

**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, 2016
- 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: 001-35299



ALKERMES PUBLIC LIMITED COMPANY

(Exact name of registrant as specified in its charter)

Ireland
(State or other jurisdiction of
incorporation or organization)

98-1007018
(I.R.S. Employer
Identification No.)

**Connaught House
1 Burlington Road
Dublin 4, Ireland**
(Address of principal executive offices)

(Zip code)

+353-1-772-8000

(Registrant's telephone number, including area code)

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

Ordinary shares, \$0.01 par value

NASDAQ Global Select Stock Market

Title of each class

Name of each exchange on which registered

Securities registered pursuant to Section 12(b) 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 Exchange 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 (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files): Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a
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 registrant's ordinary shares held by non-affiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate) computed by reference to the price at which the ordinary shares was last sold as of the last business day of the registrant's most recently completed second fiscal quarter was \$6,485,485,798.

As of February 3, 2017, 152,547,458 ordinary shares were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for our Annual General Meeting of Shareholders for the fiscal year ended December 31, 2016 are incorporated by reference into Part III of this report.

ALKERMES PLC AND SUBSIDIARIES
ANNUAL REPORT ON FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2016
INDEX

PART I		
Item 1.	Business	5
Item 1A.	Risk Factors	32
Item 1B.	Unresolved Staff Comments	48
Item 2.	Properties	48
Item 3.	Legal Proceedings	48
Item 4.	Mine Safety Disclosures	50
PART II		
Item 5.	Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	51
Item 6.	Selected Financial Data	54
Item 7.	Management’s Discussion and Analysis of Financial Condition and Results of Operations	56
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk	73
Item 8.	Financial Statements and Supplementary Data	74
Item 9.	Changes in and Disagreements With Accountants on Accounting and Financial Disclosures	74
Item 9A.	Controls and Procedures	75
Item 9B.	Other Information	76
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	77
Item 11.	Executive Compensation	77
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	77
Item 13.	Certain Relationships and Related Transactions, and Director Independence	77
Item 14.	Principal Accounting Fees and Services	77
PART IV		
Item 15.	Exhibits and Financial Statement Schedules	77
Item 16.	Form 10-K Summary	77
SIGNATURES		78

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This document contains and incorporates by reference “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. In some cases, these statements can be identified by the use of forward-looking terminology such as “may,” “will,” “could,” “should,” “would,” “expect,” “anticipate,” “continue,” “believe,” “plan,” “estimate,” “intend,” or other similar words. These statements discuss future expectations, and contain projections of results of operations or of financial condition, or state trends and known uncertainties or other forward-looking information. Forward-looking statements in this Annual Report on Form 10-K (“Annual Report”) include, without limitation, statements regarding:

- our expectations regarding our financial performance, including revenues, expenses, gross margins, liquidity, capital expenditures and income taxes;
- our expectations regarding our products, including the development, regulatory (including expectations about regulatory filing, regulatory approval and regulatory timelines), therapeutic and commercial scope and potential of such products and the costs and expenses related thereto;
- our expectations regarding the initiation, timing and results of clinical trials of our products;
- our expectations regarding the competitive landscape, and changes therein, related to our products, including our development programs, and our industry generally;
- our expectations regarding the financial impact of currency exchange rate fluctuations and valuations;
- our expectations regarding future amortization of intangible assets;
- our expectations regarding our collaborations, licensing arrangements and other significant agreements with third parties relating to our products, including our development programs;
- our expectations regarding the impact of adoption of new accounting pronouncements;
- our expectations regarding near-term changes in the nature of our market risk exposures or in management’s objectives and strategies with respect to managing such exposures;
- our ability to comply with restrictive covenants of our indebtedness and our ability to fund our debt service obligations;
- our expectations regarding future capital requirements and capital expenditures and our ability to finance our operations and capital requirements; and
- other factors discussed elsewhere in this Annual Report.

Actual results might differ materially from those expressed or implied by these forward-looking statements because these forward-looking statements are subject to risks, assumptions and uncertainties. You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this Annual Report. All subsequent written and oral forward-looking statements concerning the matters addressed in this Annual Report and attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Except as required by applicable law or regulation, we do not undertake any obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, assumptions and uncertainties, the forward-looking events discussed in this Annual Report might not occur. For more information regarding the risks and uncertainties of our business, see “Item 1A—Risk Factors” in this Annual Report.

Unless otherwise indicated, information contained in this Annual Report concerning the disorders targeted by our products and the markets in which we operate is based on information from various sources (including, without limitation, industry publications, medical and clinical journals and studies, surveys and forecasts, and our internal research), on assumptions that we have made, which we believe are reasonable, based on those data and other similar sources, and on our knowledge of the markets for our products. Our internal research has not been verified by any independent source, and we have not independently verified any third-party information. These projections, assumptions and estimates are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Item 1A—Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates included in this Annual Report.

NOTE REGARDING COMPANY AND PRODUCT REFERENCES

Use of the terms such as “us,” “we,” “our,” “Alkermes” or the “Company” in this Annual Report is meant to refer to Alkermes plc and its consolidated subsidiaries. Except as otherwise suggested by the context, (a) references to “products” or “our products” in this Annual Report include our marketed products, marketed products using our

[Table of Contents](#)

proprietary technologies, our product candidates, product candidates using our proprietary technologies, development products and development products using our proprietary technologies (b) references to the “biopharmaceutical industry” are used interchangeably with references to the “biotechnology” and/or “pharmaceutical industries” and (c) references to “licensees” are used interchangeably with references to “collaborative partners” and “partners.”

NOTE REGARDING TRADEMARKS

We are the owner of various United States (“U.S.”) federal trademark registrations (“®”) and other trademarks (“™”), including ALKERMES[®], ARISTADA[®], CODAS[®], IPDAS[®], LinkeRx[®], MXDAS[®], NanoCrystal[®], SECA[™], SODAS[®], VERELAN[®] and VIVITROL[®].

The following are trademarks of the respective companies listed: ABILIFY[®] and ABILIFY MAINTENA[®]—Otsuka Pharmaceutical Co., Ltd. (“Otsuka Pharm. Co.”); AMPYRA[®], FAMPYRA[®]—Acorda Therapeutics, Inc. (“Acorda”); ANTABUSE[®]—Teva Women’s Health, Inc.; AUBAGIO[®] and LEMTRADA[®]—Sanofi Societe Anonyme France; AVONEX[®], PLEGRIDY[®], TECFIDERA[®], and TYSABRI[®]—Biogen MA Inc. (“Biogen”); BETASERON[®]—Bayer Pharma AG; BUNAVAIL[™]—BioDelivery Sciences; BYDUREON[®] and BYETTA[®]—Amylin Pharmaceuticals, LLC (“Amylin”); CAMPRAL[®]—Merck Sante; COPAXONE[®]—Teva Pharmaceutical Industries Ltd.; FOCALIN XR[®], EXTAVIA[®], GILENYA[®] and RITALIN LA[®]—Novartis AG; INVEGA SUSTENNA[®], RISPERDAL CONSTA[®] INVEGA TRINZA[®], TREVICTA[®] and XEPLION[®]—Johnson & Johnson (or its affiliates); NOVANTRONE[®] and REBIF[®]—Ares Trading S.A.; SUBOXONE[®] and SUBUTEX[®]—Indivior plc; TRICOR[®]—Fournier Industrie et Sante Corporation; VICTOZA[®]—Novo Nordisk A/S LLC; ZOHYDRO[™]—Zogenix, Inc.; ZUBSOLV[®]—Orexo US, Inc.; and TRULICITY[®], ZYPREXA[®] and ZYPREXA[®] RELPREVV[®]—Eli Lilly and Company. Other trademarks, trade names and service marks appearing in this Annual Report are the property of their respective owners. Solely for convenience, the trademarks and trade names in this Annual Report are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

PART I

Item 1. Business

The following discussion contains forward-looking statements. Actual results may differ significantly from those expressed or implied in the forward-looking statements. See “Cautionary Note Concerning Forward-Looking Statements” on pages 3 and 4 of this Annual Report. Factors that might cause future results to differ materially from those expressed or implied in the forward-looking statements include, but are not limited to, those discussed in “Item 1A—Risk Factors” and elsewhere in this Annual Report.



Overview

Alkermes plc is a fully integrated, global biopharmaceutical company that applies its scientific expertise and proprietary technologies to research, develop and commercialize, both with partners and on its own, pharmaceutical products that are designed to address unmet medical needs of patients in major therapeutic areas. Alkermes has a diversified portfolio of marketed drug products and a clinical pipeline of products that address central nervous system (“CNS”) disorders such as schizophrenia, depression, addiction and multiple sclerosis (“MS”). Headquartered in Dublin, Ireland, Alkermes has a research and development (“R&D”) facility and corporate offices in Waltham, Massachusetts; an R&D and manufacturing facility in Athlone, Ireland; and a manufacturing facility in Wilmington, Ohio.

Marketed Products

The key marketed products discussed below are expected to generate significant revenues for us. Refer to the “Patents and Proprietary Rights” section of this Annual Report for information with respect to the intellectual property protection for these marketed products.

Summary information regarding our proprietary products include:

Product	Indication(s)	Licensee	Territory
 <p>ARISTADA aripiprazole lauroxil extended-release injectable suspension 441mg · 662mg · 882mg</p>	Schizophrenia	None	Commercialized by Alkermes in the U.S.
 <p>Vivitrol[®] (maltrexone for extended-release injectable suspension) 380 mg/vial</p>	Alcohol dependence and Opioid dependence	None Cilag GmbH International (“Cilag”)	Commercialized by Alkermes in the U.S. Russia and Commonwealth of Independent States (“CIS”)

[Table of Contents](#)

Summary information regarding products that use our proprietary technologies include:

Product	Indication(s)	Licensee	Territory
<i>RISPERDAL CONSTA</i>	Schizophrenia and Bipolar I disorder	Janssen Pharmaceutica Inc. ("Janssen, Inc.") and Janssen Pharmaceutica International, a division of Cilag International AG ("Janssen International")	Worldwide
<i>INVEGA SUSTENNA</i>	Schizophrenia and Schizoaffective disorder	Janssen Pharmaceutica N.V. (together with Janssen, Inc., Janssen International and their affiliates "Janssen")	U.S.
<i>XEPLION</i>	Schizophrenia	Janssen	All countries outside of the U.S. ("ROW")
<i>INVEGA TRINZA</i>	Schizophrenia	Janssen	U.S.
<i>TREVICTA</i>	Schizophrenia	Janssen	ROW
<i>AMPYRA</i>	Treatment to improve walking in patients with MS, as demonstrated by an increase in walking speed	Acorda	U.S.
<i>FAMPYRA</i>		Biogen, under sublicense from Acorda	ROW
<i>BYDUREON</i>	Type 2 diabetes	AstraZeneca plc ("AstraZeneca")	Worldwide

[Table of Contents](#)

Proprietary Products

We develop and commercialize products designed to address the unmet needs of patients suffering from addiction and schizophrenia.

ARISTADA

ARISTADA (aripiprazole lauroxil) is an extended-release intramuscular injectable suspension approved in the U.S. for the treatment of schizophrenia. ARISTADA is the first of our products to utilize our proprietary LinkeRx technology. ARISTADA is a prodrug; once in the body, ARISTADA is likely converted by enzyme-mediated hydrolysis to N-hydroxymethyl aripiprazole, which is then hydrolyzed to aripiprazole. ARISTADA is the first atypical antipsychotic with once-monthly and six-week dosing options to deliver and maintain therapeutic levels of medication in the body. ARISTADA has three dosing options (441 mg, 662 mg and 882 mg) and is packaged in a ready-to-use, pre-filled product format. We developed, manufacture and commercialize ARISTADA in the U.S.

What is schizophrenia?

Schizophrenia is a chronic, severe and disabling brain disorder. The disease is marked by positive symptoms (hallucinations and delusions) and negative symptoms (depression, blunted emotions and social withdrawal), as well as by disorganized thinking. An estimated 2.4 million Americans over the age of 18 have schizophrenia in a given year, with men and women affected equally. Worldwide, it is estimated that one person in every 100 develops schizophrenia. Studies have demonstrated that as many as 75% of patients with schizophrenia have difficulty taking their oral medication on a regular basis, which can lead to worsening of symptoms.

VIVITROL

VIVITROL (naltrexone for extended-release injectable suspension) is the only once-monthly, non-addictive, injectable medication approved in the U.S., Russia and certain countries of the CIS for the treatment of alcohol dependence and for the prevention of relapse to opioid dependence, following opioid detoxification. VIVITROL uses our polymer-based microsphere injectable extended-release technology to deliver and maintain therapeutic medication levels in the body through one intramuscular injection every four weeks. We developed and exclusively manufacture VIVITROL. We commercialize VIVITROL in the U.S., and Cilag commercializes VIVITROL in Russia and certain countries of the CIS.

What are opioid dependence and alcohol dependence?

Opioid dependence is a serious and chronic brain disease characterized by compulsive, prolonged self-administration of opioid substances that are not used for a medical purpose. According to the 2015 U.S. National Survey on Drug Use and Health, an estimated 2.5 million people aged 18 or older were dependent on pain relievers or heroin in the U.S.

Alcohol dependence is a serious and chronic brain disease characterized by cravings for alcohol, loss of control over drinking, withdrawal symptoms and an increased tolerance for alcohol. According to the 2015 U.S. National Survey on Drug Use and Health, an estimated 15 million people aged 18 or older were dependent on alcohol. Adherence to medication is particularly challenging with this patient population.

Products Using Our Proprietary Technologies

We have granted licenses under our proprietary technologies to enable third parties to develop, commercialize and, in some cases, manufacture products for which we receive royalties and/or manufacturing revenues. Such arrangements include the following:

INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA

INVEGA SUSTENNA/XEPLION (paliperidone palmitate), INVEGA TRINZA/TREVICTA (paliperidone palmitate) and RISPERDAL CONSTA (risperidone long-acting injection) are long-acting atypical antipsychotics owned and commercialized worldwide by Janssen that incorporate our proprietary technologies. INVEGA SUSTENNA is approved in the U.S. for the treatment of schizophrenia and for the treatment of schizoaffective

[Table of Contents](#)

disorder as either a monotherapy or adjunctive therapy. Paliperidone palmitate extended-release injectable suspension is approved in the European Union ("EU") and other countries outside of the U.S. for the treatment of schizophrenia and is marketed and sold under the trade name XEPLION. INVEGA SUSTENNA/XEPLION uses our nanoparticle injectable extended-release technology to increase the rate of dissolution and enable the formulation of an aqueous suspension for once-monthly intramuscular administration. INVEGA SUSTENNA/XEPLION is manufactured by Janssen.

INVEGA TRINZA is an atypical antipsychotic injection for the treatment of schizophrenia used in people who have been treated with INVEGA SUSTENNA for at least four months. INVEGA TRINZA, the first schizophrenia treatment to be taken once every three months, became commercially available in the U.S. in June 2015.

In May 2016, TREVICTA (paliperidone palmitate a 3-monthly injection), was approved in the EU for the maintenance treatment of schizophrenia in adult patients who are clinically stable on XEPLION. INVEGA TRINZA/TREVICTA use our proprietary technology and are manufactured by Janssen.

RISPERDAL CONSTA is approved in the U.S. for the treatment of schizophrenia and as both monotherapy and adjunctive therapy to lithium or valproate in the maintenance treatment of bipolar I disorder. RISPERDAL CONSTA is approved in numerous countries outside of the U.S. for the treatment of schizophrenia and the maintenance treatment of bipolar I disorder. RISPERDAL CONSTA uses our polymer-based microsphere injectable extended-release technology to deliver and maintain therapeutic medication levels in the body through just one intramuscular injection every two weeks. RISPERDAL CONSTA microspheres are exclusively manufactured by us.

Revenues from Janssen accounted for approximately 36%, 40% and 41% of our consolidated revenues for the fiscal years ended December 31, 2016, 2015 and 2014, respectively. See "Collaborative Arrangements" in Part I of this Annual Report for information about our relationship with Janssen.

What is bipolar I disorder?

Bipolar I disorder is a brain disorder that causes unusual shifts in a person's mood, energy and ability to function. It is often characterized by debilitating mood swings, from extreme highs (mania) to extreme lows (depression). Bipolar I disorder is characterized based on the occurrence of at least one manic episode, with or without the occurrence of a major depressive episode. Bipolar disorder is believed to affect approximately 5.7 million American adults, or about 2.6% of the U.S. population aged 18 and older in a given year. The median age of onset for bipolar disorder is 25 years.

What is schizoaffective disorder?

Schizoaffective disorder is a condition in which a person experiences a combination of schizophrenia symptoms, such as delusions, hallucinations or other symptoms characteristic of schizophrenia, and mood disorder symptoms, such as mania or depression. Schizoaffective disorder is a serious mental illness that affects about one in 100 people.

AMPYRA/FAMPYRA

AMPYRA (dalfampridine)/FAMPYRA (fampridine) is believed to be the first treatment approved in the U.S. and in over 50 countries across Europe, Asia and the Americas to improve walking in adults with MS who have walking disability, as demonstrated by an increase in walking speed. Extended-release dalfampridine tablets are marketed and sold by Acorda in the U.S. under the trade name AMPYRA and by Biogen outside the U.S. under the trade name FAMPYRA. In July 2011, the European Medicines Agency ("EMA") conditionally approved FAMPYRA in the EU for the improvement of walking in adults with MS. This authorization was renewed as of August 2016. AMPYRA and FAMPYRA incorporate our oral controlled-release technology. AMPYRA and FAMPYRA are manufactured by us.

What is multiple sclerosis?

Multiple sclerosis, or MS, is a chronic, usually progressive, disease in which the immune system attacks and degrades the function of nerve fibers in the brain and spinal cord. These nerve fibers consist of long, thin fibers, or axons, surrounded by a myelin sheath, which facilitates the transmission of electrical impulses. In MS, the myelin sheath is damaged by the body's own immune system, causing areas of myelin sheath loss, also known as

[Table of Contents](#)

demyelination. This damage, which can occur at multiple sites in the CNS, blocks or diminishes conduction of electrical impulses. People with MS may suffer impairments in any number of neurological functions. These impairments vary from individual to individual and over the course of time, depending on which parts of the brain and spinal cord are affected, and often include difficulty walking. Individuals vary in the severity of the impairments they suffer on a day-to-day basis, with impairments becoming better or worse depending on the activity of the disease on a given day.

BYDUREON

BYDUREON (exenatide extended-release for injectable suspension) is approved in the U.S. and the EU for the treatment of type 2 diabetes. AstraZeneca is responsible for the development and commercialization of BYDUREON worldwide. BYDUREON, a once-weekly formulation of exenatide, uses our polymer-based microsphere injectable extended-release technology. BYDUREON is manufactured by AstraZeneca. BYDUREON Pen 2 mg, a pre-filled, single-use pen injector that contains the same formulation and dose as the original BYDUREON single-dose tray, is available in the U.S., certain countries in the EU and Japan.

What is type 2 diabetes?

Diabetes is a disease in which the body does not produce or properly use insulin. Diabetes can result in serious health complications, including cardiovascular, kidney and nerve disease. Diabetes is believed to affect nearly 26 million people in the U.S. and an estimated 382 million adults worldwide. Approximately 90-95% of those affected have type 2 diabetes. An estimated 80% of people with type 2 diabetes are overweight or obese. Data indicate that weight loss (even a modest amount) supports patients in their efforts to achieve and sustain glycemic control.

Key Development Programs

Our R&D is focused on leveraging our formulation expertise and proprietary product platforms to develop novel, competitively advantaged medications designed to enhance patient outcomes in major CNS disorders, such as schizophrenia, addiction, depression and MS. As part of our ongoing R&D efforts, we have devoted, and will continue to devote, significant resources to conducting pre-clinical work and clinical studies to advance the development of new pharmaceutical products. The discussion below highlights our key current R&D programs. Drug development involves a high degree of risk and investment, and the status, timing and scope of our development programs are subject to change. Important factors that could adversely affect our drug development efforts are discussed in “Item 1A—Risk Factors” of this Annual Report. Refer to the “Patents and Proprietary Rights” section of this Annual Report for information with respect to the intellectual property protection for our development products.

[Table of Contents](#)

The following graphic summarizes the status of our key development programs:



Aripiprazole Lauroxil Two-Month Dose

Aripiprazole lauroxil, an intramuscular injectable atypical antipsychotic, which is currently commercially available as ARISTADA, with once monthly and six-week dosing options, for the treatment of schizophrenia, is also in development with a two-month dosing interval. In February 2016, we announced positive topline results from a randomized, open-label, pharmacokinetic study evaluating a two-month dosing interval of aripiprazole lauroxil extended-release injectable suspension for the treatment of schizophrenia. Based on these phase 1 results, we submitted a supplemental New Drug Application (“sNDA”) to the U.S. Food and Drug Administration (“FDA”) in August 2016 and the sNDA was accepted for filing by the FDA in October 2016 with a Prescription Drug User Fee Act (“PDUFA”) date in June 2017.

ALKS 5461

ALKS 5461 is a proprietary, once-daily, oral sublingual investigational medicine, with a novel mechanism of action, in development for the adjunctive treatment of Major Depressive Disorder (“MDD”) in patients with an inadequate response to standard antidepressant therapies. ALKS 5461 is composed of samidorphan in combination with buprenorphine. Samidorphan is a proprietary oral opioid modulator characterized by limited hepatic metabolism and durable pharmacologic activity in modulating brain opioid receptors. In October 2013, the FDA granted Fast Track status for ALKS 5461 for the adjunctive treatment of MDD in patients with inadequate response to standard antidepressant therapies.

In January 2016, we announced the topline results of FORWARD-3 and FORWARD-4 from the FORWARD (Focused on Results With a Rethinking of Depression) pivotal program. Neither study met the prespecified primary efficacy endpoint, which compared ALKS 5461 to placebo on the change from baseline on the 10-item Montgomery—Åsberg Depression Rating Scale (“MADRS-10”) total scores. FORWARD-4, which tested two dose levels of ALKS 5461 (2mg/2mg and 0.5mg/0.5mg) compared to placebo, showed a clear trend toward efficacy with the 2mg/2mg dose of ALKS 5461 on the primary endpoint, and post hoc analyses achieved statistical significance for the 2mg/2mg dose group on the MADRS-10 endpoint. Based on these analyses, we believe that FORWARD-4 provides supportive evidence of the efficacy of ALKS 5461 for the adjunctive treatment of MDD in patients with an inadequate response to standard antidepressant therapies. FORWARD-3 tested ALKS 5461 (2mg/2mg) compared to placebo. Placebo response was greater than that observed in FORWARD-4 and no treatment effect of ALKS 5461 was observed.

