Executive's Covered Termination (without giving effect to any reduction in base salary that would constitute grounds for Constructive Termination) (the "**Severance Base**") multiplied by 150%; (2) the product of the Severance Base multiplied by the Bonus Percentage (defined below) multiplied by 150%; and (3) the product of the Severance Base multiplied by the Bonus Percentage multiplied by the Bonus Multiplier (defined below). Notwithstanding the foregoing, to the extent applicable, the Severance Payment shall be reduced by any amounts paid to Executive (i) during any period of garden leave immediately preceding the Covered Termination, (ii) qualifying as pay-in-lieu of notice, or (iii) any other severance benefits whether contractual or statutory (including but not limited to any statutory redundancy pay) or other similar benefits payable to the Executive in connection with the Executive's termination of employment.

    By way of example, if the effective date of the Covered Termination is 30 June, Executive's annual basic salary in effect as of the Covered Termination is £100,000, and his target bonus is 40% of basic salary (and Executive has not received any higher annual bonus in either of the last two calendar years prior to the Covered Termination), the Severance Payment shall be calculated as follows:

    (1) £100,000 x 150% (1.5) = £150,000
    (2) £100.000 x bonus percentage (.4) x 150% (1.5) = £60,000
    (3) £100,000 x bonus percentage (.4) x 6/12 = £20,000

Total Severance Payment: £150,000 + £60,000 + £20,000 = £230,000

b. **Health Continuation Coverage Benefits:** To the extent that Executive elects continued private health insurance coverage following the Covered Termination at a level equivalent to the private health insurance coverage available to Executive during his employment, the Employer shall pay the applicable premiums (inclusive of premiums for the Executive's participating dependents, if any) for such plan coverage for a period of eighteen (18) months following the date of the Covered Termination (or such earlier date if the Executive dies, if Executive and/or his dependents are no longer eligible for coverage, or if Executive obtains new employment which includes eligibility for health plan coverage). The provision of these benefits is subject to health insurance coverage being obtained on normal terms and subject to medical and other underwriting requirements and other terms and conditions. The Executive shall be required to notify the Employer immediately if the Executive becomes covered by a health insurance plan of a subsequent employer or if the Executive or his participating dependents otherwise cease to be eligible for coverage during the period provided above. Upon the conclusion of such period of insurance premium payments made by the Employer, the Executive will be responsible for the entire payment of premiums.

3. **Certain Definitions**:

a. "**Affiliate**" means any "parent" or "subsidiary" of Employer as such terms are defined in Rule 405 of the United States Securities Act of 1933, as amended.

b. "**Bonus Percentage**" means the greater of (i) any annual bonus, expressed as a percentage of annual base salary paid in the year of determination, paid to the Executive by the Company or an Affiliate in respect of either of the last two calendar years prior to the date of a Covered Termination or (ii) the Executive's target bonus, expressed as a percentage of annual base salary, for the calendar year in which the Covered Termination occurs.

c. "**Bonus Multiplier**" means the quotient obtained by dividing the number of full months that the Executive is employed by the Company or an Affiliate in the year of a Covered Termination by twelve (12).

d. "**Change in Control**" means "Change in Control" as defined in the Jazz Pharmaceuticals plc Amended and Restated Executive Change in Control and Severance Benefit Plan.

e. "**Cause**" means the occurrence of any one or more of the following:

(i) the Executive's unauthorised use or disclosure of the confidential information or trade secrets of the Employer or its Affiliates which use or disclosure causes material harm to the Employer or an Affiliate;

(ii) the Executive's material breach of any agreement between the Executive and the Employer or an Affiliate which remains uncured for ten (10) days after receiving written notification of the breach from the Employer;

(iii) the Executive's material failure to comply with the written policies or rules of the Employer or an Affiliate which remains uncured for ten (10) days after receiving written notification of the breach from the Employer;

(iv) the Executive's conviction of, or plea of "guilty" or "no contest" to, any crime involving fraud, dishonesty, or moral turpitude under the laws of any United States, England and Wales, Federal, state, local, or foreign governmental authority;

(v) the Executive's gross misconduct;

(vi) the Executive's continuing failure to perform assigned duties after receiving written notification of the failure from the Employer;

(vii) the Executive's failure to cooperate in good faith with a governmental or internal investigation of the Employer, its Affiliates, directors, officers, or employees, if the Employer has requested the Executive's cooperation; or