In October 2016, we announced positive topline results from FORWARD-5, a phase 3 randomized, double-blind, multicenter, placebo-controlled, sequential parallel comparison design study of ALKS 5461 in MDD from the FORWARD pivotal program. ALKS 5461 2mg/2mg met the prespecified primary endpoint of significantly reducing depression scores compared to placebo, as measured by the 6-item Montgomery—Åsberg Depression Rating Scale (“MADRS-6”). ALKS 5461 2mg/2mg also demonstrated statistically significant reductions in MADRS-10 scores compared to placebo. The 1mg/1mg dose of ALKS 5461 showed improvement in depressive symptoms in the study, but did not separate significantly from placebo. FORWARD-5 was conducted in two sequential stages: Stage 1 was 5 weeks in duration, and Stage 2 was 6 weeks. In Stage 1, the average change from baseline depression scores was calculated for weeks 3 through 5. For Stage 2, the average change from baseline was calculated for weeks 3 through 6. The results of Stages 1 and 2 were then averaged. Depression scores were assessed using MADRS-6 and MADRS-10. MADRS-6, a subscale of the MADRS-10 assessment tool for depression, focuses on the core symptoms of depression. The most common adverse events for ALKS 5461 observed in the FORWARD efficacy studies included nausea, constipation and dizziness.

Based on the results of FORWARD-5, the supportive evidence from FORWARD-4 and the successful phase 2 study of ALKS 5461, we recently met with the FDA’s Division of Psychiatric Products at a Type C meeting to discuss ALKS 5461. We will request a pre-NDA meeting with the FDA and plan to submit the New Drug Application (“NDA”) for ALKS 5461 in the second half of 2017.

ALKS 3831

ALKS 3831 is a novel, proprietary, oral investigational medicine designed as a broad-spectrum antipsychotic for the treatment of schizophrenia. ALKS 3831 is composed of samidorphan in combination with the established antipsychotic drug olanzapine, which is generally available under the name ZYPREXA. ALKS 3831 is designed to provide the strong efficacy of olanzapine and a differentiated safety profile from olanzapine with favorable weight and metabolic properties and to have utility in the treatment of schizophrenia in patients with co-occurring alcohol use disorder.

In December 2015 and February 2016, we announced the initiation of ENLIGHTEN-1 and ENLIGHTEN-2, respectively, the two phase 3 studies from the ENLIGHTEN pivotal program for ALKS 3831. ENLIGHTEN-1 is a multicenter, randomized, double-blind study to evaluate the antipsychotic efficacy of ALKS 3831 compared to placebo over four weeks in patients experiencing acute exacerbation of schizophrenia. ENLIGHTEN-2 is designed to assess weight gain with ALKS 3831 compared to olanzapine in patients with schizophrenia over a six month period. The ENLIGHTEN pivotal program will also include supportive studies to evaluate the pharmacokinetic, metabolic and long-term safety profile of ALKS 3831. Results from ENLIGHTEN-1 are expected by the end of 2017

[Table of Contents](#)

and results from ENLIGHTEN-2 are expected in mid-2018. We expect to use safety and efficacy data from the ENLIGHTEN pivotal program, if successful, to serve as the basis for an NDA to be submitted to the FDA.

In October 2016, we announced the initiation of a phase 1 metabolic study of ALKS 3831 to assess the effects of ALKS 3831 on whole body insulin sensitivity, lipid metabolism and other important metabolic parameters compared to olanzapine. Subjects will be randomized to receive ALKS 3831, olanzapine or placebo for 21 days. Results from the study are expected in mid-2017.

In January 2017, we announced plans to initiate a phase 3 study of ALKS 3831 in young adult patients. The study will assess the impact of ALKS 3831 on weight compared to treatment with olanzapine. The study is expected to initiate in the second quarter of 2017.

ALKS 8700

ALKS 8700 is a novel, proprietary, oral investigational monomethyl fumarate ("MMF") molecule in development for the treatment of MS. ALKS 8700 is designed to rapidly and efficiently convert to MMF in the body and to offer differentiated features as compared to the currently marketed dimethyl fumarate, TECFIDERA.

We plan to file a 505(b)(2) NDA using pharmacokinetic bridging data from studies comparing ALKS 8700 and TECFIDERA and a two-year, multicenter, open-label study designed to assess the safety of ALKS 8700, which we initiated in December 2015. Additionally, we plan to initiate a randomized, head-to-head phase 3 study of the gastrointestinal tolerability of ALKS 8700 compared to TECFIDERA in the first quarter of 2017. We expect to complete ALKS 8700 registration studies and file the NDA in 2018.

For more information about 505(b)(2) NDAs, see "Item 1—Business, Regulatory, Hatch-Waxman Act".

ALKS 6428

ALKS 6428 is designed to help healthcare providers transition patients from physical dependence on opioids to initiation with VIVITROL. ALKS 6428 is an investigational regimen of ascending doses of oral naltrexone administered in conjunction with ancillary medications during a seven-day treatment period, prior to first VIVITROL injection. In February 2017, we announced that the study did not meet its primary endpoint, and no statistically significant difference between treatment groups was observed. Patients in each of the three treatment arms (ALKS 6428 plus tapering doses of buprenorphine, ALKS 6428 plus placebo, and placebo) performed equally well, with a similar percentage of patients successfully transitioning to initiation with VIVITROL. The company is continuing to analyze the full data set from the study.

A second phase 3 study of ALKS 6428 is ongoing in patients who want to transition from buprenorphine maintenance therapy to initiation with VIVITROL for the treatment of opioid dependence.

ALKS 4230

ALKS 4230 is our selective effector cell activator ("SECA") that is designed to harness a patient's immune system to preferentially activate and increase the number of tumor killing immune cells. SECA proteins selectively target immune cells to avoid expansion of immune regulatory cells which interfere with the anti-tumor response. SECA molecules are engineered using our proprietary fusion protein technology platform to modulate the natural mechanism of action of a biologic product. We filed an Investigational New Drug ("IND") application with the FDA in the first quarter of 2016 and initiated a phase 1 clinical trial in May 2016. This phase 1 study is being conducted in two stages: a dose-escalation stage followed by a dose-expansion stage. The first stage of the study is designed to determine a maximum tolerated dose, and to identify the optimal dose range of ALKS 4230 based on measures of immunological-pharmacodynamic effects. Following the identification of the optimal dose range of ALKS 4230 in the first stage of the study, the dose-expansion stage of the study will evaluate ALKS 4230 in patients with selected solid tumor types. Initial results from the first stage of the phase 1 study are expected in 2017.

ALKS 7119

ALKS 7119 is a novel, proprietary, oral investigational medicine that has a multivalent mechanism of action that acts on key receptors in the brain involved in several CNS diseases, including agitation in Alzheimer's disease, MDD

[Table of Contents](#)

and others. In January 2016, we announced the initiation of a phase 1, double-blind, placebo-controlled study designed to evaluate the safety and tolerability of single ascending doses of ALKS 7119 in healthy subjects. In April 2016, we announced that early results of the single-ascending-dose study demonstrated a favorable tolerability profile and pharmacokinetic properties consistent with potential once-daily dosing.

Based on these early results, we initiated the multiple-ascending-dose study in healthy volunteers in July 2016. In October 2016, due to tolerability issues observed in a small number of subjects in the study, we ceased further development of ALKS 7119. The effects observed were not observed in the single-ascending dose study or anticipated based on pre-clinical models.

Our Research and Development Expenditures

Please see “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for our R&D expenditures for the fiscal years ended December 31, 2016, 2015 and 2014.

Collaborative Arrangements

We have entered into several collaborative arrangements to develop and commercialize products and, in so doing, to access technological, financial, marketing, manufacturing and other resources. Refer to the “Patents and Proprietary Rights” section of this Annual Report for information with respect to the intellectual property protection for these products.

Janssen

INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA

Under our license agreement with Janssen Pharmaceutica N.V., we granted Janssen a worldwide exclusive license under our NanoCrystal technology to develop, commercialize and manufacture INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA and related products.

Under our license agreement, we received milestone payments upon the achievement of certain development goals from Janssen; there are no further milestones to be earned under this agreement. We receive tiered royalty payments between 5% and 9% of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA net sales in each country where the license is in effect, with the exact royalty percentage determined based on aggregate worldwide net sales. The tiered royalty payments consist of a patent royalty and a know-how royalty, both of which are determined on a country-by-country basis. The patent royalty, which equals 1.5% of net sales, is payable until the expiration of the last of the patents claiming the product in such country. The know-how royalty is a tiered royalty of 3.5%, 5.5% and 7.5% on aggregate worldwide net sales of below \$250 million, between \$250 million and \$500 million, and greater than \$500 million, respectively. The know-how royalty is payable for the later of 15 years from first commercial sale of a product in each individual country or March 31, 2019, subject in each case to the expiry of the license agreement. These royalty payments may be reduced in any country based on patent litigation or on competing products achieving certain minimum sales thresholds. The license agreement expires upon the later of (i) March 31, 2019 or (ii) the expiration of the last of the patents subject to the agreement. After expiration, Janssen retains a non-exclusive, royalty-free license to develop, manufacture and commercialize the products.

Janssen may terminate the license agreement in whole or in part upon three months’ notice to us. We and Janssen have the right to terminate the agreement upon a material breach of the other party, which is not cured within a certain time period, or upon the other party’s bankruptcy or insolvency.

RISPERDAL CONSTA

Under a product development agreement, we collaborated with Janssen on the development of RISPERDAL CONSTA. Under the development agreement, Janssen provided funding to us for the development of RISPERDAL CONSTA, and Janssen is responsible for securing all necessary regulatory approvals for the product.

Under two license agreements, we granted Janssen and an affiliate of Janssen exclusive worldwide licenses to use and sell RISPERDAL CONSTA. Under our license agreements with Janssen, we receive royalty payments equal to

[Table of Contents](#)

2.5% of Janssen's net sales of RISPERDAL CONSTA in each country where the license is in effect based on the quarter when the product is sold by Janssen. This royalty may be reduced in any country based on lack of patent coverage and significant competition from generic versions of the product. Janssen can terminate the license agreements upon 30 days' prior written notice to us. Either party may terminate the license agreements by written notice following a breach which continues for 90 days after the delivery of written notice thereof or upon the other party's insolvency. The licenses granted to Janssen expire on a country-by-country basis upon the later of (i) the expiration of the last patent claiming the product in such country or (ii) 15 years after the date of the first commercial sale of the product in such country, provided that in no event will the license granted to Janssen expire later than the twentieth anniversary of the first commercial sale of the product in such country, with the exception of Canada, France, Germany, Italy, Japan, Spain and the United Kingdom, in each case, where the fifteen-year limitation shall pertain regardless. After expiration, Janssen retains a non-exclusive, royalty-free license to manufacture, use and sell RISPERDAL CONSTA.

We exclusively manufacture RISPERDAL CONSTA for commercial sale. Under our manufacturing and supply agreement with Janssen, we record manufacturing revenues when product is shipped to Janssen, based on a percentage of Janssen's net unit sales price for RISPERDAL CONSTA for the calendar year. This percentage is determined based on Janssen's unit demand for the calendar year and varies based on the volume of units shipped, with a minimum manufacturing fee of 7.5%. The manufacturing and supply agreement terminates on expiration of the license agreements. In addition, either party may terminate the manufacturing and supply agreement upon a material breach by the other party, which is not resolved within 60 days after receipt of a written notice specifying the material breach or upon written notice in the event of the other party's insolvency or bankruptcy. Janssen may terminate the agreement upon six months' written notice to us. In the event that Janssen terminates the manufacturing and supply agreement without terminating the license agreements, the royalty rate payable to us on Janssen's net sales of RISPERDAL CONSTA would increase from 2.5% to 5.0%.

Acorda

Under an amended and restated license agreement, we granted Acorda an exclusive worldwide license to use and sell and, solely in accordance with our supply agreement, to make or have made, AMPYRA/FAMPYRA. We receive certain commercial and development milestone payments, license revenues and a royalty of approximately 10% based on net sales of AMPYRA/FAMPYRA by Acorda and its sub-licensee, Biogen. This royalty payment may be reduced in any country based on lack of patent coverage, competing products achieving certain minimum sales thresholds, and whether we manufacture the product.

In June 2009, we entered into an amendment of the amended and restated license agreement and the supply agreement with Acorda and, pursuant to such amendment, consented to the sublicense by Acorda to Biogen of Acorda's rights to use and sell FAMPYRA in certain territories outside of the U.S. (to the extent that such rights were to be sublicensed to Biogen pursuant to its separate collaboration and license agreement with Acorda). Under this amendment, we agreed to modify certain terms and conditions of the amended and restated license agreement and the supply agreement with Acorda to reflect the sublicense by Acorda to Biogen.

Acorda has the right to terminate the amended and restated license agreement upon 90 days' written notice. We have the right to terminate the amended and restated license agreement for countries in which Acorda fails to launch a product within a specified time after obtaining the necessary regulatory approval or fails to file regulatory approvals within a commercially reasonable time after completion of, and receipt of positive data from, all pre-clinical and clinical studies required for filing a marketing authorization application. Either party has the right to terminate the amended and restated license agreement by written notice following a material breach of the other party, which is not cured within a certain time period, or upon the other party's entry into bankruptcy or dissolution proceedings. If we terminate Acorda's license in any country, we are entitled to a license from Acorda of its patent rights and know-how relating to the product as well as the related data, information and regulatory files, and to market the product in the applicable country, subject to an initial payment equal to Acorda's cost of developing such data, information and regulatory files and to ongoing royalty payments to Acorda. Subject to the termination of the amended and restated license agreement, licenses granted under the license agreement terminate on a country-by-country basis on the later of (i) September 26, 2018 or (ii) the expiration of the last to expire of our patents or the existence of a threshold level of competition in the marketplace.

[Table of Contents](#)

Under our commercial manufacturing supply agreement with Acorda, we manufacture and supply AMPYRA/FAMPYRA for Acorda (and its sub-licensee, Biogen). Under the terms of the agreement, Acorda may obtain up to 25% of its total annual requirements of product from a second-source manufacturer. We receive manufacturing royalties equal to 8% of net selling price for all product manufactured by us and a compensating payment for product manufactured and supplied by a third party. We may terminate the commercial manufacturing supply agreement upon 12 months' prior written notice to Acorda, and either party may terminate the commercial manufacturing supply agreement following a material and uncured breach of the commercial manufacturing supply agreement or amended and restated license agreement or the entry into bankruptcy or dissolution proceedings by the other party. In addition, subject to early termination of the commercial manufacturing supply agreement noted above, the commercial manufacturing supply agreement terminates upon the expiry or termination of the amended and restated license agreement.

We are entitled to receive the following milestone payments under our amended and restated license agreement with Acorda for each of the third and fourth new indications of the product developed thereunder:

- initiation of a phase 3 clinical trial: \$1.0 million;
- acceptance of an NDA by the FDA: \$1.0 million;
- approval of the NDA by the FDA: \$1.5 million; and
- the first commercial sale: \$1.5 million.

In January 2011, we entered into a development and supplemental agreement to our amended and restated license agreement and commercial manufacturing supply agreement with Acorda. Under the terms of this agreement, we granted Acorda the right, either with us or with a third party, in each case in accordance with certain terms and conditions, to develop new formulations of dalfampridine or other aminopyridines. Under the terms of the agreement, Acorda has the right to select either a formulation developed by us or by a third party for commercialization. We are entitled to development fees we incur in developing formulations under the development and supplemental agreement and, if Acorda selects and commercializes any such formulation, to milestone payments (for new indications if not previously paid), license revenues and royalties in accordance with our amended and restated license agreement for the product, and either manufacturing fees as a percentage of net selling price for product manufactured by us or compensating fees for product manufactured by third parties. If, under the development and supplemental agreement, Acorda selects a formulation not developed by us, then we will be entitled to various compensation payments and have the first option to manufacture such third-party formulation. The development and supplemental agreement expires upon the expiry or termination of the amended and restated license agreement and may be earlier terminated by either party following an uncured breach of the agreement by the other party.

Acorda's financial obligations under this development and supplemental agreement continue for a minimum of ten years from the first commercial sale of such new formulation, and may extend for a longer period of time, depending on the intellectual property rights protecting the formulation, regulatory exclusivity and/or the absence of significant market competition. These financial obligations survive termination of the agreement.

AstraZeneca

In May 2000, we entered into a development and license agreement with Amylin for the development of exendin products falling within the scope of our patents, including the once-weekly formulation of exenatide marketed as BYDUREON. In August 2012, Bristol-Myers Squibb Company ("Bristol-Myers") acquired Amylin. From August 2012 through January 2014, Bristol-Myers and AstraZeneca jointly developed and commercialized Amylin's exendin products, including BYDUREON, through their diabetes collaboration. In April 2013, Bristol-Myers completed its assumption of all global commercialization responsibility related to the marketing of BYDUREON from Amylin's former collaborative partner, Eli Lilly & Company ("Lilly"). In February 2014, AstraZeneca acquired sole ownership from Bristol-Myers of the intellectual property and global rights related to BYDUREON and Amylin's other exendin products, including Amylin's rights and obligations under our development and license agreement.

Pursuant to the development and license agreement, AstraZeneca has an exclusive, worldwide license to our polymer-based microsphere technology for the development and commercialization of injectable extended-release formulations of exendins and other related compounds. We receive funding for research and development and will also receive royalty payments based on future product sales. Upon the achievement of certain development and commercialization goals, we received milestone payments consisting of cash and warrants for Amylin common stock;

[Table of Contents](#)

there are no further milestones to be earned under the agreement. In October 2005 and in July 2006, we amended the development and license agreement. Under the amended development and license agreement (i) we are responsible for formulation and are principally responsible for non-clinical development of any products that may be developed pursuant to the agreement and for manufacturing these products, except to the extent manufacturing rights have been transferred to Amylin, and (ii) we transferred certain of our technology related to the manufacture of BYDUREON to Amylin and agreed to the manufacture of BYDUREON by Amylin. Under our amended development and license agreement, AstraZeneca is responsible for conducting clinical trials, securing regulatory approvals and commercializing exenatide products, including BYDUREON, on a worldwide basis.

Until December 31, 2021, we will receive royalties equal to 8% of net sales from the first 40 million units of BYDUREON sold in any particular calendar year and 5.5% of net sales from units sold beyond the first 40 million units for that calendar year. Thereafter, during the term of the development and license agreement, we will receive royalties equal to 5.5% of net sales of products sold. We were entitled to, and received, milestone payments related to the first commercial sale of BYDUREON in the EU and the first commercial sale of BYDUREON in the U.S.

The development and license agreement expires on the later of (i) ten years from the first commercial sale of the last of the products covered by the development and license agreement, or (ii) the expiration or invalidation of all of our patents licensed under this agreement. Upon expiration, all licenses become non-exclusive and royalty-free. AstraZeneca may terminate the development and license agreement for any reason upon 180 days' written notice to us. In addition, either party may terminate the development and license agreement upon a material default or breach by the other party that is not cured within 60 days after receipt of written notice specifying the default or breach. Alkermes may terminate the development and license agreement upon AstraZeneca's insolvency or bankruptcy.

Proprietary Product Platforms

Our proprietary product platforms, which include technologies owned and exclusively licensed to us, address several important development opportunities. We have used these technologies as platforms to establish drug development, clinical development and regulatory expertise.

Injectable Extended-Release Microsphere Technology

Our injectable extended-release microsphere technology allows us to encapsulate small-molecule pharmaceuticals, peptides and proteins in microspheres made of common medical polymers. The technology is designed to enable novel formulations of pharmaceuticals by providing controlled, extended release of drugs over time. Drug release from the microsphere is controlled by diffusion of the drug through the microsphere and by biodegradation of the polymer. These processes can be modulated through a number of formulation and fabrication variables, including drug substance and microsphere particle sizing and choice of polymers and excipients.

LinkeRx Technology

The long-acting LinkeRx technology platform is designed to enable the creation of extended-release injectable versions of antipsychotic therapies and may also be useful in other disease areas in which extended duration of action may provide therapeutic benefits. The technology uses proprietary linker-tail chemistry to create new molecular entities derived from known agents.

NanoCrystal Technology

Our NanoCrystal technology is applicable to poorly water-soluble compounds and involves formulating and stabilizing drugs into particles that are nanometers in size. A drug in NanoCrystal form can be incorporated into a range of common dosage forms and administration routes, including tablets, capsules, inhalation devices and sterile forms for injection, with the potential for enhanced oral bioavailability, increased therapeutic effectiveness, reduced/eliminated fed/fasted variability and sustained duration of intravenous/intramuscular release.

Oral Controlled Release Technology

Our oral controlled release ("OCR") technologies are used to formulate, develop and manufacture oral dosage forms of pharmaceutical products that control the release characteristics of standard dosage forms. Our OCR platform

[Table of Contents](#)

includes technologies for tailored pharmacokinetic profiles including SODAS technology, CODAS technology, IPDAS technology and the MXDAS drug absorption system, each as described below:

- **SODAS Technology:** SODAS (“Spheroidal Oral Drug Absorption System”) technology involves producing uniform spherical beads of 1 mm to 2 mm in diameter containing drug plus excipients and coated with product-specific modified-release polymers. Varying the nature and combination of polymers within a selectively permeable membrane enables varying degrees of modified release depending upon the required product profile.
- **CODAS Technology:** CODAS (“Chronotherapeutic Oral Drug Absorption System”) technology enables the delayed onset of drug release incorporating the use of specific polymers, resulting in a drug release profile that more accurately complements circadian patterns.
- **IPDAS Technology:** IPDAS (“Intestinal Protective Drug Absorption System”) technology conveys gastrointestinal protection by a wide dispersion of drug in a controlled and gradual manner, through the use of numerous high-density controlled-release beads compressed into a tablet form. Release characteristics are modified by the application of polymers to the micro matrix and subsequent coatings, which form a rate-limiting semi-permeable membrane.
- **MXDAS Technology:** MXDAS (“Matrix Drug Absorption System”) technology formulates the drug in a hydrophilic matrix and incorporates one or more hydrophilic matrix-forming polymers into a solid oral dosage form, which controls the release of drug through a process of diffusion and erosion in the gastrointestinal tract.

Manufacturing and Product Supply

We own and occupy a R&D and manufacturing facility in Athlone, Ireland and a manufacturing facility in Wilmington, Ohio. We either purchase active drug product from third parties or receive it from our third-party licensees to formulate product using our technologies. The manufacture of our products for clinical trials and commercial use is subject to Current Good Manufacturing Practice (“cGMP”) regulations and other regulatory agency regulations. Our manufacturing and development capabilities include formulation through process development, scale-up and full-scale commercial manufacturing and specialized capabilities for the development and manufacturing of controlled substances.

Although some materials for our products are currently available from a single source or a limited number of qualified sources, we attempt to acquire an adequate inventory of such materials, establish alternative sources and/or negotiate long-term supply arrangements. We believe we do not have any significant issues in finding suppliers. However, we cannot be certain that we will continue to be able to obtain long-term supplies of our manufacturing materials.

Our third-party service providers involved in the manufacture of our products are subject to inspection by the FDA or comparable agencies in other jurisdictions. Any delay, interruption or other issues that arise in the acquisition of active pharmaceutical ingredients (“API”), manufacture, fill-finish, packaging, or storage of our marketed or development products, including as a result of a failure of our facilities or the facilities or operations of third parties to pass any regulatory agency inspection, could significantly impair our ability to sell our products or advance our development efforts, as the case may be. For information about risks relating to the manufacture of our marketed products and product candidates, see “Item 1A—Risk Factors” and specifically those sections entitled “—We rely on third parties to provide services in connection with the manufacture and distribution of our products” and “—We are subject to risks related to the manufacture of our products.”

Proprietary Products and Products using our Proprietary Technologies

We manufacture microspheres for RISPARDAL CONSTA and VIVITROL, polymer for BYDUREON, and ARISTADA in our Wilmington, Ohio facility. We are currently operating two RISPARDAL CONSTA lines, two VIVITROL lines and one ARISTADA line at commercial scale. Janssen has granted us an option, which we exercised, to purchase the most recently constructed and validated RISPARDAL CONSTA manufacturing line at its then-current net book value. We source our packaging operations for VIVITROL and ARISTADA to a third-party contractor. Janssen is responsible for packaging operations for RISPARDAL CONSTA and, in Russia and certain countries of the CIS, VIVITROL. Our Wilmington, Ohio facility has been inspected by U.S., European (including the

[Table of Contents](#)

Medicines and Healthcare Products Regulatory Agency), Chinese, Japanese, Brazilian, Turkish and Saudi Arabian regulatory authorities for compliance with required cGMP standards for continued commercial manufacturing.

We manufacture AMPYRA/FAMPYRA and other products in our Athlone, Ireland facility. This facility has been inspected by U.S., Irish, Brazilian, Turkish, Saudi Arabian, Korean, Belarusian and Chinese regulatory authorities for compliance with required cGMP standards for continued commercial manufacturing.

For more information about our manufacturing facilities, see “Item 2—Properties.”

Clinical Products

We have established, and are operating, facilities with the capability to produce clinical supplies of injectable extended-release products at our Wilmington, Ohio facility and NanoCrystal and OCR technology products at our Athlone, Ireland facility. We have also contracted with third-party manufacturers to formulate certain products for clinical use. We require that our contract manufacturers adhere to cGMP in the manufacture of products for clinical use.

Research & Development

We devote significant resources to R&D programs. We focus our R&D efforts on developing novel therapeutics in areas of high unmet medical need. Our R&D efforts include, but are not limited to, areas such as pharmaceutical formulation, analytical chemistry, process development, engineering, scale-up and drug optimization/delivery. Please see “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for our R&D expenditures for our years ended December 31, 2016, 2015 and 2014.

Permits and Regulatory Approvals

We hold various licenses in respect of our manufacturing activities conducted in Wilmington, Ohio and Athlone, Ireland. The primary licenses held in this regard are FDA Registrations of Drug Establishment; and Drug Enforcement Administration of the U.S. Department of Justice (“DEA”). We also hold a Manufacturers Authorization (No. M1067), an Investigational Medicinal Products Manufacturers Authorization (No. IMP074) and Certificates of Good Manufacturing Practice Compliance of a Manufacturer (Ref. 2014/7828/IMP074 and 2014/7828/M1067) from the Health Products Regulatory Authority in Ireland (“HPRA”) in respect of our Athlone, Ireland facility, and a number of Controlled Substance Licenses granted by the HPRA. Due to certain U.S. state law requirements, we also hold certain state licenses to cover distribution activities through certain states and not in respect of any manufacturing activities conducted in those states.

We do not generally act as the product authorization holder for products incorporating our drug delivery technologies that have been developed on behalf of a licensee of such technologies. In such cases, our licensee usually holds the relevant authorization from the FDA or other national regulator, and we would support this authorization by furnishing a copy of the Drug Master File, or the chemistry, manufacturing and controls data to the relevant regulator to prove adequate manufacturing data in respect of the product. We would generally update this information annually with the relevant regulator. In other cases where we are developing proprietary products, such as VIVITROL and ARISTADA, we hold the appropriate regulatory documentation ourselves.

Marketing, Sales and Distribution

We are responsible for the marketing of VIVITROL and ARISTADA in the U.S. We focus our sales and marketing efforts on specialist physicians in private practice and in public treatment systems. We use customary pharmaceutical company practices to market our product and to educate physicians, such as sales representatives calling on individual physicians, advertisements, professional symposia, selling initiatives and other methods. We provide, or contract with third-party vendors to provide, customer service and other related programs for our products, such as product-specific websites, insurance research services and order, delivery and fulfillment services.

Our sales force for VIVITROL in the U.S. consists of approximately 90 individuals. VIVITROL is sold directly to pharmaceutical wholesalers, specialty pharmacies and a specialty distributor. Product sales of VIVITROL during the year ended December 31, 2016 to AmerisourceBergen Corporation (“AmerisourceBergen”), McKesson Corporation,

[Table of Contents](#)

Cardinal Health and CVS Caremark Corporation represented approximately 19%, 18%, 13% and 12%, respectively, of total VIVITROL sales.

Our sales force for ARISTADA in the U.S. consists of approximately 210 individuals. ARISTADA is primarily sold to pharmaceutical wholesalers. Product sales of ARISTADA during the year ended December 31, 2016 to Cardinal Health, McKesson Corporation and AmerisourceBergen represented approximately 45%, 23% and 21%, respectively, of total ARISTADA sales.

ICS AmerisourceBergen, a division of AmerisourceBergen, provides warehousing, shipping and administrative services for VIVITROL and ARISTADA.

Under our license agreements with Janssen, AstraZeneca, Acorda and other licensees and sublicensees, these companies are responsible for the commercialization of any products developed under such agreements if and when regulatory approval is obtained.

Competition

We face intense competition in the development, manufacture, marketing and commercialization of our products from many and varied sources, such as academic institutions, government agencies, research institutions and biotechnology and pharmaceutical companies, including other companies with similar technologies. Some of these competitors are also our licensees, who control the commercialization of products from which we receive manufacturing and royalty revenues. These competitors are working to develop and market other systems, products and other methods of preventing or reducing disease, and new small-molecule and other classes of drugs that can be used with or without a drug delivery system.

The biotechnology and pharmaceutical industries are characterized by intensive research, development and commercialization efforts and rapid and significant technological change. Many of our competitors are larger and have significantly greater financial and other resources than we do. We expect our competitors to develop new technologies, products and processes that may be more effective than those we develop. The development of technologically improved or different products or technologies may make our products or product platforms obsolete or noncompetitive before we recover expenses incurred in connection with their development or realize any revenues from any marketed product.

There are other companies developing extended-release product platforms. In many cases, there are products on the market or in development that may be in direct competition with our products. In addition, we know of new chemical entities that are being developed that, if successful, could compete against our products. These chemical entities are being designed to work differently than our products and may turn out to be safer or to be more effective than our products. Among the many experimental therapies being tested around the world, there may be some that we do not now know of that may compete with our proprietary product platforms or products. Our licensees could choose a competing technology to use with their drugs instead of one of our product platforms and could develop products that compete with our products.

With respect to our products, 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 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 products, 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.

With respect to our proprietary injectable product platform, we are aware that there are other companies developing extended-release delivery systems for pharmaceutical products, including, but not limited to Luye Pharma Group Ltd. ("Luye Pharma"), which is developing risperidone formulated as extended release microspheres for intramuscular injection for the treatment of schizophrenia and/or schizoaffective disorders. In the treatment of schizophrenia, ARISTADA, INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA

[Table of Contents](#)

compete with each other and a number of other injectable products including ZYPREXA RELPREVV ((olanzapine) For Extended Release Injectable Suspension), which is marketed and sold by Lilly; ABILIFY MAINTENA, (aripiprazole for extended release injectable suspension), a once-monthly injectable formulation of ABILIFY (aripiprazole) developed by Otsuka Pharm. Co.; oral compounds currently on the market; and generic versions of branded oral and injectable products. In the treatment of bipolar disorder, RISPERDAL CONSTA competes with antipsychotics such as oral aripiprazole, REXULTI, LATUDA, risperidone, olanzapine, ziprasidone and clozapine.

In the treatment of alcohol dependence, VIVITROL competes with generic acamprosate calcium (also known as CAMPRAL) and generic disulfiram (also known as ANTABUSE) as well as currently marketed drugs, including generic drugs, also formulated from naltrexone. Other pharmaceutical companies are developing products that have shown some promise in treating alcohol dependence that, if approved by the FDA, would compete with VIVITROL.

In the treatment of opioid dependence, VIVITROL competes with methadone, oral naltrexone, SUBOXONE (buprenorphine HCl/naloxone HCl dehydrate sublingual tablets), SUBOXONE (buprenorphine/naloxone) Sublingual Film, and SUBUTEX (buprenorphine HCl sublingual tablets), each of which is marketed and sold by Indivior plc, and BUNAVAIL buccal film (buprenorphine and naloxone) marketed by BioDelivery Sciences, PROBUPHINE (buprenorphine), marketed and sold by Braeburn Pharmaceuticals and ZUBSOLV (buprenorphine and naloxone) marketed by Orexo US, Inc. It also competes with generic versions of SUBUTEX and SUBOXONE sublingual tablets. Other pharmaceutical companies are developing products that have shown promise in treating opioid dependence that, if approved by the FDA, would compete with VIVITROL.

BYDUREON competes with established diabetes therapies for market share. Such competitive products include sulfonylureas, metformin, insulins, thiazolidinediones, glinides, dipeptidyl peptidase type IV inhibitors, insulin sensitizers, alpha-glucosidase inhibitors and sodium-glucose transporter-2 inhibitors. BYDUREON also competes with other glucagon-like peptide-1 (“GLP-1”) agonists, including VICTOZA (liraglutide (rDNA origin) injection), which is marketed and sold by Novo Nordisk A/S and TRULICITY ((dulaglutide) injection), which is marketed and sold by Lilly. Other pharmaceutical companies are developing products for the treatment of type 2 diabetes that, if approved by the FDA, would compete with BYDUREON.

While AMPYRA/FAMPYRA is approved as a treatment to improve walking in patients with MS, there are a number of FDA-approved therapies for MS disease management that seek to reduce the frequency and severity of exacerbations or slow the accumulation of physical disability for people with certain types of MS. These products include AVONEX, TYSABRI, TECFIDERA, and PLEGRIDY from Biogen; BETASERON from Bayer HealthCare Pharmaceuticals; COPAXONE from Teva Pharmaceutical Industries Ltd.; REBIF and NOVANTRONE from EMD Serono, Inc.; GILENYA and EXTAVIA from Novartis AG; AUBAGIO and LEMTRADA from Sanofi-Aventis and generic products.

With respect to our NanoCrystal technology, we are aware that other technology approaches similarly address poorly water-soluble drugs. These approaches include nanoparticles, cyclodextrins, lipid-based self-emulsifying drug delivery systems, dendrimers and micelles, among others, any of which could limit the potential success and growth prospects of products incorporating our NanoCrystal technology. In addition, there are many competing technologies to our OCR technology, some of which are owned by large pharmaceutical companies with drug delivery divisions and other, smaller drug-delivery-specific companies.

Patents and Proprietary Rights

Our success will be dependent, in part, on our ability to obtain and maintain patent protection for our products, including those marketed and sold by our licensees, to maintain trade secret protection and to operate without infringing upon the proprietary rights of others. We have a proprietary portfolio of patent rights and exclusive licenses to patents and patent applications. In addition, our licensees may own issued patents that cover certain of our products. We have filed numerous patent applications in the U.S. and in other countries directed to compositions of matter as well as processes of preparation and methods of use, including patent applications relating to each of our delivery technologies. As of December 31, 2016, we owned more than 200 issued U.S. patents. In the future, we plan to file additional patent applications in the U.S. and in other countries directed to new or improved products and processes, and we intend to vigorously defend our patent positions.

[Table of Contents](#)

ARISTADA

We have several U.S. patents and patent applications, and a number of corresponding foreign counterparts, that cover ARISTADA. Our principal U.S. patents and expiration dates are:

- U.S. Patent No. 8,431,576, having claims to a class of compounds that includes aripiprazole lauroxil, expiring in 2030;
- U.S. Patent No. 8,796,276, having claims to methods of treating schizophrenia using a class of compounds that includes aripiprazole lauroxil, expiring in 2030;
- U.S. Patent No. 9,034,867, having claims to pharmaceutical compositions, expiring in 2032;
- U.S. Patent No. 9,193,685, having claims to pharmaceutical compositions that confer long-term stability, expiring in 2033;
- U.S. Patent No. 9,452,131, having claims to methods of treatment for schizophrenia, expiring in 2035; and
- U.S. Patent No. 9,526,726, having claims to kits comprising pharmaceutical compositions of aripiprazole lauroxil and instructions for intramuscular injection, expiring in 2035.

In addition to patent protection, in the U.S. ARISTADA is entitled to regulatory exclusivity afforded to new chemical entities until 2020.

VIVITROL, RISPERDAL CONSTA and BYDUREON

We have a significant number of patents and certain pending patent applications covering our microsphere technology throughout the world, which, to some extent, cover VIVITROL, RISPERDAL CONSTA and BYDUREON. The latest of our patents covering VIVITROL, RISPERDAL CONSTA and BYDUREON expire in 2029, 2023 and 2026 in the U.S., respectively, and 2021, 2021 and 2024 in the EU, respectively, and we own 20, 7, and 10 Orange-Book listed U.S. patents covering VIVITROL, RISPERDAL CONSTA and BYDUREON, respectively.

INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA

Our NanoCrystal technology patent portfolio contains a number of patents granted throughout the world, including the U.S. and countries outside of the U.S. We also have a number of pending patent applications covering our NanoCrystal technology which, to some extent, cover INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA. The latest of the patents subject to our license agreement with Janssen covering INVEGA SUSTENNA/XEPLION expire in 2019 in the U.S. and 2022 in the EU, and, in certain countries, such as Australia and South Korea, in 2023. The latest of the patents covering INVEGA TRINZA/TREVICTA expire in November 2017 in the U.S. and 2022 in the EU. In addition, the latest of the patents not subject to our license agreement with Janssen covering INVEGA SUSTENNA/XEPLION expires in 2031 in the U.S.

AMPYRA/FAMPYRA

Our OCR technology is protected by a patent estate including patents and patent applications filed worldwide. Some OCR patent families are product-specific (including some which are owned by our licensees), whereas others cover generic delivery platforms (e.g. different release profiles, taste masking). AMPYRA/FAMPYRA incorporates our OCR technology, and the latest of the patents covering AMPYRA/FAMPYRA expires in May 2027 in the U.S. and April 2025 in the EU. For a discussion of legal proceedings related to the patents covering AMPYRA, see “Item 3—Legal Proceedings.”

ALKS 5461 and ALKS 3831

We also have worldwide patent protection for our Key Development Programs. We own or have a license to U.S. patents that cover a class of compounds that includes the opioid modulators in both ALKS 5461 and ALKS 3831 and granted method of treatment claims that cover ALKS 5461 or ALKS 3831. Our principal U.S. patents and expiration dates for ALKS 5461 and ALKS 3831 are:

[Table of Contents](#)

U.S. Patent No.	Product Candidate(s) Covered	Expiration Date
7,956,187	ALKS 5461	2021
	ALKS 3831	
8,252,929	ALKS 5461	2021
	ALKS 3831	
7,262,298	ALKS 5461	2025
	ALKS 3831	
8,680,112	ALKS 5461	2030
	ALKS 3831	
9,119,848	ALKS 5461	2031
	ALKS 3831	
9,126,977	ALKS 3831	2031
9,517,235	ALKS 3831	2031
8,778,960	ALKS 3831	2032
8,822,488	ALKS 5461	2032
9,498,474	ALKS 5461	2032

ALKS 8700

We have U.S. patents and patent applications, and a number of corresponding foreign counterparts, that cover ALKS 8700. Our U.S. patents and expiration dates for ALKS 8700 are:

- U.S. Patent No. 8,669,281, having claims to a composition of matter that covers ALKS 8700, expiring in 2033; and
- U.S. Patent No. 9,090,558, having claims to methods of treating MS, expiring in 2033.

ALKS 4230

We have U.S. patents and patent applications, and a number of corresponding foreign counterparts, that cover ALKS 4230. U.S. Patent No. 9,359,415, having claims to ligands that are modified by circular permutation as agonists and antagonists, expiring in 2033, covers ALKS 4230.

Protection of Proprietary Rights and Competitive Position

We have exclusive rights through licensing agreements with third parties to issued U.S. patents, pending patent applications and corresponding patents or patent applications in countries outside the U.S., subject in certain instances to the rights of the U.S. government to use the technology covered by such patents and patent applications. Under certain licensing agreements, we are responsible for patent expenses, and we pay annual license fees and/or minimum annual royalties. In addition, under these licensing agreements, we are obligated to pay royalties on future sales of products, if any, covered by the licensed patents.

We know of several U.S. patents issued to other parties that may relate to our products. The manufacture, use, offer for sale, sale or import of some of our products might be found to infringe on the claims of these patents. A party might file an infringement action against us. The cost of defending such an action is likely to be high, and we might not receive a favorable ruling.

We also know of patent applications filed by other parties in the U.S. and various other countries that may relate to some of our products if issued in their present form. The patent laws of the U.S. and other countries are distinct, and decisions as to patenting, validity of patents and infringement of patents may be resolved differently in different countries. If patents are issued to any of these applicants, we or our licensees may not be able to manufacture, use, offer for sale, sell or import some of our products without first getting a license from the patent holder. The patent holder may not grant us a license on reasonable terms, or it may refuse to grant us a license at all. This could delay or prevent us from developing, manufacturing, selling or importing those of our products that would require the license.

We try to protect our proprietary position by filing patent applications in the U.S. and in other countries related to our proprietary technology, inventions and improvements that are important to the development of our business. Because the patent position of biotechnology and pharmaceutical companies involves complex legal and factual questions, enforceability of patents cannot be predicted with certainty. The ultimate degree of patent protection that will be afforded to products and processes, including ours, in the U.S. and in other important markets, remains uncertain and is dependent upon the scope of protection decided upon by the patent offices, courts and lawmakers in

[Table of Contents](#)

these countries. Patents, if issued, may be challenged, invalidated or circumvented. Thus, any patents that we own or license from others may not provide any protection against competitors. Our pending patent applications, those we may file in the future, or those we may license from third parties, may not result in patents being issued. If issued, they may not provide us with proprietary protection or competitive advantages against competitors with similar technology. Furthermore, others may independently develop similar technologies or duplicate any technology that we have developed outside the scope of our patents. The laws of certain countries do not protect our intellectual property rights to the same extent as do the laws of the U.S.

We also rely on trade secrets, know-how and technology, which are not protected by patents, to maintain our competitive position. We try to protect this information by entering into confidentiality agreements with parties that have access to it, such as our corporate partners, collaborators, licensees, employees and consultants. Any of these parties may breach the agreements and disclose our confidential information or our competitors might learn of the information in some other way. If any trade secret, know-how or other technology not protected by a patent were to be disclosed to, or independently developed by, a competitor, such event could materially adversely affect our business, results of operations, cash flows and financial condition. For more information, see “Item 1A—Risk Factors.”

Our trademarks, including VIVITROL and ARISTADA, are important to us and are generally covered by trademark applications or registrations in the U.S. Patent and Trademark Office and the patent or trademark offices of other countries. Products using our proprietary technologies also use trademarks that are owned by our licensees, such as the marks INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA, which are registered trademarks of Johnson & Johnson, BYDUREON, which is a registered trademark of Amylin, and AMPYRA and FAMPYRA, which are registered trademarks of Acorda. Trademark protection varies in accordance with local law, and continues in some countries as long as the mark is used and in other countries as long as the mark is registered. Trademark registrations generally are for fixed but renewable terms.

Revenues and Assets by Region

For the fiscal years ended December 31, 2016, 2015 and 2014, our revenue and assets are presented below by geographic area:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Revenue by region:			
U.S.	\$ 557,312	\$ 448,639	\$ 398,189
Ireland	4,407	3,902	7,691
Rest of world	183,975	175,794	212,909
Assets by region:			
Current assets:			
U.S.	\$ 382,168	\$ 360,154	\$ 385,715
Ireland	407,761	394,281	490,577
Rest of world	749	527	501
Long-term assets:			
U.S.:			
Intangible assets	\$ —	\$ —	\$ —
Goodwill	—	—	3,677
Other	236,175	294,158	226,479
Ireland:			
Intangible assets	\$ 318,227	\$ 379,186	\$ 479,412
Goodwill	92,873	92,873	90,535
Other	288,470	334,565	242,162

Regulatory

Regulation of Pharmaceutical Products

United States

Our current and contemplated activities, and the products and processes that result from such activities, are subject to substantial government regulation. Before new pharmaceutical products may be sold in the U.S., pre-clinical studies and clinical trials of the products must be conducted and the results submitted to the FDA for

[Table of Contents](#)

approval. Clinical trial programs must determine an appropriate dose and regimen, establish substantial evidence of effectiveness and define the conditions for safe use. This is a high-risk process that requires stepwise clinical studies in which the product must successfully meet pre-specified endpoints.

Pre-Clinical Testing: Before beginning testing of any compounds with potential therapeutic value in human subjects in the U.S., stringent government requirements for pre-clinical data must be satisfied. Pre-clinical testing includes both in vitro, or in an artificial environment outside of a living organism, and in vivo, or within a living organism, laboratory evaluation and characterization of the safety and efficacy of a drug and its formulation.

Investigational New Drug Exemption: Pre-clinical testing results obtained from in vivo studies in several animal species, as well as from in vitro studies, are submitted to the FDA, as part of an IND, and are reviewed by the FDA prior to the commencement of human clinical trials. The pre-clinical data must provide an adequate basis for evaluating both the safety and the scientific rationale for the initial clinical studies in human volunteers.

Clinical Trials: Clinical trials involve the administration of the drug to healthy human volunteers or to patients under the supervision of a qualified investigator pursuant to an FDA-reviewed protocol. Human clinical trials are typically conducted in three sequential phases, although the phases may overlap with one another and, depending upon the nature of the clinical program, a specific phase or phases may be skipped altogether. Clinical trials must be conducted under protocols that detail the objectives of the study, the parameters to be used to monitor safety, and the efficacy criteria, if any, to be evaluated. Each protocol must be submitted to the FDA as part of the IND.

- Phase 1 clinical trials—test for safety, dose tolerability, absorption, bio-distribution, metabolism, excretion and clinical pharmacology and, if possible, to gain early evidence regarding efficacy.
- Phase 2 clinical trials—involve a relatively small sample of the actual intended patient population and seek to assess the efficacy of the drug for specific targeted indications, to determine dose-response and the optimal dose range and to gather additional information relating to safety and potential adverse effects.
- Phase 3 clinical trials—consist of expanded, large-scale studies of patients with the target disease or disorder to obtain definitive statistical evidence of the efficacy and safety of the proposed product and dosing regimen.

In the U.S., the results of the pre-clinical and clinical testing of a product are then submitted to the FDA in the form of a Biologics License Application (“BLA”), or an NDA. The NDA or BLA also includes information pertaining to the preparation of the product, analytical methods, details of the manufacture of finished products and proposed product packaging and labeling. The submission of an application is not a guarantee that the FDA will find the application complete and accept it for filing. The FDA may refuse to file the application if it is not considered sufficiently complete to permit a review and will inform the applicant of the reason for the refusal. The applicant may then resubmit the application and include the supplemental information.

Once an NDA or BLA is accepted for filing, the FDA has 10 months, under its standard review process, within which to review the application (for some applications, the review process is longer than 10 months). For drugs that, if approved, would represent a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions when compared to standard applications, the FDA may assign “priority review” designation and review the application within 6 months. The FDA has additional review pathways to expedite development and review of new drugs that are intended to treat serious or life-threatening conditions and demonstrate the potential to address unmet medical needs, including: “Fast Track,” “Breakthrough Therapy,” and “Accelerated Approval.”