(viii) any action of Executive warranting summary dismissal or termination without prior notice under Executive's employment agreement with the Employer as in effect on the Covered Termination (as applicable, the "**Employment Agreement**") or under applicable employment laws.

f. "**Constructive Termination**" means a resignation of employment by Executive after an action or event which constitutes Good Reason is undertaken by Employer or an Affiliate, or otherwise occurs, provided such action or event is not agreed to by Executive in writing; provided, however, that in order for Executive's resignation to constitute a Constructive Termination, Executive must (i) provide written notice to Employer's General Counsel within thirty (30) days after the first occurrence of the event giving rise to Good Reason setting forth the basis for such resignation, (ii) allow Employer at least thirty (30) days from receipt of such written notice to cure such event, and (iii) if such event is not reasonably cured within such period, resign from all positions Executive then holds with Employer and any Affiliate effective not later than ninety (90) days after the expiration of the cure period.

g. "**Covered Termination**" means either (i) an Involuntary Termination Without Cause, or (ii) a Constructive Termination. Termination of employment of Executive due to death or disability shall not constitute a Covered Termination unless a resignation of employment by Executive immediately prior to Executive's death or disability would have qualified as a Constructive Termination.

h. "**Executive**" means Iain McGill (referenced as the "Employee" in the Employment Agreement).

i. "**Good Reason**" means the occurrence of any one or more of the following actions or events without Executive's written consent:

i. a reduction in Executive's base salary by more than ten percent (10%) (other than a reduction in conjunction with (x) a Company-wide salary reduction, or (y) a salary reduction involving senior management of Employer which results in salary reductions for employees similarly-situated to Executive);

ii. a relocation of Executive's place of employment that increases Executive's one-way commute by more than thirty-five (35) miles;

iii. a substantial reduction in Executive's duties or responsibilities (and not simply a change in reporting relationships) in effect immediately prior to the effective date of the Change in Control; provided, however, that it shall not constitute "Good Reason" if, following the effective date of the Change in Control, either (x) Employer is retained as a separate legal entity or business unit and Executive holds the same position in such legal entity or business unit as Executive held before such effective date, (y) Executive holds a position with duties and responsibilities comparable (although not necessarily identical, in view of the relative sizes of Employer and the entity involved in the Change in Control) to the duties and responsibilities of Executive prior to the effective date of the Change in Control; or

iv. a reduction in the Executive's title.

j. "**Involuntary Termination Without Cause**" means a termination by the Employer of the Executive's employment relationship with the Employer or an Affiliate for any reason other than for Cause and other than as a result of death or disability.

4. **Additional Terms for Severance Benefits:** The following additional terms shall apply:

a. **Release:** In order to be eligible to receive, and prior to receipt of, any of the Severance Benefits, the Executive must execute a general waiver and release and return such release to Employer within the time period specified therein, but in no event more than forty-five (45) days following the date of the Covered Termination, and such release must become effective in accordance with its terms but in all cases not later than the sixtieth (60th) day following the Covered Termination. No release shall require the Executive to forego any unpaid salary, any accrued but unpaid vacation pay, or any vested or earned benefits payable pursuant to the Executive's Employment Agreement or by law. The Employer, in its sole discretion, may modify the form of the required release to comply with applicable law and shall determine the form of the required release.

b. **Mitigation:** The Executive shall not be required to mitigate damages as a condition of the Severance Benefits by seeking other employment or otherwise. Similarly, no amount of the Severance Benefits shall be reduced by any compensation earned by the Executive as a result of employment by another employer or any retirement benefits received by such Executive after the date of the Executive's termination of employment with the Employer, except for Severance Benefits relating to payments for health continuation coverage provided above.

c. **Tax Withholding, Contributions:** All payments under this Schedule will be subject to all applicable deductions and withholding of the Employer, including, without limitation, all obligations to withhold or make deductions for federal, state and local income and employment taxes, as well as national contributions and any other required deductions or withholdings which are required pursuant to the terms of the Executive's employment or by law, or which are provided for in the Executive's Employment Agreement and/or this Schedule (including for the avoidance of doubt deductions for income tax and national insurance contributions required under English law).