For example, in October 2013, the FDA granted Fast Track status for ALKS 5461 for the adjunctive treatment of MDD in patients with inadequate response to standard antidepressant therapies. Fast Track is a process designed to expedite the review of such products by providing, among other things, more frequent meetings with the FDA to discuss the product’s development plan, more frequent written correspondence from the FDA about trial design, eligibility for accelerated approval, and rolling review, which allows submission of individually completed sections of a NDA or BLA for FDA review before the entire filing is completed. Fast Track status does not ensure that a product will be developed more quickly or receive FDA approval.

[Table of Contents](#)

As part of its review, the FDA may refer the application to an advisory committee for independent advice on questions related to the development of the drug and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee; however, historically, it has typically followed such recommendations. The FDA may determine that a Risk Evaluation and Mitigation Strategy (“REMS”) is necessary to ensure that the benefits of a new product outweigh its risks. If required, a REMS may include various elements, such as publication of a medication guide, patient package insert, a communication plan to educate health care providers of the drug’s risks, limitations on who may prescribe or dispense the drug, or other measures that the FDA deems necessary to assure the safe use of the drug.

In reviewing a BLA or NDA, the FDA may grant marketing approval, or issue a complete response letter to communicate to the applicant the reasons the application cannot be approved in the current form and provide input on the changes that must be made before an application can be approved. Even if such additional information and data are submitted, the FDA may ultimately decide that the BLA or NDA does not satisfy the criteria for approval. The receipt of regulatory approval often takes a number of years, involves the expenditure of substantial resources and depends on a number of factors, including the severity of the disease in question, the availability of alternative treatments, potential safety signals observed in pre-clinical or clinical tests, and the risks and benefits demonstrated in clinical trials. It is impossible to predict with any certainty whether and when the FDA will grant marketing approval. Even if a product is approved, the approval may be subject to limitations based on the FDA’s interpretation of the data. For example, the FDA may require, as a condition of approval, restricted distribution and use, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, pre-approval of promotional materials or restrictions on direct-to-consumer advertising, any of which could negatively impact the commercial success of a drug. The FDA may require a sponsor to conduct additional post-marketing studies as a condition of approval to provide data on safety and effectiveness. In addition, prior to commercialization, controlled substances are subject to review and potential scheduling by the DEA.

The FDA tracks information on side effects and adverse events reported during clinical studies and after marketing approval. Non-compliance with safety reporting requirements may result in civil or criminal penalties. Side effects or adverse events that are identified during clinical trials can delay, impede or prevent marketing approval. Based on new safety information that emerges after approval, the FDA can mandate product labeling changes, impose a new REMS or the addition of elements to an existing REMS, require new post-marketing studies (including additional clinical trials), or suspend or withdraw approval of the product.

If we seek to make certain types of changes to an approved product, such as adding a new indication, making certain manufacturing changes, or changing manufacturers or suppliers of certain ingredients or components, the FDA will need to review and approve such changes in advance. In the case of a new indication, we are required to demonstrate with additional clinical data that the product is safe and effective for the new intended use. Such regulatory reviews can result in denial or modification of the planned changes, or requirements to conduct additional tests or evaluations that can substantially delay or increase the cost of the planned changes.

In addition, the FDA regulates all advertising and promotional activities for products under its jurisdiction. A company can make only those claims relating to safety and efficacy that are consistent with FDA regulation. However, physicians may prescribe legally available drugs for uses that are not described in the drug’s labeling. Such off-label uses are common across certain medical specialties and often reflect a physician’s belief that the off-label use is the best treatment for a particular patient. The FDA does not regulate the behavior of physicians in their choice of treatments, but the FDA regulations do impose stringent restrictions on manufacturers’ communications regarding off-label uses. Failure to comply with applicable FDA requirements may subject a company to adverse publicity, enforcement action by the FDA and the U.S. Department of Justice, corrective advertising and the full range of civil and criminal penalties available to the FDA and the U.S. Department of Justice.

Controlled Substances Act: The DEA regulates pharmaceutical products that are controlled substances. Controlled substances are those drugs that appear on one of the five schedules promulgated and administered by the DEA under the Controlled Substances Act (the “CSA”). The CSA governs, among other things, the inventory, distribution, recordkeeping, handling, security and disposal of controlled substances. Pharmaceutical products that act on the CNS are often evaluated for abuse potential; a product that is then classified as controlled substance must undergo scheduling by the DEA, which is a separate process that may delay the commercial launch of a

[Table of Contents](#)

pharmaceutical product even after FDA approval of the NDA. Companies with a scheduled pharmaceutical product are subject to periodic and ongoing inspections by the DEA and similar state drug enforcement authorities to assess ongoing compliance with the DEA's regulations. Any failure to comply with these regulations could lead to a variety of sanctions, including the revocation, or a denial of renewal, of any DEA registration and injunctions, or civil or criminal penalties.

Outside the United States

Certain of our products are commercialized by our licensees in numerous jurisdictions outside the U.S. Most of these jurisdictions have product approval and post-approval regulatory processes that are similar in principle to those in the U.S. In Europe, there are several tracks for marketing approval, depending on the type of product for which approval is sought. Under the centralized procedure, a company submits a single application to the EMA. The marketing application is similar to the NDA in the U.S. and is evaluated by the Committee for Medicinal Products for Human Use ("CHMP"), the expert scientific committee of the EMA. If the CHMP determines that the marketing application fulfills the requirements for quality, safety, and efficacy, it will submit a favorable opinion to the European Commission ("EC"). The CHMP opinion is not binding, but is typically adopted by the EC. A marketing application approved by the EC is valid in all member states.

In addition to the centralized procedure, Europe also has: (i) a nationalized procedure, which requires a separate application to, and approval determination by, each country; (ii) a decentralized procedure, whereby applicants submit identical applications to several countries and receive simultaneous approval; and (iii) a mutual recognition procedure, where applicants submit an application to one country for review and other countries may accept or reject the initial decision. Regardless of the approval process employed, various parties share responsibilities for the monitoring, detection and evaluation of adverse events post-approval, including national authorities, the EMA, the EC and the marketing authorization holder.

Good Manufacturing Processes

The FDA, the EMA, the competent authorities of the EU Member States and other regulatory agencies regulate and inspect equipment, facilities and processes used in the manufacturing of pharmaceutical and biologic products prior to approving a product. If, after receiving clearance from regulatory agencies, a company makes a material change in manufacturing equipment, location or process, additional regulatory review and approval may be required. Companies also must adhere to cGMP and product-specific regulations enforced by the FDA following product approval. The FDA, the EMA and other regulatory agencies also conduct regular, periodic visits to re-inspect equipment, facilities and processes following the initial approval of a product. If, as a result of these inspections, it is determined that our equipment, facilities or processes do not comply with applicable regulations and conditions of product approval, regulatory agencies may seek civil, criminal or administrative sanctions and/or remedies against us, including the suspension of our manufacturing operations.

Good Clinical Practices

The FDA, the EMA and other regulatory agencies promulgate regulations and standards, commonly referred to as Good Clinical Practices ("GCP"), for designing, conducting, monitoring, auditing and reporting the results of clinical trials to ensure that the data and results are accurate and that the trial participants are adequately protected. The FDA, the EMA and other regulatory agencies enforce GCP through periodic inspections of trial sponsors, principal investigators, trial sites, contract research organizations ("CROs") and institutional review boards. If our studies fail to comply with applicable GCP, patient safety and well-being could be impacted, the clinical data generated in our clinical trials may be deemed unreliable, and relevant regulatory agencies may require us to perform additional clinical trials before approving our marketing applications. Noncompliance can also result in civil or criminal sanctions. We rely on third parties, including CROs, to carry out many of our clinical trial-related activities. Failure of such third parties to comply with GCP can likewise result in rejection of our clinical trial data or other sanctions.

Hatch-Waxman Act

Under the U.S. Drug Price Competition and Patent Term Restoration Act of 1984 (the "Hatch-Waxman Act"), Congress created an abbreviated FDA review process for generic versions of pioneer, or brand-name, drug products. The law also provides incentives by awarding, in certain circumstances, non-patent related marketing exclusivities to pioneer drug manufacturers. Newly approved drug products and changes to the conditions of use of approved products

[Table of Contents](#)

may benefit from periods of non-patent-related marketing exclusivity in addition to any patent protection the drug product may have. The Hatch-Waxman Act provides five years of new chemical entity (“NCE”) marketing exclusivity to the first applicant to gain approval of an NDA for a product that contains an active ingredient, known as the active drug moiety, not found in any other approved product. The FDA is prohibited from accepting any abbreviated NDA (“ANDA”) for a generic drug or 505(b)(2) application for five years from the date of approval of the NCE, or four years in the case of an ANDA or 505(b)(2) application containing a patent challenge. A 505(b)(2) application is an NDA wherein the applicant relies, in part, on data and the FDA’s findings of safety and efficacy from studies not conducted by or for it and for which the applicant has not obtained a right of reference. Hatch-Waxman Act exclusivities will not prevent the submission or approval of a full NDA (e.g., under 505(b)(1)), as opposed to an ANDA or 505(b)(2) application, for any drug, including, for example, a drug with the same active ingredient, dosage form, route of administration, strength and conditions of use.

The Hatch-Waxman Act also provides three years of exclusivity for applications containing the results of new clinical investigations, other than bioavailability studies, essential to the FDA’s approval of new uses of approved products, such as new indications, dosage forms, strengths, or conditions of use. However, this exclusivity only protects against the approval of ANDAs and 505(b)(2) applications for the protected use and will not prohibit the FDA from accepting or approving ANDAs or 505(b)(2) applications for other products containing the same active ingredient.

The Hatch-Waxman Act requires NDA applicants and NDA holders to provide certain information about patents related to the drug for listing in the FDA’s Approved Drugs Product List, commonly referred to as the Orange Book. ANDA and 505(b)(2) applicants must then certify regarding each of the patents listed with the FDA for the reference product. A certification that a listed patent is invalid or will not be infringed by the marketing of the applicant’s product is called a “Paragraph IV certification.” If the ANDA or 505(b)(2) applicant provides such a notification of patent invalidity or noninfringement, then the FDA may accept the ANDA or 505(b)(2) application four years after approval of the NDA for an NCE. If a Paragraph IV certification is filed and the ANDA or 505(b)(2) application has been accepted as a reviewable filing by the FDA, the ANDA or 505(b)(2) applicant must then, within 20 days, provide notice to the NDA holder and patent owner stating that the application has been submitted and providing the factual and legal basis for the applicant’s opinion that the patent is invalid or not infringed. The NDA holder or patent owner may file suit against the ANDA or 505(b)(2) applicant for patent infringement. If this is done within 45 days of receiving notice of the Paragraph IV certification, a one-time, 30-month stay of the FDA’s ability to approve the ANDA or 505(b)(2) application is triggered. The 30-month stay begins at the end of the NDA holder’s data exclusivity period, or, if data exclusivity has expired, on the date that the patent holder is notified. The FDA may approve the proposed product before the expiration of the 30-month stay if a court finds the patent invalid or not infringed, or if the court shortens the period because the parties have failed to cooperate in expediting the litigation.

Sales and Marketing

We are subject to various U.S. federal and state laws pertaining to healthcare fraud and abuse, including anti-kickback laws and false claims laws. Anti-kickback laws make it illegal for a prescription drug manufacturer to solicit, offer, receive, or pay any remuneration in exchange for, or to induce, the referral of business, including the purchase or prescription of a particular drug. Due to the broad scope of the U.S. statutory provisions, the general absence of guidance in the form of regulations, and few court decisions addressing industry practices, it is possible that our practices might be challenged under anti-kickback or similar laws. False claims laws prohibit anyone from knowingly and willingly presenting, or causing to be presented, for payment to third-party payers (including Medicare and Medicaid) claims for reimbursed drugs or services that are false or fraudulent, claims for items or services not provided as claimed or claims for medically unnecessary items or services. Activities relating to the sale and marketing of our products may be subject to scrutiny under these laws. Violations of fraud and abuse laws may be punishable by criminal and/or civil sanctions, including fines and civil monetary penalties, as well as the possibility of exclusion from federal healthcare programs (including Medicare and Medicaid). In addition, federal and state authorities are paying increased attention to enforcement of these laws within the pharmaceutical industry and private individuals have been active in alleging violations of the laws and bringing suits on behalf of the government under the federal civil False Claims Act. If we were subject to allegations concerning, or were convicted of violating, these laws, our business could be harmed. See “Item 1A—Risk Factors” and specifically those sections entitled “—If we fail to comply with the extensive legal and regulatory requirements affecting the healthcare industry, we could face increased costs, penalties and a loss of business,” “—Revenues generated by sales of our products depend on the availability of reimbursement from third-party payers, and a reduction in payment rate or reimbursement or an

[Table of Contents](#)

increase in our financial obligation to governmental payers could result in decreased sales of our products and decreased revenues” and “—The commercial use of our products may cause unintended side effects or adverse reactions, or incidents of misuse may occur, which could adversely affect our business and share price.”

Laws and regulations have been enacted by the federal government and various states to regulate the sales and marketing practices of pharmaceutical manufacturers. The laws and regulations generally limit financial interactions between manufacturers and healthcare providers and require disclosure to the government and public of such interactions. The laws include federal “sunshine” provisions enacted in 2010 as part of the comprehensive federal healthcare reform legislation. The sunshine provisions apply to pharmaceutical manufacturers with products reimbursed under certain government programs and require those manufacturers to disclose annually to the federal government (for re-disclosure to the public) certain payments made to, or at the request of, or on behalf of, physicians or to teaching hospitals. Certain state laws also require disclosure of pharmaceutical pricing information and marketing expenditures. Given the ambiguity found in many of these laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent federal and state laws and regulations.

Pricing and Reimbursement

United States

In the U.S., sales of our products, including those sold by our licensees, and our ability to generate revenues on such sales are dependent, in significant part, on the availability and level of reimbursement from third-party payers such as state and federal governments, including Medicare and Medicaid, managed care providers and private insurance plans. Third-party payers are increasingly challenging the prices charged for medical products and examining the medical necessity and cost-effectiveness of medical products, in addition to their safety and efficacy.

Medicaid is a joint federal and state program that is administered by the states for low-income and disabled beneficiaries. Under the Medicaid rebate program, we are required to pay a rebate for each unit of product reimbursed by the state Medicaid programs. The amount of the rebate for each product is set by law as the greater of 23.1% of average manufacturer price (“AMP”) or the difference between AMP and the best price available from us to any commercial or non-federal governmental customer. The rebate amount must be adjusted upward where the AMP for a product’s first full quarter of sales, when adjusted for increases in the Consumer Price Index—Urban, is less than the AMP for the current quarter, with this difference being the amount by which the rebate is adjusted upwards. The rebate amount is required to be recomputed each quarter based on our report of current AMP and best price for each of our products to the Centers for Medicare & Medicaid Services (“CMS”). The terms of our participation in the rebate program imposes a requirement for us to report revisions to AMP or best price within a period not to exceed 12 quarters from the quarter in which the data was originally due. Any such revisions could have the impact of increasing or decreasing our rebate liability for prior quarters, depending on the direction of the revision. In addition, if we were found to have knowingly submitted false information to the government, the statute provides for civil monetary penalties per item of false information in addition to other penalties available to the government.

Medicare is a federal program that is administered by the federal government that covers individuals age 65 and over as well as those with certain disabilities. Medicare Part B pays physicians who administer our products under a payment methodology using average sales price (“ASP”) information. Manufacturers, including us, are required to provide ASP information to the CMS on a quarterly basis. This information is used to compute Medicare payment rates, with rates for Medicare Part B drugs outside the hospital outpatient setting and in the hospital outpatient setting consisting of ASP plus a specified percentage. These rates are adjusted periodically. If a manufacturer is found to have made a misrepresentation in the reporting of ASP, the statute provides for civil monetary penalties for each misrepresentation for each day in which the misrepresentation was applied.

Medicare Part D provides coverage to enrolled Medicare patients for self-administered drugs (i.e. drugs that do not need to be injected or otherwise administered by a physician) and certain physician-administered drugs reimbursed under a pharmacy benefit. Medicare Part D also covers the prescription drug benefit for dual eligible beneficiaries. Medicare Part D is administered by private prescription drug plans approved by the U.S. government and each drug plan establishes its own Medicare Part D formulary for prescription drug coverage and pricing, which the drug plan may modify from time-to-time. The prescription drug plans negotiate pricing with

[Table of Contents](#)

manufacturers and may condition formulary placement on the availability of manufacturer discounts. Except for dual eligible Medicare Part D beneficiaries who qualify for low income subsidies, manufacturers, including us, are required to provide a 50% discount on our brand name prescription drugs utilized by Medicare Part D beneficiaries when those beneficiaries reach the coverage gap in their drug benefits.

The availability of federal funds to pay for our products under the Medicaid Drug Rebate Program and Medicare Part B requires that we extend discounts to certain purchasers under the Public Health Services (“PHS”) pharmaceutical pricing program. Purchasers eligible for discounts include a variety of community health clinics, other entities that receive health services grants from PHS, and hospitals that serve a disproportionate share of financially needy patients.

We also make our products available for purchase by authorized users of the Federal Supply Schedule (“FSS”) of the General Services Administration pursuant to our FSS contract with the Department of Veterans Affairs. Under the Veterans Health Care Act of 1992 (the “VHC Act”), we are required to offer deeply discounted FSS contract pricing to four federal agencies: the Department of Veterans Affairs; the Department of Defense; the Coast Guard; and the PHS (including the Indian Health Service), in order for federal funding to be made available for reimbursement of any of our products by such federal agencies and certain federal grantees. Coverage under Medicaid, the Medicare Part B program and the PHS pharmaceutical pricing program is also conditioned upon FSS participation. FSS pricing is negotiated periodically with the Department of Veterans Affairs. FSS pricing is intended not to exceed the price that we charge our most-favored non-federal customer for a product. In addition, prices for drugs purchased by the Department of Veterans Affairs, Department of Defense (including drugs purchased by military personnel and dependents through the TriCare retail pharmacy program), Coast Guard and PHS are subject to a cap on pricing equal to 76% of the non-federal average manufacturer price (“non-FAMP”). An additional discount applies if non-FAMP increases more than inflation (measured by the Consumer Price Index—Urban). In addition, if we are found to have knowingly submitted false information to the government, the VHC Act provides for civil monetary penalties per false item of information in addition to other penalties available to the government.

In addition, on January 21, 2016, CMS released the final Medicaid covered outpatient drug regulation, which became effective on April 1, 2016. This regulation implements those changes made by the Affordable Care Act to the Medicaid drug rebate statute in 2010 and addresses a number of other issues with respect to the Medicaid program, including, but not limited to, the eligibility and calculation methodologies for AMP and best price, and the expansion of Medicaid rebate liability to include Medicaid managed care organizations.

The U.S. federal and state governments regularly consider reforming healthcare coverage and lessening healthcare costs. Such reforms may include price controls, value-based pricing and changes to the coverage and reimbursement of our products, which may have a significant impact on our business. In addition, emphasis on managed care in the U.S. has increased and we expect will continue to increase the pressure on drug pricing. Private insurers regularly seek to manage drug cost and utilization by implementing coverage and reimbursement limitations through means including, but not limited to, formularies, increased out-of-pocket obligations and various prior authorization requirements. Even if favorable coverage and reimbursement status is attained for one or more products for which we have received regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Outside the United States

Within the EU, products are paid for by a variety of payers, with governments being the primary source of payment. Governments may determine or influence reimbursement of products. Governments may also set prices or otherwise regulate pricing. Negotiating prices with governmental authorities can delay commercialization of products. Governments may use a variety of cost-containment measures to control the cost of products, including price cuts, mandatory rebates, value-based pricing and reference pricing (i.e. referencing prices in other countries and using those reference prices to set a price). Recent budgetary pressures in many EU countries are causing governments to consider or implement various cost-containment measures, such as price freezes, increased price cuts and rebates, and expanded generic substitution and patient cost-sharing. If budget pressures continue, governments may implement additional cost-containment measures.

[Table of Contents](#)

Other Regulations

Foreign Corrupt Practices Act: We are subject to the U.S. Foreign Corrupt Practices Act (“FCPA”), which prohibits U.S. corporations and their representatives from paying, offering to pay, promising, authorizing, or making payments of anything of value to any foreign government official, government staff member, political party, or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. In many countries, the healthcare professionals with whom we regularly interact may meet the FCPA’s definition of a foreign government official. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect their transactions and to devise and maintain an adequate system of internal accounting controls.

UK Bribery Act: We are also subject to the UK Bribery Act, which proscribes giving and receiving bribes in the public and private sectors, bribing a foreign public official and failing to have adequate procedures to prevent employees and other agents from giving bribes. Foreign corporations that conduct business in the UK generally will be subject to the UK Bribery Act. Penalties under the UK Bribery Act include potentially unlimited fines for corporations and criminal sanctions for corporate officers under certain circumstances.

Environmental, Health and Safety Laws: 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, where we have manufacturing facilities, namely the U.S. and Ireland. Environmental and health and safety authorities in the relevant jurisdictions, including the Environmental Protection Agency and the Occupational Safety and Health Administration in the U.S. and the Environmental Protection Agency and the Health and Safety Authority in Ireland, administer laws which regulate, 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, these laws 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 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.

Other Laws: We are subject to a variety of financial disclosure, securities trading regulations and governmental regulations as an Irish-incorporated public company in the U.S., including laws relating to the oversight activities of the Securities and Exchange Commission (“SEC”), the Irish Companies Act 2014, and the regulations of the NASDAQ, on which our shares are traded. We are also subject to various laws, regulations and recommendations relating to safe working conditions, laboratory practices, the experimental use of animals, and the purchase, storage, movement, import and export and use and disposal of hazardous or potentially hazardous substances used in connection with our research work.

Employees

As of February 3, 2017, we had approximately 1,750 full-time employees. A significant number of our management and professional employees have prior experience with pharmaceutical, biotechnology or medical product companies. We believe that we have been successful in attracting skilled and experienced scientific and senior management personnel; however, competition for such personnel is intense. None of our employees is covered by a collective bargaining agreement. We consider our relations with our employees to be good.

Available Information

Our principal executive offices are located at Connaught House, 1 Burlington Road, Dublin 4, Ireland. Our telephone number is +353-1-772-8000 and our website address is www.alkermes.com. Information that is contained in, and can be accessed through, our website is not incorporated into, and does not form a part of, this Annual Report. We make available free of charge through the Investors section of our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We also make available on our

[Table of Contents](#)

website (i) the charters for the standing committees of our Board of Directors, including the Audit and Risk Committee, Compensation Committee, and Nominating and Corporate Governance Committee, and (ii) our Code of Business Conduct and Ethics governing our directors, officers and employees. We intend to disclose on our website any amendments to, or waivers from, our Code of Business Conduct and Ethics that are required to be disclosed pursuant to the rules of the SEC. You may read and copy materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

[Table of Contents](#)

Item 1A. Risk Factors

Investing in our company involves a high degree of risk. In deciding whether to invest in our ordinary shares, you should consider carefully the risks described below in addition to the financial and other information contained in this Annual Report, including the matters addressed under the caption “Cautionary Note Concerning Forward-Looking Statements.” If any events described by the following risks actually occur, they could materially adversely affect our business, financial condition, cash flows or operating results. This could cause the market price of our ordinary shares to decline, and could cause you to lose all or a part of your investment. Except as otherwise suggested by the context, references to “products” or “our products” include our marketed products, marketed products using our proprietary technologies, product candidates, product candidates using our proprietary technologies, development products and development products using our proprietary technologies.