Exhibit 10.17B

PERSONAL, PRIVATE AND CONFIDENTIAL

Monday, December 08, 2014

Paul Treacy

Re: Amendment to Terms and Conditions of Employment (the "Amendment")

Dear Paul:

As discussed, I am pleased to formally notify you that the Company has approved a Change in Control severance arrangement for you. The terms and conditions of this Change in Control severance arrangement are set forth in the attached Schedule 1. Both you and the Company hereby agree that your terms and conditions of employment as contained in the agreement with the Company dated 10 June 2014 (the "**Employment Agreement**") are amended to include Schedule 1, effective as of the date that you return this fully signed Amendment.

In all other respects, the remaining terms and conditions of your Employment Agreement are unaffected and shall continue in full force.

To amend your Employment Agreement as provided above, please sign and date the Amendment in the space provided below, and return it to me at your earliest convenience. Do not hesitate to let me know if you have any questions.

Best regards,

/s/ Heather McGaughey
Heather McGaughey
Senior Vice President, Human Resources

REVIEWED, UNDERSTOOD AND AGREED:

/s/ Paul Treacy
Paul Treacy

SCHEDULE 1

1. **Covered Termination:** The Executive will be eligible for the Severance Benefits in the event of a Covered Termination which is effective on or within twelve (12) months following a Change in Control, subject to the requirements set forth in this Schedule.

2. **Severance Benefits:** The Severance Benefits will consist of cash severance payment and payments for continued health care insurance coverage, as follows:

    a. **Cash Severance Benefits:** A lump sum cash severance payment will be paid to the Executive in an amount equal to the sum of the following three components (the "**Severance Payment**"): (1) Executive's annual basic salary in effect as of the effective date of the Executive's Covered Termination (without giving effect to any reduction in base salary that would constitute grounds for Constructive Termination) (the "**Severance Base**") multiplied by 150%; (2) the product of the Severance Base multiplied by the Bonus Percentage (defined below) multiplied by 150%; and (3) the product of the Severance Base multiplied by the Bonus Percentage multiplied by the Bonus Multiplier (defined below). Notwithstanding the foregoing, to the extent applicable, the Severance Payment shall be reduced by any amounts paid to Executive (i) during any period of garden leave immediately preceding the Covered Termination, (ii) qualifying as pay-in-lieu of notice, or (iii) any other severance benefits whether contractual or statutory (including but not limited to any statutory redundancy pay) or other similar benefits payable to the Executive in connection with the Executive's termination of employment.

    By way of example, if the effective date of the Covered Termination is 30 June, Executive's annual basic salary in effect as of the Covered Termination is €100,000, and his target bonus is 40% of basic salary (and Executive has not received any higher annual bonus in either of the last two calendar years prior to the Covered Termination), the Severance Payment shall be calculated as follows:

    (1) €100,000 x 150% (1.5) = €150,000
    (2) €100.000 x bonus percentage (.4) x 150% (1.5) = €60,000
    (3) €100,000 x bonus percentage (.4) x 6/12 = €20,000

    Total Severance Payment: 150,000 + 60,000 + 20,000 = €230,000

    b. **Health Continuation Coverage Benefits:** To the extent that Executive elects continued private health insurance coverage following the Covered Termination at a level equivalent to the private health insurance coverage available to Executive during his employment, the Employer shall pay the applicable premiums (inclusive of premiums for the Executive's participating dependents, if any) for such plan coverage for a period of eighteen (18) months following the date of the Covered Termination (or such earlier date if the Executive dies, if

Executive and/or his dependents are no longer eligible for coverage, or if Executive obtains new employment which includes eligibility for health plan coverage). The provision of these benefits is subject to health insurance coverage being obtained on normal terms and subject to medical and other underwriting requirements and other terms and conditions. The Executive shall be required to notify the Employer immediately if the Executive becomes covered by a health insurance plan of a subsequent employer or if the Executive or his participating dependents otherwise cease to be eligible for coverage during the period provided above. Upon the conclusion of such period of insurance premium payments made by the Employer, the Executive will be responsible for the entire payment of premiums.

3. **Certain Definitions**:

a. "**Affiliate**" means any "parent" or "subsidiary" of Employer as such terms are defined in Rule 405 of the United States Securities Act of 1933, as amended.

b. "**Bonus Percentage**" means the greater of (i) any annual bonus, expressed as a percentage of annual base salary paid in the year of determination, paid to the Executive by the Company or an Affiliate in respect of either of the last two calendar years prior to the date of a Covered Termination or (ii) the Executive's target bonus, expressed as a percentage of annual base salary, for the calendar year in which the Covered Termination occurs.

c. "**Bonus Multiplier**" means the quotient obtained by dividing the number of full months that the Executive is employed by the Company or an Affiliate in the year of a Covered Termination by twelve (12).

d. "**Change in Control**" means "Change in Control" as defined in the Jazz Pharmaceuticals plc Amended and Restated Executive Change in Control and Severance Benefit Plan.

e. "**Cause**" means the occurrence of any one or more of the following:

(i) the Executive's unauthorised use or disclosure of the confidential information or trade secrets of the Employer or its Affiliates which use or disclosure causes material harm to the Employer or an Affiliate;

(ii) the Executive's material breach of any agreement between the Executive and the Employer or an Affiliate which remains uncured for ten (10) days after receiving written notification of the breach from the Employer;

(iii) the Executive's material failure to comply with the written policies or rules of the Employer or an Affiliate which remains uncured for ten (10) days after receiving written notification of the breach from the Employer;

(iv) the Executive's conviction of, or plea of "guilty" or "no contest" to, any crime involving fraud, dishonesty, or moral turpitude under the laws of any United States or Irish Federal, state, local, or foreign governmental authority;

(v) the Executive's gross misconduct;

(vi) the Executive's continuing failure to perform assigned duties after receiving written notification of the failure from the Employer;

(vii) the Executive's failure to cooperate in good faith with a governmental or internal investigation of the Employer, its Affiliates, directors, officers, or employees, if the Employer has requested the Executive's cooperation; or

(viii) any action of Executive warranting summary dismissal or termination without prior notice under Executive's Terms and Conditions of Employment dated 10 June 2014 or such other employment agreement with the Employer as in effect on the Covered Termination (as applicable, the "**Employment Agreement**") or under applicable employment laws.

f. "**Constructive Termination**" means a resignation of employment by Executive after an action or event which constitutes Good Reason is undertaken by Employer or an Affiliate, or otherwise occurs, provided such action or event is not agreed to by Executive in writing; provided, however, that in order for Executive's resignation to constitute a Constructive Termination, Executive must (i) provide written notice to Employer's General Counsel within thirty (30) days after the first occurrence of the event giving rise to Good Reason setting forth the basis for such resignation, (ii) allow Employer at least thirty (30) days from receipt of such written notice to cure such event, and (iii) if such event is not reasonably cured within such period, resign from all positions Executive then holds with Employer and any Affiliate effective not later than ninety (90) days after the expiration of the cure period.

g. "**Covered Termination**" means either (i) an Involuntary Termination Without Cause, or (ii) a Constructive Termination. Termination of employment of Executive due to death or disability shall not constitute a Covered Termination unless a resignation of employment by Executive immediately prior to Executive's death or disability would have qualified as a Constructive Termination.

h. "**Executive**" means Paul Treacy.

i. "**Good Reason**" means the occurrence of any one or more of the following actions or events without Executive's written consent:

i. a reduction in Executive's base salary by more than ten percent (10%) (other than a reduction in conjunction with (x) a Company-wide salary reduction, or (y) a salary reduction involving senior management of Employer which results in salary reductions for employees similarly-situated to Executive);

ii. a relocation of Executive's place of employment that increases Executive's one-way commute by more than thirty-five (35) miles;

iii. a substantial reduction in Executive's duties or responsibilities (and not simply a change in reporting relationships) in effect immediately prior to

the effective date of the Change in Control; provided, however, that it shall not constitute "Good Reason" if, following the effective date of the Change in Control, either (x) Employer is retained as a separate legal entity or business unit and Executive holds the same position in such legal entity or business unit as Executive held before such effective date, (y) Executive holds a position with duties and responsibilities comparable (although not necessarily identical, in view of the relative sizes of Employer and the entity involved in the Change in Control) to the duties and responsibilities of Executive prior to the effective date of the Change in Control; or

iv. a reduction in the Executive's title.

j. "**Involuntary Termination Without Cause**" means a termination by the Employer of the Executive's employment relationship with the Employer or an Affiliate for any reason other than for Cause and other than as a result of death or disability.