We rely heavily on our licensees in the commercialization and continued development of products from which we receive revenue; and if our licensees are not effective, our revenues could be materially adversely affected.

Our arrangements with licensees are critical to bringing products from which we receive manufacturing and/or royalty revenue to the market and successfully commercializing them. We rely on these parties in various respects, including providing funding for development programs and conducting pre-clinical testing and clinical trials with respect to new formulations or other development activities for our products; managing the regulatory approval process; and commercializing our products.

The revenues that we receive from manufacturing fees and royalties depend primarily upon the success of our licensees, and particularly Janssen, Acorda, Biogen, and AstraZeneca, in commercializing certain of our products. Janssen is responsible for the commercialization of RISPERDAL CONSTA, INVEGA SUSTENNA/XEPLION, and INVEGA TRINZA/TREVICTA, and, in Russia and the CIS, VIVITROL. Acorda and Biogen are responsible for commercializing AMPYRA/FAMPYRA. AstraZeneca is responsible for commercializing BYDUREON. We have no involvement in the commercialization efforts for such products. Our revenues may fall below our expectations, the expectations of our partners or those of investors, which could have a material adverse effect on our results of operations and the price of our ordinary shares. Such revenues will depend on numerous factors, many of which are outside our control.

Our licensees may also choose to use their own or other technology to develop an alternative product and withdraw their support of our product, or to compete with our jointly developed product. In addition, ARISTADA competes directly with RISPERDAL CONSTA, INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA, products from which we receive revenue. Disputes may also arise between us and a licensee and may involve the ownership of technology developed under a license or other issues arising out of collaborative agreements. Such a dispute could delay the related program or result in expensive arbitration or litigation, which may not be resolved in our favor.

In addition, most of our licensees can terminate their agreements with us without cause, and we cannot guarantee that any of these relationships will continue. Failure to make or maintain these arrangements or a delay in, or failure of, a licensee’s performance, or factors that may affect a licensee’s sales, may materially adversely affect our business, financial condition, cash flows and results of operations.

We receive substantial revenues from certain products.

We depend substantially upon continued sales of RISPERDAL CONSTA and INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA by Janssen, upon continued sales of AMPYRA/FAMPYRA by Acorda and its sublicensee, Biogen, and upon our continued sales of VIVITROL. Any significant negative developments relating to these products, or to our licensee relationships, could have a material adverse effect on our business, results of operations, cash flows and financial condition.

Our revenues may be lower than expected as a result of failure by the marketplace to accept our products or for other factors.

We cannot be assured that our products will be, or will continue to be, accepted in the U.S. or in any markets outside the U.S. or that sales of our products will not decline or cease in the future. A number of factors may cause revenues from sales of our products to grow at a slower than expected rate, or even to decrease or cease, including:

[Table of Contents](#)

- perception of physicians and other members of the healthcare community as to our products' safety and efficacy relative to that of competing products;
- the cost-effectiveness of our products;
- patient and physician satisfaction with our products;
- the successful manufacture of our products on a timely basis;
- the cost and availability of raw materials necessary for the manufacture of our products;
- the size of the markets for our products;
- reimbursement policies of government and third-party payers;
- unfavorable publicity concerning our products, similar classes of drugs or the industry generally;
- the introduction, availability and acceptance of competing treatments, including treatments marketed and sold by our licensees;
- the reaction of companies that market competitive products;
- adverse event information relating to our products or to similar classes of drugs;
- changes to the product labels of our products, or of products within the same drug classes, to add significant warnings or restrictions on use;
- our continued ability to access third parties to vial, package and/or distribute our products on acceptable terms;
- the unfavorable outcome of litigation or proceedings before the U.S. Patent and Trademark Office's (the "USPTO") Patent Trial and Appeal Board (the "PTAB"), including so-called "Paragraph IV" litigation, inter partes reviews ("IPR") and other patent litigation, related to any of our products;
- regulatory developments related to the manufacture or continued use of our products, including the issuance of a REMS by the FDA;
- the extent and effectiveness of the sales and marketing and distribution support our products receive, including from our licensees;
- our licensees' decisions as to the timing of product launches, pricing and discounting;
- disputes with our licensees relating to the marketing and sale of products from which we receive revenue;
- exchange rate valuations and fluctuations; and
- any other material adverse developments with respect to the commercialization of our products.

Our revenues will also fluctuate from quarter to quarter based on a number of other factors, including the acceptance of our products in the marketplace, our licensees' orders, the timing of shipments, and our ability to manufacture products successfully, including our yield and our production schedule. The unit costs to manufacture our products may be higher than anticipated if certain volume levels are not achieved. In addition, we may not be able to supply the products in a timely manner or at all.

We have less experience in the commercialization of long-acting atypical antipsychotics than our competitors.

We launched ARISTADA in October 2015 into a highly competitive market with companies larger than us and with more experience than us marketing and selling competing long-acting injectable atypical antipsychotic products for the treatment of schizophrenia.

We have less experience commercializing ARISTADA in a competitive market of this type. If we are not able to continue to attract and retain qualified personnel to serve in our sales and marketing organization, to maintain an effective distribution network and reimbursement for ARISTADA, or to otherwise effectively and efficiently support our commercialization activities, we may not be able to successfully commercialize ARISTADA and such events could materially adversely affect our business, financial condition, cash flows and results of operations.

We are subject to risks related to the manufacture of our products.

The manufacture of pharmaceutical products is a highly complex process in which a variety of difficulties may arise from time to time including, but not limited to, product loss due to material failure, equipment failure, vendor error, operator error, labor shortages, inability to obtain material, equipment or transportation, physical or electronic security breaches, natural disasters and many other factors. Problems with manufacturing processes could result in product defects or manufacturing failures, which could require us to delay shipment of products or recall products previously shipped, or could impair our ability to expand into new markets or supply products in existing markets. We may not be able to resolve any such problems in a timely fashion, if at all.

[Table of Contents](#)

We rely solely on our manufacturing facility in Wilmington, Ohio for the manufacture of RISPERDAL CONSTA, VIVITROL, ARISTADA, polymer for BYDUREON and certain of our other development products. We rely on our manufacturing facility in Athlone, Ireland for the manufacture of AMPYRA/FAMPYRA and some of our other products using our NanoCrystal and OCR technologies.

Due to regulatory and technical requirements, we have limited ability to shift production among our facilities or to outsource any part of our manufacturing to third parties. If we cannot produce sufficient commercial quantities of our products to meet demand, there are currently very few, if any, third-party manufacturers capable of manufacturing our products as contract suppliers. We cannot be certain that we could reach agreement on reasonable terms, if at all, with those manufacturers. Even if we were to reach agreement, the transition of the manufacturing process to a third party to enable commercial supplies could take a significant amount of time and money, and may not be successful.

Our manufacturing facilities also require specialized personnel and are expensive to operate and maintain. Any delay in the regulatory approval or market launch of products, or suspension of the sale of our products, manufactured in our facilities, may cause operating losses as we continue to operate these facilities and retain specialized personnel. In addition, any interruption in manufacturing could result in delays in meeting contractual obligations and could damage our relationships with our licensees, including the loss of manufacturing and supply rights.

We rely on third parties to provide services in connection with the manufacture and distribution of our products.

We rely on third parties for the timely supply of specified raw materials, equipment, contract manufacturing, formulation or packaging services, storage and product distribution services, customer service activities and product returns processing. These third parties must comply with federal, state and local regulations applicable to their business, including FDA and, as applicable, DEA regulations. Although we actively manage these third-party relationships to ensure continuity, quality and compliance with regulations, some events beyond our control could result in the complete or partial failure of these goods and services. Any such failure could materially adversely affect our business, financial condition, cash flows and results of operations.

The manufacture of products and product components, including the procurement of bulk drug product, packaging, storage and distribution of our products, requires successful coordination among us and multiple third-party providers. For example, we are responsible for the entire supply chain for both ARISTADA and VIVITROL, up to the sale of final product and including the sourcing of key raw materials and active pharmaceutical agents from third parties. Issues with our third-party providers, including our inability to coordinate these efforts, lack of capacity available at such third-party providers or any other problems with the operations of these third-party providers, could require us to delay shipment of saleable products, recall products previously shipped or could impair our ability to supply products at all. This could increase our costs, cause us to lose revenue or market share and damage our reputation and have a material adverse effect on our business, financial condition, cash flows and results of operations.

In addition, due to the unique nature of the production of our products, there are several single-source providers of our key raw materials. We endeavor to qualify and register new vendors and to develop contingency plans so that production is not impacted by issues associated with single-source providers. Nonetheless, our business could be materially and adversely affected by issues associated with single-source providers.

We are also dependent in certain cases on third parties to manufacture products. Where the manufacturing rights to the products in which our technologies are applied are granted to, or retained by, our third-party licensee (for example, in the cases of INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and BYDUREON) or approved sub-licensee, we have no control over the manufacturing, supply or distribution of the product. Supply or manufacturing issues encountered by such licensees or sublicensees could materially and adversely affect sales of products from which we receive revenue, and our business, financial condition, cash flows and results of operations.

If we or our third-party providers fail to meet the stringent requirements of governmental regulation in the manufacture of our products, we could incur substantial remedial costs and a reduction in sales and/or revenues.

We and our third-party providers are generally required to comply with cGMP regulations and other applicable foreign standards in the manufacture of our products. In addition, in the U.S., the DEA and state-level agencies heavily regulate the manufacturing, holding, processing, security, recordkeeping and distribution of substances, including

[Table of Contents](#)

controlled substances. Our products that are scheduled by the DEA as controlled substances make us subject to the DEA's regulations. We are subject to unannounced inspections by the FDA, the DEA and comparable state and foreign agencies in other jurisdictions to confirm compliance with all applicable laws. Any changes of suppliers or modifications of methods of manufacturing require amending our application to the FDA or other regulatory agencies, and ultimate amendment acceptance by such agencies, prior to release of product to the applicable marketplace. Our inability or the inability of our third-party providers to demonstrate ongoing cGMP or other regulatory compliance could require us to withdraw or recall products and interrupt clinical and commercial supply of our products. Any delay, interruption or other issues that may arise in the manufacture, formulation, packaging or storage of our products as a result of a failure of our facilities or the facilities or operations of third parties to pass any regulatory agency inspection could significantly impair our ability to develop and commercialize our products. This could increase our costs, cause us to lose revenue or market share and damage our reputation.

The FDA and various regulatory agencies outside the U.S. have inspected and approved our commercial manufacturing facilities. We cannot guarantee that the FDA or any other regulatory agencies will approve any other facility we or our suppliers may operate or, once approved, that any of these facilities will remain in compliance with cGMP and other regulations. Any third party we use to manufacture bulk drug product must be licensed by the FDA and, for controlled substances, the DEA. Failure to gain or maintain regulatory compliance with the FDA or other regulatory agencies could materially adversely affect our business, financial condition, cash flows and results of operations.

Revenues generated by sales of our products depend on the availability of reimbursement from third-party payers, and a reduction in payment rate or reimbursement or an increase in our financial obligation to governmental payers could result in decreased sales of our products and decreased revenues.

In both U.S. and non-U.S. markets, sales of our products depend, in part, on the availability of reimbursement from third-party payers such as state and federal governments, including Medicare and Medicaid in the U.S. and similar programs in other countries, managed care providers and private insurance plans. Deterioration in the timeliness, certainty and amount of reimbursement for our products, including the existence of barriers to coverage of our products (such as prior authorization, criteria for use or other requirements), limitations by healthcare providers on how much, or under what circumstances, they will prescribe or administer our products or unwillingness by patients to pay any required co-payments, or deductible amounts, could reduce the use of, and revenues generated from, our products and could have a material adverse effect on our business, financial condition, cash flows and results of operations. In addition, when a new product is approved, the availability of government and private reimbursement for that product is uncertain, as is the amount for which that product will be reimbursed. We cannot predict the availability or amount of reimbursement for our products.

In the U.S., federal and state legislatures, health agencies and third-party payers continue to focus on containing the cost of healthcare, including by comparing the effectiveness, benefits and costs of similar treatments. Any adverse findings for our products from such comparisons may reduce the extent of reimbursement for our products. Economic pressure on state budgets may result in states increasingly seeking to achieve budget savings through mechanisms that limit coverage or payment for drugs, including but not limited to price control initiatives, discounts and other pricing-related actions. For example, in 2016, the State of California proposed a ballot initiative that, if passed, would have prohibited state agencies from entering into purchasing agreements with drug manufacturers unless the net cost of the drug was equal to less than that paid by the Veterans Administration. We expect similar state drug pricing initiatives in 2017. In addition, State Medicaid programs are increasingly requesting manufacturers to pay supplemental rebates and requiring prior authorization by the state program for use of any drug. Managed care organizations continue to seek price discounts and, in some cases, to impose restrictions on the coverage of particular drugs. Government efforts to reduce Medicaid expenses may lead to increased use of managed care organizations by Medicaid programs. This may result in managed care organizations influencing prescription decisions for a larger segment of the population and a corresponding constraint on prices and reimbursement for our products.

In 2017, we may face uncertainties as a result of likely federal and administrative efforts to repeal, substantially modify or invalidate some or all of the provisions of the Patient Protection and Affordable Care Act (the "PPACA") and potential reforms and changes to government negotiation or regulation of drug pricing. There is no assurance that the PPACA, as currently enacted or as amended in the future, or such reforms and changes, will not adversely affect our business and financial results, and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

[Table of Contents](#)

The government-sponsored healthcare systems in Europe and many other countries are the primary payers for healthcare expenditures, including payment for drugs and biologics. We expect that countries may take actions to reduce expenditure on drugs and biologics, including mandatory price reductions, patient access restrictions, suspensions of price increases, increased mandatory discounts or rebates, preference for generic products, reduction in the amount of reimbursement and greater importation of drugs from lower-cost countries. These cost-control measures likely would reduce our revenues. In addition, certain countries set prices by reference to the prices in other countries where our products are marketed. Thus, the inability to secure adequate prices in a particular country may not only limit the marketing of products within that country, but may also adversely affect the ability to obtain acceptable prices in other markets.

Patent protection for our products is important and uncertain.

The following factors are important to our success:

- receiving and maintaining patent and/or trademark protection for our products, technologies and developing technologies, including those that are the subject of licenses with our licensees;
- maintaining our trade secrets;
- not infringing the proprietary rights of others; and
- preventing others from infringing our proprietary rights.

Patent protection only provides rights of exclusivity for the term of the patent. We are able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets. In this regard, we try to protect our proprietary position by filing patent applications in the U.S. and elsewhere related to our proprietary product inventions and improvements that are important to the development of our business. Our pending patent applications, together with those we may file in the future, or those we may license from third parties, may not result in patents being issued. Even if issued, such patents may not provide us with sufficient proprietary protection or competitive advantages against competitors with similar technology. The development of new technologies or products may take a number of years, and there can be no assurance that any patents which may be granted in respect of such technologies or products will not have expired or be due to expire or withstand challenge by the time such products are commercialized.

Although we believe that we make reasonable efforts to protect our intellectual property rights and to ensure that our proprietary technology does not infringe the rights of other parties, we cannot ascertain the existence of all potentially conflicting claims. Therefore, there is a risk that third parties may make claims of infringement against our products or technologies. We know of several patents issued in the U.S. to third parties that may relate to our products. We also know of patent applications filed by other parties in the U.S. and various countries outside the U.S. that may relate to some of our products if such patents are issued in their present form. If patents are issued that cover our products, we may not be able to manufacture, use, offer for sale, sell or import such products without first getting a license from the patent holder. The patent holder may not grant us a license on reasonable terms, or it may refuse to grant us a license at all. This could delay or prevent us from developing, manufacturing, selling or importing those of our products that would require the license. Claims of intellectual property infringement also might require us to redesign affected products, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling certain of our products. Even if we have an agreement to indemnify us against such costs, the indemnifying party may be unable to uphold its contractual obligations. If we cannot or do not license the infringed technology at all, license the technology on reasonable terms or substitute similar technology from another source, our revenue and earnings could be adversely impacted.

Because the patent positions of biopharmaceutical companies involve complex legal and factual questions, enforceability of patents cannot be predicted with certainty. The ultimate degree of patent protection that will be afforded to products and processes, including ours, in the U.S. and in other important markets, remains uncertain and is dependent upon the scope of protection decided upon by the patent offices, courts and lawmakers in these countries. Patents, if issued, may be challenged, invalidated or circumvented. As more products are commercialized using our proprietary product platforms, or as any product achieves greater commercial success, our patents become more likely to be subject to challenge by potential competitors. The laws of certain countries may not protect our intellectual property rights to the same extent as do the laws of the U.S. Thus, any patents that we own or license from others may not provide any protection against competitors. Furthermore, others may independently develop similar technologies outside the scope of our patent coverage.

[Table of Contents](#)

We also rely on trade secrets, know-how and technology, which are not protected by patents, to maintain our competitive position. We try to protect this information by entering into confidentiality agreements with parties that have access to it, such as our licensees, licensors, employees and consultants. Any of these parties may breach the agreements and disclose our confidential information, or our competitors might learn of the information in some other way. To the extent that our employees, consultants or contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. If any trade secret, know-how or other technology not protected by a patent were to be disclosed to, or independently developed by, a competitor, such event could materially adversely affect our business, financial condition, cash flows and results of operations.

Uncertainty over intellectual property in the pharmaceutical industry has been the source of litigation, which is inherently costly and unpredictable.

There is considerable uncertainty within the pharmaceutical industry about the validity, scope and enforceability of many issued patents in the U.S. and elsewhere in the world. We cannot currently determine the ultimate scope and validity of patents which may be granted to third parties in the future or which patents might be asserted to be infringed by the manufacture, use or sale of our products.

In part as a result of this uncertainty, there has been, and we expect that there may continue to be, significant litigation and an increasing number of IPRs and administrative proceedings in the pharmaceutical industry regarding patents and other intellectual property rights. A patent holder might file an IPR, interference and/or infringement action against us claiming that certain claims of one or more of our issued patents are invalid or that the manufacture, use, offer for sale, sale or import of our products infringed one or more of such party's patents. We may have to expend considerable time, effort and resources to defend such actions. In addition, we may need to enforce our intellectual property rights against third parties who infringe our patents and other intellectual property or challenge our patents, patent applications or trademark applications (see “—We face claims against our intellectual property rights and competition from generic drug manufacturers.” for additional information regarding litigation with generic drug manufacturers). We expect that litigation may be necessary in some instances to determine the validity and scope of certain of our proprietary rights. Competitors may sue us as a way of delaying the introduction of our products.

Litigation and trial proceedings, such as IPRs, concerning patents and other intellectual property rights may be expensive, protracted with no certainty of success, and distracting to management. Ultimately, the outcome of such litigation and proceedings could adversely affect our business and the validity and scope of our patents or other proprietary rights or hinder our ability to manufacture and market our products.

Our level of indebtedness could adversely affect our business and limit our ability to plan for or respond to changes in our business.

Pursuant to an amendment to our credit agreement, dated as of October 12, 2016, we extended our \$288.0 million term loan with an interest rate at LIBOR plus 2.75% with a LIBOR floor of 0.75% by two years to September 25, 2021 (“Term Loan B-1”).

Our existing indebtedness is secured by a first priority lien on substantially all of the combined company assets and properties of Alkermes plc and most of its subsidiaries, which serve as guarantors. The agreements governing Term Loan B-1 include a number of restrictive covenants that, among other things, and subject to certain exceptions and baskets, impose operating and financial restrictions on us. Our level of indebtedness and the terms of these financing arrangements could adversely affect our business by, among other things:

- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow for other purposes, including business development efforts, research and development and capital expenditures;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate, thereby placing us at a competitive disadvantage compared to competitors with less debt;
- limiting our ability to take advantage of significant business opportunities, such as potential acquisition opportunities; and
- increasing our vulnerability to adverse economic and industry conditions.

[Table of Contents](#)

Our failure to comply with these restrictions or to make these payments could lead to an event of default that could result in an acceleration of the indebtedness. Our future operating results may not be sufficient to ensure compliance with these covenants or to remedy any such default. In the event of an acceleration of this indebtedness, we may not have, or be able to obtain, sufficient funds to make any accelerated payments.

We rely on a limited number of pharmaceutical wholesalers to distribute our product.

As is typical in the pharmaceutical industry, we utilize pharmaceutical wholesalers in connection with the distribution of the products that we market and sell. A significant amount of our product is sold to end-users through the three largest wholesalers in the U.S. market, Cardinal Health Inc., AmerisourceBergen Corp., and McKesson Corp. If we are unable to maintain our business relationships with these major pharmaceutical wholesalers on commercially acceptable terms, if the buying patterns of these wholesalers fluctuate due to seasonality or if wholesaler buying decisions or other factors outside of our control change, such events could materially adversely affect our business, financial condition, cash flows and results of operations.

Our business may suffer if we are unable to develop new products.

Our long-term viability and growth will depend upon the successful development of new products from our research and development activities and we expect the development of products for our own account to consume substantial resources. Since we fund the development of our proprietary products, there is a risk that we may not be able to continue to fund all such development efforts to completion or to provide the support necessary to perform the clinical trials, obtain regulatory approvals, obtain a final DEA scheduling designation (to the extent our products are controlled substances) or market any approved products on a worldwide basis. If we are able to develop commercial products on our own, the risks associated with these programs may be greater than those associated with our programs with licensees.

If our delivery technologies or product development efforts fail to result in the successful development and commercialization of products, if our licensees decide not to pursue development and/or commercialization of our products or if new products do not perform as anticipated, such events could materially adversely affect our business, financial condition, cash flows and results of operations (see “—Our revenues may be lower than expected as a result of failure by the marketplace to accept our products or for other factors” for factors that may affect the market acceptance of our products approved for sale).

Clinical trials for our products are expensive, may take several years to complete, and their outcome is uncertain.

Before obtaining regulatory approvals for the commercial sale of any products, we or our partners must demonstrate, through pre-clinical testing and clinical trials, that our products are safe and effective for use in humans. Conducting clinical trials is a lengthy, time-consuming and expensive process. We have incurred, and we will continue to incur, substantial expense for pre-clinical testing and clinical trials.

Our pre-clinical and clinical development efforts may not be successfully completed. Completion of clinical trials may take several years or more. The length of time can vary substantially with the type, complexity, novelty and intended use of the product. The commencement and rate of completion of clinical trials may be delayed by many factors, including:

- the potential delay by a collaborative partner in beginning a clinical trial;
- the failure of third-party CROs and other third-party service providers and independent clinical investigators to manage and conduct the trials, to perform their oversight of the trials or to meet expected deadlines;
- the inability to recruit clinical trial participants at the expected rate;
- the inability to follow patients adequately after treatment;
- unforeseen safety issues;
- the inability to manufacture or obtain sufficient quantities of materials used for clinical trials; and
- unforeseen governmental or regulatory issues, including those by the FDA, DEA and other regulatory agencies.