4. **Additional Terms for Severance Benefits:** The following additional terms shall apply:

a. **Release:** In order to be eligible to receive, and prior to receipt of, any of the Severance Benefits, the Executive must execute a general waiver and release and return such release to Employer within the time period specified therein, but in no event more than forty-five (45) days following the date of the Covered Termination, and such release must become effective in accordance with its terms but in all cases not later than the sixtieth (60th) day following the Covered Termination. No release shall require the Executive to forego any unpaid salary, any accrued but unpaid vacation pay, or any vested or earned benefits payable pursuant to the Executive's Employment Agreement or by law. The Employer, in its sole discretion, may modify the form of the required release to comply with applicable law and shall determine the form of the required release.

b. **Mitigation:** The Executive shall not be required to mitigate damages as a condition of the Severance Benefits by seeking other employment or otherwise. Similarly, no amount of the Severance Benefits shall be reduced by any compensation earned by the Executive as a result of employment by another employer or any retirement benefits received by such Executive after the date of the Executive's termination of employment with the Employer, except for Severance Benefits relating to payments for health continuation coverage provided above.

c. **Tax Withholding, Contributions:** All payments under this Schedule will be subject to all applicable deductions and withholdings of tax, PRSI, Universal Social Charge, and any other deductions which are required pursuant to the terms of the Executive's employment or by law, or which are provided for in the Executive's Employment Agreement and/or this Schedule.

EXHIBIT 21.1

Subsidiaries of the Registrant

Name of Subsidiary	State or Jurisdiction of Incorporation or Organization
Jazz Pharmaceuticals Ireland Limited	Ireland
Jazz Financing I Limited	Ireland
Jazz Pharmaceuticals, Inc.	Delaware
Jazz Pharmaceuticals (EUSA Pharma Holdings) Inc.	Delaware
Jazz Pharmaceuticals International Limited	Bermuda
Jazz Pharmaceuticals International II Limited	Bermuda
Jazz Pharmaceuticals International III Limited	Bermuda
EUSA Pharma International Limited	Gibraltar
EUSA Pharma SAS	France
EUSA Pharma Holdings SAS	France
EUSA Pharma (Luxembourg) S.à.r.l.	Luxembourg
EUSA Pharma (Europe) Limited	United Kingdom
Jazz Pharmaceuticals Italy S.p.A.	Italy
Gentium S.p.A.	Italy
Gentium GmbH	Switzerland

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Jazz Pharmaceuticals plc:

We consent to the incorporation by reference in the registration statement (No. 333-194131) on Form S-8, in the registration statement (No. 333-186886) on Form S-8, in the registration statement (No. 333-179075) on Form S-8, and in the registration statement (No. 333-179080) on Form S-3, of Jazz Pharmaceuticals plc of our reports dated February 24, 2015, with respect to the consolidated balance sheets of Jazz Pharmaceuticals plc as of December 31, 2014 and 2013, and the related consolidated statements of income, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period then ended, and the related financial statement schedule, and the effectiveness of internal control over financial reporting as of December 31, 2014, which reports appear in the December 31, 2014 annual report on Form 10-K of Jazz Pharmaceuticals plc.

/s/ KPMG

Dublin, Ireland
February 24, 2015

Exhibit 31.1

CERTIFICATION

I, Bruce C. Cozadd, certify that:

1. I have reviewed this Annual Report on Form 10-K of Jazz Pharmaceuticals Public Limited Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2015

By: /s/ Bruce C. Cozadd

Bruce C. Cozadd
Chairman and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Matthew P. Young, certify that:

1. I have reviewed this Annual Report on Form 10-K of Jazz Pharmaceuticals Public Limited Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2015

By: /s/ Matthew P. Young

Matthew P. Young
Executive Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION (1)

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350), Bruce C. Cozadd, Chief Executive Officer of Jazz Pharmaceuticals Public Limited Company (the "Company"), and Matthew P. Young, Executive Vice President and Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 24, 2015

/s/ Bruce C. Cozadd

Bruce C. Cozadd
Chairman and Chief Executive Officer

/s/ Matthew P. Young

Matthew P. Young
Executive Vice President and Chief Financial Officer

(1) This certification accompanies the Annual Report on Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Jazz Pharmaceuticals Public Limited 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. A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Jazz Pharmaceuticals Public Limited Company and will be retained by Jazz Pharmaceuticals Public Limited Company and furnished to the Securities and Exchange Commission or its staff upon request.