In addition, we are currently conducting and enrolling patients in clinical studies in a number of countries where our experience is more limited. For example, phase 3 efficacy studies of ALKS 3831 are being conducted in many countries

[Table of Contents](#)

around the world, including in Eastern Europe and Asia. We depend on independent clinical investigators, CROs and other third-party service providers and our collaborators in the conduct of clinical trials for our products and in the accurate reporting of results from such clinical trials. We rely heavily on these parties for successful execution of our clinical trials but do not control many aspects of their activities. For example, while the investigators are not our employees, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols.

The outcome of our clinical trials is uncertain. The results from pre-clinical testing and early clinical trials often have not predicted results of later clinical trials. A number of products have shown promising results in early clinical trials but subsequently failed to establish sufficient safety and efficacy data in later clinical trials to obtain necessary regulatory approvals.

If a product fails to demonstrate safety and efficacy in clinical trials, or if third parties fail to conduct clinical trials in accordance with their obligations, the development, approval and commercialization of our products may be delayed or prevented, and such events could materially adversely affect our business, financial condition, cash flows and results of operations.

The FDA or other regulatory agencies may not approve our products or may delay approval.

We must obtain government approvals before marketing or selling our products in the U.S. and in jurisdictions outside the U.S. The FDA, DEA (to the extent a product is a controlled substance), and comparable regulatory agencies in other countries, impose substantial and rigorous requirements for the development, production and commercial introduction of drug products. These include pre-clinical, laboratory and clinical testing procedures, sampling activities, clinical trials and other costly and time-consuming procedures. Satisfaction of the requirements of the FDA and of other regulatory agencies typically takes a significant number of years and can vary substantially based upon the type, complexity and novelty of the product.

In addition, regulation is not static, and regulatory agencies, including the FDA, evolve in their staff, interpretations and practices and may impose more stringent requirements than currently in effect, which may adversely affect our planned drug development and/or our commercialization efforts. The approval procedure and the time required to obtain approval also varies among countries. Regulatory agencies may have varying interpretations of the same data, and approval by one regulatory agency does not ensure approval by regulatory agencies in other jurisdictions. In addition, the FDA or regulatory agencies outside the U.S. may choose not to communicate with or update us during clinical testing and regulatory review periods. The ultimate decision by the FDA or other regulatory agencies regarding drug approval may not be consistent with prior communications.

This product approval process can last many years, be very costly and still be unsuccessful. Regulatory approval by the FDA or regulatory agencies outside the U.S. can be delayed, limited or not granted at all for many reasons, including:

- a product may not demonstrate safety and efficacy for each target indication in accordance with regulatory agency standards;
- data from pre-clinical testing and clinical trials may be interpreted by the FDA or other regulatory agencies in different ways than we or our partners interpret it;
- the FDA or other regulatory agencies might not approve our or our partners' manufacturing processes or facilities;
- the FDA or other regulatory agencies may not approve accelerated development timelines for our product;
- the failure of our clinical investigational sites and the records kept at such sites, including the clinical trial data, to be in compliance with the FDA's GCP, or EU legislation governing GCP, including the failure to pass FDA, EMA or EU Member State inspections of clinical trials;
- the FDA or other regulatory agencies may change their approval policies or adopt new regulations;
- adverse medical events during the trials could lead to requirements that trials be repeated or extended, or that a program be terminated or placed on clinical hold, even if other studies or trials relating to the program are successful; and
- the FDA or other regulatory agencies may not agree with our or our partners' regulatory approval strategies or components of our or our partners' filings, such as clinical trial designs.

[Table of Contents](#)

Failure to obtain regulatory approval for products will prevent their commercialization. Any delay in obtaining regulatory approval for products could adversely affect our ability to successfully commercialize such products. In addition, share prices have declined significantly in certain instances where companies have failed to obtain FDA approval of a product or where the timing of FDA approval is delayed. If the FDA's or any other regulatory agency's response to any application for approval is delayed or not favorable for any of our products, our share price could decline significantly.

The FDA or other regulatory agencies may impose limitations on any product approval.

Even if regulatory approval to market a product is granted by the FDA and other regulatory agencies, the approval may impose limitations on the indicated use for which the drug product may be marketed and additional post-approval requirements with which we would need to comply in order to maintain the approval of such products. Our business could be seriously harmed if we do not complete these post-approval requirements and the FDA, as a result, requires us to change sections of the label for our products.

Further, even if the FDA provides regulatory approval, controlled substances will not become commercially available until after the DEA provides its final schedule designation, which may take longer and may be more restrictive than we expect or change after its initial designation. We currently expect ALKS 5461 and ALKS 3831 to require such DEA final schedule designation prior to commercialization. Restrictive designation could adversely affect our ability to commercialize such products and could adversely affect our business and share price.

Citizen Petitions and other actions filed with, or litigation against, the FDA or other regulatory agencies or litigation against Alkermes may negatively impact the approval of our products and our business.

As described under "Item 3—Legal Proceedings" in this Annual Report, on July 13, 2015, Otsuka Pharmaceutical Development & Commercialization, Inc. ("Otsuka PD&C") filed a Citizen Petition with the FDA which requested that the FDA refuse to approve the NDA for ARISTADA or delay approval of such NDA until the exclusivity rights covering long-acting aripiprazole expire in December 2017. The FDA approved ARISTADA on October 5, 2015 and, concurrent with such approval, denied Otsuka PD&C's Citizen Petition. On October 15, 2015, Otsuka Pharm. Co., Otsuka PD&C, and Otsuka America Pharmaceutical, Inc. (collectively, "Otsuka") filed an action for declaratory and injunctive relief with the United States District Court for the District of Columbia (the "DC Court") against the FDA requesting, among other things, that the DC Court vacate FDA's approval of the ARISTADA NDA. We successfully intervened in, and received the DC Court's approval to become a party to, this action.

On July 28, 2016, the DC Court issued an opinion in favor of us and the FDA, affirming in all respects FDA's decision to approve ARISTADA for the treatment of schizophrenia, and denying the action filed by Otsuka for declaratory and injunctive relief. Otsuka has filed an appeal of the DC Court's decision with the U.S. Court of Appeals for the District of Columbia Circuit ("DC Circuit") asking the DC Circuit to reverse the DC Court's decision, vacate FDA's approval of the ARISTADA NDA and remand the case to the DC Court for consideration of any appropriate equitable remedy for Otsuka's lost exclusivity. The DC Circuit's appellate hearing for this matter occurred on December 12, 2016.

If Otsuka's action is successful, the DC Circuit could remand the case to the DC Court and the DC Court could remand the ARISTADA NDA to the FDA for further action, vacate the FDA's approval of the ARISTADA NDA, declare that Otsuka's exclusivity rights preclude FDA from granting approval of the NDA for ARISTADA until December 2017, grant injunctive relief and require that we remove ARISTADA from the market, and/or require that the FDA impose limitations on the approval of the ARISTADA NDA. These outcomes and others could adversely affect our ability to generate revenues from the commercialization and sale of ARISTADA, and our share price.

In addition, in the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted against companies. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

[Table of Contents](#)

If we fail to comply with the extensive legal and regulatory requirements affecting the healthcare industry, we could face increased costs, penalties and a loss of business.

Our activities, and the activities of our licensees and third-party providers, are subject to comprehensive government regulation. Government regulation by various national, state and local agencies, which includes detailed inspection of, and controls over, research and laboratory procedures, clinical investigations, product approvals and manufacturing, marketing and promotion, adverse event reporting, sampling, distribution, recordkeeping, storage, and disposal practices, and achieving compliance with these regulations, substantially increases the time, difficulty and costs incurred in obtaining and maintaining the approval to market newly developed and existing products. Government regulatory actions can result in delay in the release of products, seizure or recall of products, suspension or revocation of the authority necessary for their production and sale, and other civil or criminal sanctions, including fines and penalties. Pharmaceutical and biotechnology companies also have been the target of government lawsuits and investigations alleging violations of government regulation, including claims asserting submission of incorrect pricing information, impermissible off-label promotion of pharmaceutical products, payments intended to influence the referral of healthcare business, submission of false claims for government reimbursement, antitrust violations and violations related to environmental matters. In addition, we may be the subject of securities law claims and derivative actions.

While we have implemented numerous risk mitigation measures, we cannot guarantee that we, our employees, our licensees, our consultants or our contractors are, or will be, in compliance with all potentially applicable U.S. federal and state regulations and/or laws or all potentially applicable regulations and/or laws outside the U.S. and interpretations of the applicability of these laws to marketing practices. If we or our agents fail to comply with any of those regulations and/or laws, a range of actions could result, including the termination of clinical trials, the failure to approve a product, restrictions on our products or manufacturing processes, withdrawal of our products from the market, significant fines, exclusion from government healthcare programs or other sanctions or litigation.

Changes in laws affecting the healthcare industry could also adversely affect our revenues and profitability, including new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to patent protection and enforcement, healthcare availability, and product pricing and marketing. The enactment in the U.S. of healthcare reform, the promulgation of regulations, new legislation and legislation on comparative effectiveness research are examples of previously enacted and possible future changes in laws that could adversely affect our business.

We face competition in the biopharmaceutical industry.

We face intense competition in the development, manufacture, marketing and commercialization of our products from many and varied sources, such as academic institutions, government agencies, research institutions, pharmaceutical and biotechnology companies, including other companies with similar technologies, and manufacturers of generic drugs (see “— We face claims against our intellectual property rights and competition from generic drug manufacturers.” for additional information relating to competition from generic drug manufacturers). Some of these competitors are also our licensees, who control the commercialization of products from which we receive manufacturing and royalty revenues. These competitors are working to develop and market other systems, products, and other methods of preventing or reducing disease, and new small-molecule and other classes of drugs that can be used with or without a drug delivery system.

The pharmaceutical and biotechnology industries are characterized by intensive research, development and commercialization efforts and rapid and significant technological change. Many of our competitors are larger and have significantly greater financial and other resources than we do. We expect our competitors to attempt to develop new technologies, products and processes that may be more effective than those we develop. The development of technologically improved or different products or technologies may make our products or product platforms obsolete or noncompetitive before we recover expenses incurred in connection with their development or realize any revenues from any marketed product.

There are other companies developing extended-release product platforms. In many cases, there are products on the market or in development that may be in direct competition with our products. In addition, we know of new chemical entities that are being developed that, if successful, could compete against our products. These chemical entities are being designed to work differently than our products and may turn out to be safer or to be more effective than our products. Among the many experimental therapies being tested around the world, there may be some that we do not now know of that may compete with our proprietary product platforms or products. Our licensees could choose a competing

[Table of Contents](#)

technology to use with their drugs instead of one of our product platforms and could develop products that compete with our products.

With respect to our proprietary injectable product platform, we are aware that there are other companies developing extended-release delivery systems for pharmaceutical products, including, but not limited to, Luye Pharma, which is developing risperidone formulated as extended release microspheres for intramuscular injection for the treatment of schizophrenia and/or schizoaffective disorders. In the treatment of schizophrenia, ARISTADA, RISPERDAL CONSTA, INVEGA SUSTENNA/XEPLION, and INVEGA TRINZA/TREVICTA currently compete with each other and a number of other injectable products including ZYPREXA RELPREVV (olanzapine) For Extended Release Injectable Suspension), which is marketed and sold by Lilly; ABILIFY MAINTENA (aripiprazole for extended release injectable suspension), a once-monthly injectable formulation of ABILIFY (aripiprazole) developed by Otsuka Pharm. Co.; oral compounds currently on the market; and generic versions of branded oral and injectable products. In the treatment of bipolar disorder, RISPERDAL CONSTA competes with antipsychotics such as oral aripiprazole, REXULTI, LATUDA, risperidone, olanzapine, ziprasidone and clozapine.

In the treatment of alcohol dependence, VIVITROL competes with generic acamprosate calcium (also known as CAMPRAL) and generic disulfiram (also known as ANTABUSE) as well as currently marketed drugs, including generic drugs, also formulated from naltrexone. Other pharmaceutical companies are developing products that have shown some promise in treating alcohol dependence that, if approved by the FDA, would compete with VIVITROL.

In the treatment of opioid dependence, VIVITROL competes with methadone, oral naltrexone, SUBOXONE (buprenorphine HCl/naloxone HCl dehydrate sublingual tablets), SUBOXONE (buprenorphine/naloxone) Sublingual Film, and SUBUTEX (buprenorphine HCl sublingual tablets), each of which is marketed and sold by Indivior plc, and BUNAVAIL buccal film (buprenorphine and naloxone) marketed by BioDelivery Sciences, PROBUPHINE (buprenorphine), marketed and sold by Braeburn Pharmaceuticals and ZUBSOLV (buprenorphine and naloxone) marketed by Orexo US, Inc. It also competes with generic versions of SUBUTEX and SUBOXONE sublingual tablets. Other pharmaceutical companies are developing products that have shown promise in treating opioid dependence that, if approved by the FDA, would compete with VIVITROL.

BYDUREON competes with established therapies for market share. Such competitive products include sulfonylureas, metformin, insulins, thiazolidinediones, glinides, dipeptidyl peptidase type IV inhibitors, insulin sensitizers, alpha-glucosidase inhibitors and sodium-glucose transporter-2 inhibitors. BYDUREON also competes with other glucagon-like peptide-1 (“GLP-1”) agonists, including VICTOZA (liraglutide (rDNA origin) injection), which is marketed and sold by Novo Nordisk A/S. Other pharmaceutical companies are developing products for the treatment of type 2 diabetes that, if approved by the FDA, would compete with BYDUREON.

While AMPYRA/FAMPYRA is approved as a treatment to improve walking in patients with MS, there are a number of FDA-approved therapies for MS disease management that seek to reduce the frequency and severity of exacerbations or slow the accumulation of physical disability for people with certain types of MS. These products include AVONEX, TYSABRI, TECFIDERA, and PLEGRIDY from Biogen; BETASERON from Bayer HealthCare Pharmaceuticals; COPAXONE from Teva Pharmaceutical Industries Ltd.; REBIF and NOVANTRONE from EMD Serono, Inc.; GILENYA and EXTAVIA from Novartis AG; AUBAGIO and LEMTRADA from Sanofi-Aventis, and generic products.

With respect to our NanoCrystal technology, we are aware that other technology approaches similarly address poorly water-soluble drugs. These approaches include nanoparticles, cyclodextrins, lipid-based self-emulsifying drug delivery systems, dendrimers and micelles, among others, any of which could limit the potential success and growth prospects of products incorporating our NanoCrystal technology. In addition, there are many competing technologies to our OCR technology, some of which are owned by large pharmaceutical companies with drug delivery divisions and other, smaller drug-delivery-specific companies.

Our inability to compete successfully in the pharmaceutical and biotechnology industries could materially adversely affect our business, results of operations, cash flows and financial condition.

[Table of Contents](#)

We face claims against our intellectual property rights and competition from generic drug manufacturers.

In the U.S., generic manufacturers of innovator drug products may file ANDAs and, in doing so, certify that their products do not infringe the innovator's patents and/or that the innovator's patents are invalid. This often results in litigation between the innovator and the ANDA applicant. This type of litigation is commonly known as "Paragraph IV" litigation in the U.S.

We have received notices of ANDA filings for AMPYRA asserting that a generic form of AMPYRA would not infringe AMPYRA's Orange-Book listed patents and/or those patents are invalid. We are currently engaged in Paragraph IV litigation disputing such claims. This litigation may be costly and time consuming. For a discussion of legal proceedings related to the patents covering AMPYRA, see "Item 3—Legal Proceedings."

Although we intend to vigorously enforce our intellectual property rights, there can be no assurance that we will prevail in our defense of our patent rights. Our existing patents could be invalidated, found unenforceable or found not to cover generic forms of our products. If an ANDA filer were to receive FDA approval to sell a generic version of our products and/or prevail in any patent litigation, our products would become subject to increased competition and our revenue could be adversely affected.

The commercial use of our products may cause unintended side effects or adverse reactions, or incidents of misuse may occur, which could adversely affect our business and share price.

We cannot predict whether the commercial use of our products will produce undesirable or unintended side effects that have not been evident in the use of, or in clinical trials conducted for, such products to date. The administration of drugs in humans carries the inherent risk of product liability claims whether or not the drugs are actually the cause of an injury. Our products may cause, or may appear to have caused, injury or dangerous drug interactions, and we may not learn about or understand those effects until the products have been administered to patients for a prolonged period of time. Additionally, incidents of product misuse may occur. These events, among others, could result in product recalls, product liability actions or withdrawals or additional regulatory controls (including additional regulatory scrutiny, REMS programs, and requirements for additional labeling), all of which could have a material adverse effect on our business, financial condition, cash flows and results of operations. In addition, the reporting of adverse safety events involving our products and public rumors about such events could cause our product sales or share price to decline or experience periods of volatility.

Our business involves environmental, health and safety risks.

Our business involves the controlled use of hazardous materials and chemicals and is subject to numerous environmental, health and safety laws and regulations and to periodic inspections for possible violations of these laws and regulations. Under certain of those laws and regulations, we could be liable for any contamination at our current or former properties or third-party waste disposal sites. In addition to significant remediation costs, contamination can give rise to third-party claims for fines, penalties, natural resource damages, personal injury and damage (including property damage). The costs of compliance with environmental, health and safety laws and regulations are significant. Any violations, even if inadvertent or accidental, of current or future environmental, health or safety laws or regulations, the cost of compliance with any resulting order or fine and any liability imposed in connection with any contamination for which we may be responsible could materially adversely affect our business, financial condition, cash flows and results of operations.

We may not become profitable on a sustained basis.

At December 31, 2016, our accumulated deficit was \$947.9 million, which was primarily the result of net losses incurred from 1987, the year Alkermes, Inc., was founded, through December 31, 2016, partially offset by net income over certain of our recent fiscal periods. There can be no assurance we will achieve sustained profitability.

A major component of our revenue is dependent on our licensees' and our ability to commercialize, and our and our partners' ability to manufacture economically, our marketed products. Our ability to achieve sustained profitability in the future depends, in part, on our or our licensees', as applicable, ability to:

[Table of Contents](#)

- successfully commercialize VIVITROL and ARISTADA in the U.S.;
- obtain and maintain regulatory approval for products both in the U.S. and in other countries;
- efficiently manufacture our products;
- support the commercialization of products by our licensees;
- enter into agreements to develop and commercialize our products;
- develop, have manufactured or expand our capacity to manufacture and market our products;
- obtain adequate reimbursement coverage for our products from insurance companies, government programs and other third-party payers;
- obtain additional research and development funding for our proprietary products; and
- achieve certain product development milestones.

In addition, the amount we spend will impact our profitability. Our spending will depend, in part, on:

- the progress of our research and development programs for our products, including clinical trials;
- the time and expense that will be required to pursue FDA and/or non-U.S. regulatory approvals for our products and whether such approvals are obtained;
- the time that will be required for the DEA to provide its final scheduling designation for our products that are controlled substances;
- the time and expense required to prosecute, enforce and/or challenge patent and other intellectual property rights;
- the cost of building, operating and maintaining manufacturing and research facilities;
- the cost of third-party manufacturers;
- the number of products we pursue, particularly proprietary products;
- how competing technological and market developments affect our products;
- the cost of possible acquisitions of technologies, compounds, product rights or companies;
- the cost of obtaining licenses to use technology owned by others for proprietary products and otherwise;
- the costs of potential litigation; and
- the costs associated with recruiting and compensating a highly skilled workforce in an environment where competition for such employees is intense.

We may not achieve all or any of these goals and, thus, we cannot provide assurances that we will ever be profitable on a sustained basis or achieve significant revenues. Even if we do achieve some or all of these goals, we may not achieve significant or sustained commercial success.

We may require additional funds to execute on our business strategy, and such funding may not be available on commercially favorable terms or at all, and may cause dilution to our existing shareholders.

We may require additional funds in the future to execute on our business strategy, and we may seek funds through various sources, including debt and equity offerings, corporate collaborations, bank borrowings, arrangements relating to assets, sale of royalty streams we receive on our products or other financing methods or structures. The source, timing and availability of any financings will depend on market conditions, interest rates and other factors. If we issue additional equity securities or securities convertible into equity securities to raise funds, our shareholders will suffer dilution of their investment, and it may adversely affect the market price of our ordinary shares. In addition, as a condition to providing additional funds to us, future investors or lenders may demand, and may be granted, rights superior to those of existing shareholders. If we issue additional debt securities in the future, our existing debt service obligations will increase further. If we are unable to generate sufficient cash to meet these obligations and need to use existing cash or liquidate investments in order to fund our debt service obligations or to repay our debt, we may be forced to delay or terminate clinical trials or curtail operations. We cannot be certain, however, that additional financing will be available from any of these sources when needed or, if available, will be on acceptable terms, if at all, particularly if the credit and financial markets are constrained at the time we require funding. If we fail to obtain additional capital when we need it, we may not be able to execute our business strategy successfully and may have to give up rights to our product platforms, and/or products, or grant licenses on terms that may not be favorable to us.

[Table of Contents](#)

Adverse financial market conditions may exacerbate certain risks affecting our business.

As a result of adverse financial market conditions, organizations that reimburse for use of our products, such as government health administration authorities and private health insurers, may be unable to satisfy such obligations or may delay payment. In addition, federal and state health authorities may reduce reimbursements (including Medicare and Medicaid reimbursements in the U.S.) or payments, and private insurers may increase their scrutiny of claims. We are also dependent on the performance of our licensees, and we sell our products to our licensees through contracts that may not be secured by collateral or other security. Accordingly, we bear the risk if our partners are unable to pay amounts due to us thereunder. Due to volatility in the financial markets, there may be a disruption or delay in the performance of our third-party contractors, suppliers or licensees. If such third parties are unable to pay amounts owed to us or satisfy their commitments to us, or if there are reductions in the availability or extent of reimbursement available to us, our business, financial condition, cash flows and results of operations would be adversely affected.

Currency exchange rates may affect revenues and expenses.

We conduct a large portion of our business in international markets. For example, we derive a majority of our RISPERDAL CONSTA revenues and all of our FAMPYRA, XEPLION and TREVICTA revenues from sales in countries other than the U.S., and these sales are denominated in non-U.S. dollar (“USD”) currencies. We also incur substantial operating costs in Ireland and face exposure to changes in the exchange ratio of the USD and the Euro arising from expenses and payables at our Irish operations that are settled in Euro. Our efforts to mitigate the impact of fluctuating currency exchange rates may not be successful. As a result, currency fluctuations among our reporting currency, USD, and the currencies in which we do business will affect our results of operations, often in unpredictable ways. Refer to “Item 7A—Quantitative and Qualitative Disclosure about Market Risk” for additional information relating to our foreign currency exchange rate risk.

We may not be able to attract and retain our key personnel.

Our success depends largely upon the continued service of our management and scientific staff and our ability to attract, retain and motivate highly skilled technical, scientific, manufacturing, management, regulatory compliance and selling and marketing personnel. The loss of key personnel or our inability to hire and retain personnel who have technical, scientific, manufacturing, management, regulatory compliance or commercial backgrounds could materially adversely affect our research and development efforts and our business.

Future transactions may harm our business or the market price of our ordinary shares.

We regularly review potential transactions related to technologies, products or product rights and businesses complementary to our business. These transactions could include:

- mergers;
- acquisitions;
- strategic alliances;
- licensing agreements; and
- co-promotion agreements.

We may choose to enter into one or more of these transactions at any time, which may cause substantial fluctuations in the market price of our ordinary shares. Moreover, depending upon the nature of any transaction, we may experience a charge to earnings, which could also materially adversely affect our results of operations and could harm the market price of our ordinary shares.

If we are unable to successfully integrate the companies, businesses or properties that we acquire, such events could materially adversely affect our business, financial condition, cash flows and results of operations. Merger and acquisition transactions involve various inherent risks, including:

- uncertainties in assessing the value, strengths and potential profitability of, and identifying the extent of all weaknesses, risks, contingent and other liabilities of, the respective parties;
- the potential loss of key customers, management and employees of an acquired business;

[Table of Contents](#)

- the consummation of financing transactions, acquisitions or dispositions and the related effects on our business;
- the ability to achieve identified operating and financial synergies from an acquisition in the amounts and within the timeframe predicted;
- problems that could arise from the integration of the respective businesses, including the application of internal control processes to the acquired business;
- difficulties that could be encountered in managing international operations; and
- unanticipated changes in business, industry, market or general economic conditions that differ from the assumptions underlying our rationale for pursuing the transaction.

Any one or more of these factors could cause us not to realize the benefits anticipated from a transaction. Moreover, any acquisition opportunities we pursue could materially affect our liquidity and capital resources and may require us to incur additional indebtedness, seek equity capital or both. Future acquisitions could also result in our assuming more long-term liabilities relative to the value of the acquired assets than we have assumed in our previous acquisitions.

If goodwill or other intangible assets become impaired, we could have to take significant charges against earnings.

At December 31, 2016, we have \$318.2 million of amortizable intangible assets and \$92.9 million of goodwill. Under accounting principles generally accepted in the U.S. (“GAAP”), we must assess, at least annually and potentially more frequently, whether the value of goodwill and other indefinite-lived intangible assets have been impaired. Amortizing intangible assets will be assessed for impairment in the event of an impairment indicator. Any reduction or impairment of the value of goodwill or other intangible assets will result in a charge against earnings, which could materially adversely affect our results of operations and shareholders’ equity in future periods.

Our effective tax rate may increase.

As a global biopharmaceutical company, we are subject to taxation in a number of different jurisdictions. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of these places. Our effective tax rate may fluctuate depending on a number of factors, including, but not limited to, the distribution of our profits or losses between the jurisdictions where we operate and differences in interpretation of tax laws. In addition, the tax laws of any jurisdiction in which we operate may change in the future, which could impact our effective tax rate. Tax authorities in the jurisdictions in which we operate may audit us. If we are unsuccessful in defending any tax positions adopted in our submitted tax returns, 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 have a material adverse effect on our business, financial condition, cash flows, results of operations and growth prospects.

The business combination of Alkermes, Inc. and the drug technology business (“EDT”) of Elan Corporation, plc may limit our ability to use our tax attributes to offset taxable income, if any, generated from such business combination.

On September 16, 2011, the business of Alkermes, Inc. and EDT were combined under Alkermes plc (this combination is referred to as the “Business Combination”). For U.S. federal income tax purposes, a corporation is generally considered tax resident in the place of its incorporation. Because we are incorporated in Ireland, we should be deemed an Irish corporation under these general rules. However, Section 7874 of the Internal Revenue Code of 1986, as amended (the “Code”) generally provides that a corporation organized outside the U.S. that acquires substantially all of the assets of a corporation organized in the U.S. will be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes if shareholders of the acquired U.S. corporation own at least 80% (of either the voting power or the value) of the stock of the acquiring foreign corporation after the acquisition by reason of holding stock in the domestic corporation, and the “expanded affiliated group” (as defined in Section 7874) that includes the acquiring corporation does not have substantial business activities in the country in which it is organized.

In addition, Section 7874 provides that if a corporation organized outside the U.S. acquires substantially all of the assets of a corporation organized in the U.S., the taxable income of the U.S. corporation during the period beginning on the date the first assets are acquired as part of the acquisition, through the date which is ten years after the last date assets are acquired as part of the acquisition, shall be no less than the income or gain recognized by reason of the transfer during such period or by reason of a license of property by the expatriated entity after such acquisition to a foreign affiliate during such period, which is referred to as the “inversion gain,” if shareholders of the acquired U.S. corporation

[Table of Contents](#)

own at least 60% (of either the voting power or the value) of the stock of the acquiring foreign corporation after the acquisition by reason of holding stock in the domestic corporation, and the “expanded affiliated group” of the acquiring corporation does not have substantial business activities in the country in which it is organized. If this rule was to apply to the Business Combination, among other things, Alkermes, Inc. would have been restricted in its ability to use the approximately \$274 million of U.S. Federal net operating loss (“NOL”) and \$38 million of U.S. state NOL carryforwards that it had as of March 31, 2011. We do not believe that either of these limitations should apply as a result of the Business Combination. However, the U.S. Internal Revenue Service (the “IRS”) could assert a contrary position, in which case we could become involved in tax controversy with the IRS regarding possible additional U.S. tax liability. If we were to be unsuccessful in resolving any such tax controversy in our favor, we could be liable for significantly greater U.S. federal and state income tax than we anticipate being liable for through the Business Combination, which would place further demands on our cash needs.

Our business could be negatively affected as a result of the actions of activist shareholders.

Proxy contests have been waged against many companies in the pharmaceutical and biotechnology industries over the last few years. If faced with a proxy contest, we may not be able to respond successfully to the contest, which would be disruptive to our business. Even if we are successful, our business could be adversely affected by a proxy contest involving us because:

- responding to proxy contests and other actions by activist shareholders can be costly and time-consuming, disrupting operations and diverting the attention of management and employees, and can lead to uncertainty;
- perceived uncertainties as to future direction may result in the loss of potential acquisitions, collaborations or in-licensing opportunities, and may make it more difficult to attract and retain qualified personnel and business partners; and
- if individuals are elected to our board of directors with a specific agenda, it may adversely affect our ability to effectively implement our strategic plan in a timely manner and create additional value for our shareholders.

These actions could cause the market price of our ordinary shares to experience periods of volatility.

If any of our licensees undergoes a change in control or in management, this may adversely affect revenues from our products.

Any change of control, or change in management, of our licensees may result in a reprioritization of our product within such licensee’s portfolio, or such licensee may fail to maintain the financial or other resources necessary to continue the development and/or commercialization of such product.

If any of our licensees undergoes a change of control and the acquirer either is unable to perform such licensee’s obligations under its agreements with us or has a product that competes with ours that such acquirer does not divest, it could materially adversely affect our business, financial condition, cash flows and results of operations.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our suppliers and partners, as well as personally identifiable information of patients, clinical trial participants and employees. Similarly, our partners and third-party providers possess certain of our sensitive data. The secure maintenance of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Certain types of information technology or infrastructure attacks or breaches may go undetected for a prolonged period of time. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information, including our data being breached at our partners or third-party providers, could result in legal claims or proceedings and liability under laws that protect the privacy of personal information, disrupt our operations, and damage our reputation which could adversely affect our business.

[Table of Contents](#)

If we identify a material weakness in our internal control over financial reporting, our ability to meet our reporting obligations and the trading price of our ordinary shares could be negatively affected.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. Accordingly, a material weakness increases the risk that the financial information we report contains material errors.

We regularly review and update our internal controls, disclosure controls and procedures, and corporate governance policies. In addition, we are required under the Sarbanes-Oxley Act of 2002 to report annually on our internal control over financial reporting. Any system of internal controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. If we, or our independent registered public accounting firm, determine that our internal controls over financial reporting are not effective, or we discover areas that need improvement in the future, these shortcomings could have an adverse effect on our business and financial results, and the price of our ordinary shares could be negatively affected.

If we cannot conclude that we have effective internal control over our financial reporting, or if our independent registered public accounting firm is unable to provide an unqualified opinion regarding the effectiveness of our internal control over financial reporting, investors could lose confidence in the reliability of our financial statements, which could lead to a decline in the trading price of our ordinary shares. Failure to comply with reporting requirements could also subject us to sanctions and/or investigations by the SEC, the NASDAQ or other regulatory authorities.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We lease approximately 14,600 square feet of corporate office space in Dublin, Ireland, which houses our corporate headquarters. This lease expires in 2022 and includes a tenant option to terminate in 2017. We lease two properties in Waltham, Massachusetts. One facility has approximately 175,000 square feet of space and houses corporate offices, administrative areas and laboratories. This lease expires in 2021 and includes a tenant option to extend the term for up to two five-year periods. We entered into a second lease in Waltham, Massachusetts on January 31, 2017 for approximately 65,000 square feet of office space. This lease expires in 2020 and includes a tenant option to extend the term for up to two one-year periods.

We own a R&D and manufacturing facility in Athlone, Ireland (approximately 400,000 square feet) and a manufacturing facility in Wilmington, Ohio (approximately 300,000 square feet).

We believe that our current and planned facilities are suitable and adequate for our current and near-term pre-clinical, clinical and commercial requirements.

Item 3. Legal Proceedings

ARISTADA

On July 13, 2015, Otsuka PD&C filed a Citizen Petition with the FDA which requested that the FDA refuse to approve the NDA for ARISTADA or delay approval of such NDA until the exclusivity rights covering long-acting aripiprazole expire in December 2017. The FDA approved ARISTADA on October 5, 2015 and, concurrent with such approval, denied Otsuka PD&C's Citizen Petition.

On October 15, 2015, Otsuka filed an action for declaratory and injunctive relief with the DC Court against Sylvia Mathews Burwell, Secretary, U.S. Department of Health and Human Services; Dr. Stephen Ostroff, Acting Commissioner, FDA; and the FDA, requesting that the DC Court (a) expedite the legal proceedings; (b) declare that the FDA's denial of Otsuka's claimed exclusivity rights and approval of the ARISTADA NDA were arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law; (c) vacate FDA's approval of the ARISTADA NDA and vacate any FDA decisions or actions underlying or supporting or predicated upon that approval; (d) declare that Otsuka's claimed exclusivity rights preclude FDA from granting approval of the Alkermes

[Table of Contents](#)

NDA until the expiration of such exclusivity rights in December 2017; and (e) grant any and all other, further, and additional relief, including all necessary and appropriate protective preliminary, interim, or permanent relief, as the nature of the cause may require, including all necessary and appropriate declarations of rights and injunctive relief. We successfully intervened in, and received the DC Court's approval to become a party to, this action.

On July 28, 2016, the DC Court issued an opinion in favor of us and the FDA, affirming in all respects FDA's decision to approve ARISTADA for the treatment of schizophrenia, and denying the action filed by Otsuka for declaratory and injunctive relief. Otsuka has filed an appeal of the DC Court's decision with the DC Circuit asking the DC Circuit to reverse the DC Court's decision, vacate FDA's approval of the ARISTADA NDA and remand the case to the DC Court for consideration of any appropriate equitable remedy for Otsuka's lost exclusivity. The DC Circuit's appellate hearing for this matter occurred on December 12, 2016. We believe Otsuka's action is without merit and will continue to vigorously defend ARISTADA against such action. For information about risks relating to this action, see "Item 1A—Risk Factors" of this Annual Report and specifically the section entitled "Citizen Petitions and other actions filed with, or litigation against, the FDA or other regulatory agencies or litigation against Alkermes may negatively impact the approval of our products and our business."

AMPYRA

AMPYRA ANDA Litigation

Ten separate Paragraph IV Certification Notices have been submitted to us and/or our partner Acorda from Accord Healthcare, Inc. ("Accord"); Actavis Laboratories FL, Inc. ("Actavis"); Alkem Laboratories Ltd. ("Alkem"); Apotex Corporation and Apotex, Inc. (collectively, "Apotex"); Aurobindo Pharma Ltd. ("Aurobindo"); Mylan Pharmaceuticals, Inc. ("Mylan"); Par Pharmaceutical, Inc. ("Par"); Roxane Laboratories, Inc.; Sun Pharmaceutical Industries Limited and Sun Pharmaceuticals Industries Inc. (collectively, "Sun"); and Teva Pharmaceuticals USA, Inc., advising that each of these companies had submitted an ANDA to the FDA seeking marketing approval for generic versions of AMPYRA (dalfampridine) Extended Release Tablets, 10 mg. The ANDA filers have challenged the validity of the Orange Book-listed patents for AMPYRA, and they have also asserted that their generic versions do not infringe certain claims of these patents. In response, we and/or Acorda filed lawsuits against the ANDA filers in the U.S. District Court for the District of Delaware (the "Delaware Court") asserting infringement of U.S. Patent Nos. 5,540,938 (which we own), 8,007,826, 8,354,437, 8,440,703, and 8,663,685 (which are owned by Acorda). Requested judicial remedies include recovery of litigation costs and injunctive relief. Lawsuits with eight of the ANDA filers have been consolidated into a single case. The Delaware Court held a bench trial that concluded on September 23, 2016. All lawsuits were filed within 45 days from the date of receipt of each of the Paragraph IV Certification Notices. As a result, a 30-month statutory stay of approval period applies to each of the ANDAs under the Hatch-Waxman Act. The 30-month stay starts from January 22, 2015, which is the end of the new chemical entity exclusivity period for AMPYRA. This stay restricts the FDA from approving the ANDAs until July 2017 at the earliest, unless a Federal district court issues a decision adverse to all of the asserted Orange Book-listed patents prior to that date.

Mylan challenged the jurisdiction of the Delaware Court with respect to the Delaware action. In January 2015, the Delaware Court denied Mylan's motion to dismiss. Subsequently, in January 2015, the Delaware Court granted Mylan's request for an interlocutory appeal of its jurisdictional decision to the U.S. Court of Appeals for the Federal Circuit (the "Federal Circuit"). In March 2016, the Federal Circuit denied Mylan's appeal, and the case remains in the Delaware Court. Mylan requested the Federal Circuit to reconsider its decision. However, on June 20, 2016, the Federal Circuit denied Mylan's request. Mylan filed an appeal with the U.S. Supreme Court, which was denied. Due to Mylan's motion to dismiss, we, along with Acorda, also filed another patent infringement suit against Mylan in the U.S. District Court for the Northern District of West Virginia asserting the same U.S. Patents and requesting the same judicial relief as in the Delaware action. In December 2014, we, along with Acorda, filed a motion in the Northern District of West Virginia to stay that action in deference to the Delaware proceeding. In February 2014, the District Court for the Northern District of West Virginia granted our motion to stay the proceeding. The patent infringement case against Mylan, however, is still proceeding in Delaware along with the cases against the other ANDA filers.

We and/or Acorda have entered into a settlement agreement with each of Accord, Actavis, Apotex, Alkem, Aurobindo, Par and Sun (collectively, the "Settling ANDA Filers") to resolve the patent litigation that we and/or Acorda brought against the Settling ANDA Filers in the Delaware Court as described above. As a result of the settlement agreements, the Settling ANDA Filers will be permitted to market a generic version of AMPYRA in the

[Table of Contents](#)

U.S. at a specified date in 2025, or potentially earlier under certain circumstances. The parties have submitted their respective settlement agreements to the Federal Trade Commission and the Department of Justice, as required by federal law. The settlements with the Settling ANDA Filers do not resolve pending patent litigation that we and Acorda brought against the other ANDA filers, as described in this Annual Report.

We intend to vigorously enforce our intellectual property rights. For information about risks relating to the AMPYRA Paragraph IV litigations and other proceedings see “Item 1A—Risk Factors” in this Annual Report and specifically the section entitled “We face claims against our intellectual property rights and competition from generic drug manufacturers.”

AMPYRA IPR Proceedings

A hedge fund (acting with affiliated entities and individuals and proceeding under the name of the Coalition for Affordable Drugs) has filed IPR petitions with the USPTO, challenging U.S. Patent Nos. 8,663,685; 8,440,703; 8,354,437 and 8,007,826 (which are owned by Acorda). In March 2016, the USPTO’s PTAB instituted the IPR. Oral argument for the IPR was held on January 19, 2017, and a ruling on the IPR petitions is expected in March 2017. The challenged patents are four of the five AMPYRA Orange-Book listed patents. The 30-month statutory stay period based on patent infringement suits filed by us and Acorda against ANDA filers is not impacted by these filings, and remains in effect.

BYDUREON, RISPERDAL CONSTA AND VIVITROL IPR Proceedings

On June 3, 2016, Luye Pharma, Luye Pharma (USA) Ltd., Shandong Luye Pharmaceutical Co., Ltd., and Nanjing Luye Pharmaceutical Co., Ltd. (collectively, “Luye”) filed two separate IPR petitions challenging U.S. Patent Number 6,667,061 (the “061 Patent”), which is an Orange Book-listed patent for each of BYDUREON, RISPERDAL CONSTA and VIVITROL. We opposed the institution of these IPR petitions. On November 30, 2016, the USPTO’s PTAB instituted one of Luye’s IPR petitions and denied instituting Luye’s other IPR petition. Oral argument for the instituted IPR is currently scheduled for August 28, 2017. A decision on the instituted IPR would be expected, pursuant to the statutory time frame, by November 30, 2018.

We will vigorously defend the 061 Patent in the IPR proceedings. For information about risks relating to the 061 Patent IPR proceedings see “Item 1A—Risk Factors” in this Annual Report and specifically the sections entitled “Patent protection for our products is important and uncertain” and “Uncertainty over intellectual property in the pharmaceutical industry has been the source of litigation, which is inherently costly and unpredictable.”

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 and shareholder information**

Our ordinary shares are traded on the NASDAQ under the symbol "ALKS." Set forth below for the indicated periods are the high and low closing sales prices for our ordinary shares.

	Year Ended December 31, 2016		Year Ended December 31, 2015	
	High	Low	High	Low
1st Quarter	\$ 75.27	\$ 29.05	\$ 73.64	\$ 58.24
2nd Quarter	47.00	35.67	67.00	55.37
3rd Quarter	51.78	43.77	72.79	55.08
4th Quarter	59.50	42.30	80.14	57.89

There were 145 shareholders of record for our ordinary shares on February 3, 2017. In addition, the last reported sale price of our ordinary shares as reported on the NASDAQ on February 3, 2017 was \$54.95.

Dividends

No dividends have been paid on the ordinary shares to date, and we do not expect to pay cash dividends thereon in the foreseeable future. We anticipate that we will retain all earnings, if any, to support our operations and our proprietary drug development programs. Any future determination as to the payment of dividends will be at the sole discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors our board of directors deems relevant.

Securities authorized for issuance under equity compensation plans

For information regarding securities authorized for issuance under equity compensation plans, see "Item 12, Security Ownership of Certain Beneficial Owners and Management," which incorporates by reference to the Proxy Statement relating to our 2017 Annual General Meeting of Shareholders.

Repurchase of equity securities

On September 16, 2011, our board of directors authorized the continuation of the Alkermes, Inc. program to repurchase up to \$215.0 million of our ordinary shares at the discretion of management from time to time in the open market or through privately negotiated transactions. We did not purchase any shares under this program during the year ended December 31, 2016. As of December 31, 2016, we had purchased a total of 8,866,342 shares at a cost of \$114.0 million. Term Loan B-1 includes restrictive covenants that impose certain limitations on our ability to repurchase our ordinary shares.

During the three months ended December 31, 2016, we acquired 108,423 Alkermes ordinary shares, at an average price of \$46.45 per share related to the vesting of employee equity awards to satisfy withholding tax obligations. During the three months ended December 31, 2016, we acquired 6,073 Alkermes ordinary shares, at an average price of \$57.26 per share, tendered by employees as payment of the exercise price of stock options granted under our equity compensation plans.

Irish taxes applicable to U.S. holders

The following is a general summary of the main Irish tax considerations applicable to the purchase, ownership and disposition of our ordinary shares by U.S. holders. It is based on existing Irish law and practices in effect on January 24, 2017, and on discussions and correspondence with the Irish Revenue Commissioners. Legislative, administrative or judicial changes may modify the tax consequences described below.

The statements do not constitute tax advice and are intended only as a general guide. Furthermore, this information applies only to ordinary shares held as capital assets and does not apply to all categories of shareholders, such as dealers

[Table of Contents](#)

in securities, trustees, insurance companies, collective investment schemes and shareholders who acquire, or who are deemed to acquire, their ordinary shares by virtue of an office or employment. This summary is not exhaustive and shareholders should consult their own tax advisers as to the tax consequences in Ireland, or other relevant jurisdictions where we operate, including the acquisition, ownership and disposition of ordinary shares.

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 (“DWT”) at the standard rate of income tax, which is currently 20%, unless an exemption applies. Dividends on our ordinary shares that are owned by residents of the U.S. and held beneficially through the Depository Trust Company (“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 U.S.

Dividends on our ordinary shares that are owned by residents of the U.S. 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 U.S. 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.

Income tax on dividends

Irish income tax, if any, may arise in respect of dividends paid by us. However, a shareholder who is neither resident nor ordinarily resident in Ireland and who is entitled to an exemption from DWT, generally has no liability for Irish income tax or to the universal social charge on a dividend from us unless he or she holds his or her ordinary shares through a branch or agency in Ireland which carries out a trade on his or her behalf.

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 (“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 recipient, and (ii) the aggregation of the values of previous gifts and inheritances received by the recipient 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, which is 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.

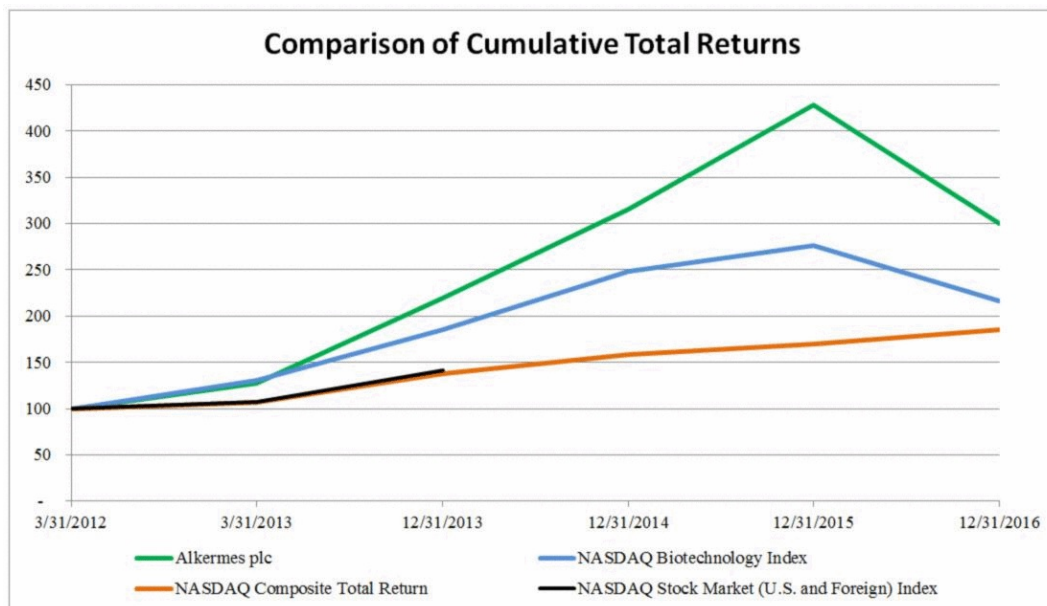
[Table of Contents](#)

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 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 being contemplated.

Stock Performance Graph

The information contained in the performance graph shall not be deemed to be “soliciting material” or to be “filed” with the SEC, and such information shall not be incorporated by reference into any future filing under the Securities Act of 1933, as amended or the Securities Exchange Act of 1934, as amended (the “Exchange Act”), except to the extent that we specifically incorporate it by reference into such filing.

The following graph compares the cumulative total shareholder return on our ordinary shares since March 31, 2012 through December 31, 2016 with the NASDAQ Composite Total Return Index and the NASDAQ Biotechnology Index. As a result of a change in the total return data made available to us through our vendor provider, our performance graphs going forward will use the NASDAQ Composite Total Return Index in lieu of the NASDAQ U.S. & Foreign Index. Please note that information for the NASDAQ U.S. & Foreign Index is provided only from March 31, 2012 through December 31, 2013, the last day this data was made available by our third-party index provider. The NASDAQ Biotechnology Index was not affected by this change. The comparison assumes \$100 was invested on March 31, 2012 in our common stock and in each of the foregoing indices and further assumes reinvestment of any dividends. We did not declare or pay any dividends on our common stock or ordinary shares during the comparison period.



[Table of Contents](#)

	<u>Year Ended March 31,</u>		<u>Nine Months</u> <u>Ended</u> <u>December 31,</u>	<u>Year Ended December 31,</u>		
	<u>2012</u>	<u>2013</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Alkermes	100	128	219	316	428	300
NASDAQ Composite Total Return	100	107	138	159	170	185
NASDAQ Biotechnology Index	100	130	185	248	276	216
NASDAQ Stock Market (U.S. and Foreign) Index	100	107	141	—	—	—

Item 6. Selected Financial Data

The selected historical financial data set forth below at December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 are derived from our audited consolidated financial statements, which are included elsewhere in this Annual Report. The selected historical financial data set forth below at December 31, 2014, 2013 and March 31, 2013 and as of the nine months ended December 31, 2013 and the year ended March 31, 2013 are derived from audited consolidated financial statements, which are not included in this Annual Report.

On May 21, 2013, our Audit and Risk Committee, with such authority delegated to it by our board of directors, approved a change to our fiscal year-end from March 31 to December 31. We have elected not to recast prior period amounts to conform to the change in our fiscal year.

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements, the related notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this Annual Report. The historical results are not necessarily indicative of the results to be expected for any future period.

[Table of Contents](#)

	Year Ended December 31,			Nine Months Ended December 31,	Year Ended March 31,
	2016	2015	2014	2013	2013
(In thousands, except per share data)					
Consolidated Statements of Operations Data:					
REVENUES:					
Manufacturing and royalty revenues	\$ 487,247	\$ 475,288	\$ 516,876	\$ 371,039	\$ 510,900
Product sales, net	256,146	149,028	94,160	57,215	58,107
Research and development revenue	2,301	4,019	7,753	4,657	6,541
Total revenues	745,694	628,335	618,789	432,911	575,548
EXPENSES:					
Cost of goods manufactured and sold	132,122	138,989	175,832	134,306	170,466
Research and development	387,148	344,404	272,043	128,125	140,013
Selling, general and administrative	374,130	311,558	199,905	116,558	125,758
Amortization of acquired intangible assets	60,959	57,685	58,153	38,428	41,852
Restructuring ⁽¹⁾	—	—	—	—	12,300
Impairment of long-lived assets ⁽²⁾	—	—	—	—	3,346
Total expenses	954,359	852,636	705,933	417,417	493,735
OPERATING (LOSS) INCOME	(208,665)	(224,301)	(87,144)	15,494	81,813
OTHER (EXPENSE) INCOME, NET ⁽³⁾	(5,722)	296	73,115	(10,097)	(46,372)
(LOSS) INCOME BEFORE INCOME TAXES	(214,387)	(224,005)	(14,029)	5,397	35,441
(BENEFIT) PROVISION FOR INCOME TAXES	(5,943)	3,158	16,032	(12,252)	10,458
NET (LOSS) INCOME	\$ (208,444)	\$ (227,163)	\$ (30,061)	\$ 17,649	\$ 24,983
(LOSS) EARNINGS PER COMMON SHARE:					
BASIC	\$ (1.38)	\$ (1.52)	\$ (0.21)	\$ 0.13	\$ 0.19
DILUTED	\$ (1.38)	\$ (1.52)	\$ (0.21)	\$ 0.12	\$ 0.18
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:					
BASIC	151,484	149,206	145,274	135,960	131,713
DILUTED	151,484	149,206	145,274	144,961	137,100
Consolidated Balance Sheet Data:					
Cash, cash equivalents and investments	\$ 619,165	\$ 798,849	\$ 801,646	\$ 449,995	\$ 304,179
Total assets ⁽⁴⁾	1,726,423	1,855,744	1,919,058	1,574,848	1,467,121
Long-term debt ⁽⁴⁾	283,666	349,944	355,756	361,553	365,837
Shareholders' equity	1,209,481	1,314,275	1,396,837	1,065,186	952,374

- (1) Represents a one-time charge in connection with the restructuring plan related to our Athlone, Ireland manufacturing facility recorded in the year ended March 31, 2013. The charge consists of severance payments and other employee-related expenses.
- (2) Includes an impairment charge of \$3.3 million related to the impairment of certain of our equipment located at our Wilmington, Ohio manufacturing facility in the year ended March 31, 2013.
- (3) Includes \$9.6 million Gain on the Gainesville Transaction in the year ended December 31, 2015.
- (4) In 2015, the Company retrospectively adopted the Financial Accounting Standards Board's guidance, simplifying the presentation of debt issuance costs. As a result, deferred financing costs of \$2.2 million, \$2.7 million and \$3.2 million that were classified within "Other long-term assets" at December 31, 2014, December 31, 2013 and March 31, 2013, respectively, were reclassified to "Long-term debt" to conform to the current period presentation.

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

The following should be read in conjunction with our consolidated financial statements and related notes beginning on page F-1 of this Annual Report. The following discussion contains forward-looking statements. Actual results may differ significantly from those projected in the forward-looking statements. See "Cautionary Note Concerning Forward-Looking Statements" on pages 3 and 4 of this Annual Report. Factors that might cause future results to differ materially from those projected in the forward-looking statements also include, but are not limited to, those discussed in "Item 1A—Risk Factors" and elsewhere in this Annual Report.

Overview

We earn revenue on net sales of VIVITROL and ARISTADA, which are proprietary products that we manufacture, market and sell in the U.S., and manufacturing and/or royalty revenues on net sales of products commercialized by our licensees. Our key marketed products are expected to generate significant revenues for us in the near- and medium-term and we believe are singular or competitively advantaged products in their classes. These key marketed products consist of INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA; AMPYRA/FAMPYRA; BYDUREON; VIVITROL; and ARISTADA. Revenues from these products accounted for 92% of our total revenues during the year ended December 31, 2016, as compared to 88% and 74% during the years ended December 31, 2015 and 2014, respectively.

During the year ended December 31, 2016 we incurred an operating loss of \$208.7 million, which was primarily due to the continued significant investment in our R&D pipeline and commercial organization. During 2016, within R&D we:

- filed a sNDA for Aripiprazole Lauroxil Two-Month Dose;
- announced results from three phase 3 studies for ALKS 5461, met with the Division of Psychiatric Products at a Type C meeting and will request a pre-NDA meeting with the FDA and plan to submit the NDA for ALKS 5461 in the second half of 2017;
- continued the ENLIGHTEN phase 3 pivotal program for ALKS 3831, initiated in December 2015. We also announced the initiation of a phase 1 study of ALKS 3831 in October 2016;
- continued the two-year, multicenter, open-label phase 3 study designed to assess the safety of ALKS 8700, initiated in December 2015. We also announced our plan to initiate a randomized, head-to-head phase 3 study of the gastrointestinal tolerability of ALKS 8700 compared to TECFIDERA in the first half of 2017;
- completed, as of October 2016, enrollment of the phase 3 study evaluating the safety, tolerability and efficacy of ALKS 6428 in patients with opioid dependence, which was initiated in September 2015; and
- filed an IND with the FDA and initiated a phase 1 study of ALKS 4230 in May 2016.

In 2016, we had increases in net sales of VIVITROL of 45% when compared to 2015, and we had a full year of ARISTADA sales as ARISTADA was launched in October 2015. As a result of the approval of ARISTADA, and our continued investment in VIVITROL, selling, general and administrative expenses increased by 20% in 2016, when compared to 2015, most of which was driven by increases in headcount and increased marketing activity related to these two products.

[Table of Contents](#)

Results of Operations

Manufacturing and Royalty Revenues

Manufacturing revenues are earned from the sale of products under arrangements with our licensees when product is shipped to them at an agreed upon price. Royalties are generally earned on our licensees' net sales of products that incorporate our technologies and are recognized in the period the products are sold by our licensees. The following table compares manufacturing and royalty revenues earned in the years ended December 31, 2016, 2015 and 2014:

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016-2015	2015-2014
Manufacturing and royalty revenues:					
Continuing products:					
INVEGA SUSTENNA/XEPLION & INVEGA TRINZA/TREVICTA	\$ 184.2	\$ 149.7	\$ 127.8	\$ 34.5	\$ 21.9
AMPYRA/FAMPYRA	114.2	104.7	80.9	9.5	23.8
RISPERDAL CONSTA	87.2	100.7	120.6	(13.5)	(19.9)
BYDUREON	45.6	46.1	36.6	(0.5)	9.5
Other	56.0	55.3	80.6	0.7	(25.3)
	<u>487.2</u>	<u>456.5</u>	<u>446.5</u>	<u>30.7</u>	<u>10.0</u>
Divested products:					
RITALIN LA & FOCALIN XR	—	9.3	40.7	(9.3)	(31.4)
Other	—	9.5	29.7	(9.5)	(20.2)
	<u>—</u>	<u>18.8</u>	<u>70.4</u>	<u>(18.8)</u>	<u>(51.6)</u>
Manufacturing and royalty revenues	<u>\$ 487.2</u>	<u>\$ 475.3</u>	<u>\$ 516.9</u>	<u>\$ 11.9</u>	<u>\$ (41.6)</u>

Under our INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA agreement with Janssen, we earn royalties on end-market net sales of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA of 5% up to the first \$250 million in calendar-year sales, 7% on calendar-year sales of between \$250 million and \$500 million, and 9% on calendar-year sales exceeding \$500 million. The royalty rate resets at the beginning of each calendar-year to 5%. Under our RISPERDAL CONSTA supply and license agreements with Janssen, we earn manufacturing revenues of 7.5% of Janssen's unit net sales price of RISPERDAL CONSTA and royalty revenues of 2.5% of end-market sales.

The increase in INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA royalty revenues in each period was due to an increase in Janssen's end-market sales of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA. Janssen's end-market sales of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA were \$2.2 billion, \$1.8 billion and \$1.6 billion, during the years ended December 31, 2016, 2015 and 2014, respectively. Partially offsetting the increase in INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA end-market sales by Janssen in 2015, as compared to 2014, was an 8% decrease in revenue due to the strengthening of the U.S. dollar in relation to the currencies in which XEPLION/TREVICTA were sold.

The decrease in RISPERDAL CONSTA revenue in each period was primarily due to a decline in Janssen's end-market net sales of RISPERDAL CONSTA. Janssen's end-market net sales of RISPERDAL CONSTA were \$893.0 million, \$970.0 million and \$1,190.0 million, during the years ended December 31, 2016, 2015 and 2014, respectively. The decline in Janssen's end-market net sales led to a decrease in our royalty revenues of 8% in 2016, as compared to 2015, and 18% in 2015, as compared to 2014. Contributing to the decrease in RISPERDAL CONSTA end-market net sales by Janssen in 2015, as compared to 2014, was a 9% decrease in revenue due to the strengthening of the U.S. dollar in relation to the currencies in which RISPERDAL CONSTA was sold.

The manufacturing revenue we earned on shipments of RISPERDAL CONSTA to Janssen also declined by 15% in 2016, as compared to 2015, and by 16% in 2015, as compared to 2014. The decrease in manufacturing revenue in 2016, as compared to 2015, was primarily due to a 13% decrease in the number of units shipped to Janssen and the decrease in manufacturing revenue in 2015, as compared to 2014, was primarily due to a 17% decrease in the number of units shipped to Janssen.

We expect revenues from our long-acting, atypical antipsychotic franchise to continue to grow as INVEGA SUSTENNA/XEPLION grows and INVEGA TRINZA/TREVICTA is launched around the world. A number of companies, including us, are working to develop products to treat schizophrenia and/or bipolar disorder that may

[Table of Contents](#)

compete with INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA. Increased competition may lead to reduced unit sales of INVEGA SUSTENNA/XEPLION, INVEGA TRINZA/TREVICTA and RISPERDAL CONSTA, as well as increasing pricing pressure. The latest of the patents subject to our license agreement with Janssen covering INVEGA SUSTENNA/XEPLION expire in 2019 in the U.S. and 2022 in the EU, and, in certain countries, such as Australia and South Korea, in 2023. The latest of the patents covering INVEGA TRINZA/TREVICTA expire in November 2017 in the U.S. and 2022 in the EU. In addition, the latest of the patents not subject to our license agreement with Janssen covering INVEGA SUSTENNA/XEPLION expires in 2031 in the U.S. RISPERDAL CONSTA is covered by a patent until 2021 in the EU and 2023 in the U.S. As such, we do not anticipate generic versions in the near-term for any of these products.

Under our AMPYRA supply and license agreements with Acorda, we earn manufacturing and royalty revenues when AMPYRA is shipped to Acorda, either by us or a third-party manufacturer. Under our FAMPYRA supply and license agreements with Biogen, we earn manufacturing revenue when FAMPYRA is shipped to Biogen, and we earn royalties upon end-market net sales of FAMPYRA by Biogen.

The increase in AMPYRA/FAMPYRA revenues in 2016, as compared to 2015, was due to a 10% increase in manufacturing revenue and an 8% increase in royalty revenue. The increase in manufacturing revenue was primarily due to a 12% increase in product shipped to Acorda and Biogen. The increase in royalty revenue was due to an increase in the end-market net sales of AMPYRA/FAMPYRA as end-market net sales of the products were \$573.9 million, \$520.7 million and \$446.4 million in the years ended December 31, 2016, 2015 and 2014, respectively.

The increase in AMPYRA/FAMPYRA revenues in 2015, as compared to 2014, was due to a 31% increase in manufacturing revenue and a 28% increase in royalty revenue. The increase in manufacturing revenue was primarily due to a 20% increase in product shipped to Acorda and Biogen and an 8% increase in price.

We expect AMPYRA/FAMPYRA sales to continue to grow as Acorda continues to penetrate the U.S. market with AMPYRA and Biogen continues to launch FAMPYRA in the rest of the world. AMPYRA is covered by a patent until 2027 in the U.S. and FAMPYRA is covered by a patent until 2025 in the EU. AMPYRA is subject to an IPR proceeding and Paragraph IV litigation. For a discussion of legal proceedings related to the patents covering AMPYRA, see “Item 3—Legal Proceedings.” A number of companies, including us, are working to develop products to treat multiple sclerosis that may compete with AMPYRA/FAMPYRA, which may negatively impact future sales of the products.

Under our BYDUREON license agreement with AstraZeneca, we earned royalties on end-market net sales of BYDUREON of 8% in the years ended December 31, 2016, 2015 and 2014. The change in BYDUREON royalty revenues in each period presented was due to the amount of end-market net sales of BYDUREON. AstraZeneca’s end-market net sales of BYDUREON were \$576.3 million, \$580.0 million and \$457.3 million in 2016, 2015 and 2014, respectively. BYDUREON is covered by a patent until 2026 in the U.S. and until 2024 in the EU, and as such, we do not anticipate any generic versions of this product in the near-term.

Included in other manufacturing and royalty revenues in 2015 and 2014 was \$9.5 million and \$29.7 million, respectively, of revenue associated with certain products manufactured at our divested manufacturing facility in Gainesville, GA, including VERELAN, ZOHYDRO ER, and BIDIL, which were sold in April 2015. RITALIN LA and FOCALIN XR were also manufactured at our Gainesville facility.

Certain of our manufacturing and royalty revenues are earned in countries outside of the U.S. and are denominated in currencies in which the product is sold. See “Item 7A. Quantitative and Qualitative Disclosures about Market Risk” for information on currency exchange rate risk related to our revenues.

[Table of Contents](#)

Product Sales, Net

Our product sales, net consist of sales of VIVITROL and, following its approval by the FDA in October 2015, ARISTADA in the U.S., primarily to wholesalers, specialty distributors and specialty pharmacies. The following table presents the adjustments deducted from product sales, gross to arrive at product sales, net for sales of VIVITROL and ARISTADA in the U.S. during the years ended December 31, 2016, 2015 and 2014:

(In millions)	Year Ended December 31,					
	2016	% of Sales	2015	% of Sales	2014	% of Sales
Product sales, gross	\$ 444.6	100.0 %	\$ 227.0	100.0 %	\$ 137.1	100.0 %
Adjustments to product sales, gross:						
Medicaid rebates	(94.2)	(21.2)%	(32.2)	(14.2)%	(11.1)	(8.1)%
Product discounts	(35.1)	(7.9)%	(13.2)	(5.8)%	(7.2)	(5.3)%
Chargebacks	(31.5)	(7.1)%	(17.8)	(7.8)%	(9.3)	(6.8)%
Co-pay assistance	(8.5)	(1.9)%	(6.5)	(2.9)%	(6.1)	(4.4)%
Other	(19.2)	(4.3)%	(8.3)	(3.7)%	(9.2)	(6.7)%
Total adjustments	(188.5)	(42.4)%	(78.0)	(34.4)%	(42.9)	(31.3)%
Product sales, net	\$ 256.1	57.6 %	\$ 149.0	65.6 %	\$ 94.2	68.7 %

The increase in product sales, gross in 2016, as compared to 2015, was primarily due to a 70% increase in VIVITROL gross sales, and a full year of ARISTADA sales. The increase in VIVITROL gross sales was primarily due to a 66% increase in the number of VIVITROL units sold and a 3% increase in the price of VIVITROL. The 66% increase in product sales, gross in 2015, as compared to 2014, was due to a 61% increase in VIVITROL gross sales and the launch of ARISTADA in October 2015. The 61% increase in VIVITROL gross sales was primarily due to a 46% increase in the number of VIVITROL units sold and an 11% increase in the price of VIVITROL.

The increase in Medicaid rebates as a percentage of sales in 2016, as compared to 2015, and in 2015, as compared to 2014, was primarily due to an increase in the amount of VIVITROL sold under the Medicaid Drug Rebate Program.

Our product sales, net for VIVITROL and ARISTADA in 2016 were \$209.0 million and \$47.1 million, respectively, as compared to \$144.4 million and \$4.6 million in 2015, respectively. We expect our product sales, net will continue to grow as VIVITROL continues to penetrate the opioid dependence market in the U.S., and as ARISTADA sales increase following its approval by the FDA in October 2015.

A number of companies, including us, are working to develop products to treat addiction, including alcohol and opioid dependence that may compete with, and negatively impact future sales of VIVITROL. Increased competition and increased pricing pressure may lead to reduced unit sales of VIVITROL. VIVITROL is covered by a patent that will expire in the U.S. in 2029 and in Europe in 2021 and, as such, we do not anticipate any generic versions of this product in the near-term. A number of companies, including us, currently market and/or are working to develop products to treat schizophrenia that may compete with and negatively impact future sales of ARISTADA. Increased competition and increased pricing pressure may lead to reduced unit sales of ARISTADA. ARISTADA is covered by a patent that will expire in the U.S. in 2035, and, as such, we do not anticipate any generic versions of this product in the near-term.

Costs and Expenses

Cost of Goods Manufactured and Sold

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016 - 2015	2015 - 2014
Cost of goods manufactured and sold	\$ 132.1	\$ 139.0	\$ 175.8	\$ 6.9	\$ 36.8

The decrease in cost of goods manufactured and sold in 2016, as compared to 2015, was primarily due to the Gainesville Transaction. During the years ended December 31, 2015 and 2014, the Gainesville facility had cost of goods manufactured of \$10.2 million and \$37.1 million, respectively. In addition, cost of goods manufactured at our Athlone facility decreased by \$8.2 million, which was primarily due to a reduction in manufacturing activity due to the restructuring program initiated in April 2013. These decreases were partially offset by an \$11.4 million increase in cost of goods manufactured and sold related to products produced at our Wilmington, Ohio manufacturing facility, which was primarily due to the increase in VIVITROL sales and a full year of ARISTADA sales.

[Table of Contents](#)

The decrease in cost of goods manufactured and sold in 2015, as compared to 2014, was primarily due to the Gainesville Transaction. Also, in connection with the restructuring plan related to our Athlone, Ireland manufacturing facility initiated in April 2013, our cost of goods manufactured at our Athlone facility decreased by \$14.3 million, with the most significant savings being occupancy and depreciation expense of \$9.2 million and employee-related expenses of \$4.1 million. These decreases were partially offset by an increase in cost of goods manufactured and sold related to our Ohio manufacturing facility of \$4.4 million, which was primarily due to the increase in sales of VIVITROL and the launch of ARISTADA in October 2015, partially offset by a decrease in cost of goods manufactured for RISPERDAL CONSTA due to a decrease in the number of units shipped to Janssen.

Research and Development Expenses

For each of our R&D programs, we incur both external and internal expenses. External R&D expenses include costs related to clinical and non-clinical activities performed by CROs, consulting fees, laboratory services, purchases of drug product materials and third-party manufacturing development costs. Internal R&D expenses include employee-related expenses, occupancy costs, depreciation and general overhead. We track external R&D expenses for each of our development programs; however, internal R&D expenses are not tracked by individual program as they benefit multiple programs or our technologies in general.

The following table sets forth our external R&D expenses relating to our individual Key Development Programs and all other development programs, and our internal R&D expenses by the nature of such expenses:

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016 - 2015	2015 - 2014
External R&D Expenses:					
Key development programs:					
ALKS 3831	\$ 71.0	\$ 26.1	\$ 28.8	\$ (44.9)	\$ 2.7
ALKS 5461	46.2	108.4	77.1	62.2	(31.3)
ARISTADA and ARISTADA line extensions	36.3	38.1	30.9	1.8	(7.2)
ALKS 8700	26.9	17.9	10.1	(9.0)	(7.8)
ALKS 6428	16.3	7.0	—	(9.3)	(7.0)
Other external R&D expenses	47.2	19.5	25.0	(27.7)	5.5
Total external R&D expenses	243.9	217.0	171.9	(26.9)	(45.1)
Internal R&D expenses:					
Employee-related	110.1	97.5	75.7	(12.6)	(21.8)
Occupancy	9.0	8.1	6.9	(0.9)	(1.2)
Depreciation	7.9	6.2	8.2	(1.7)	2.0
Other	16.2	15.6	9.3	(0.6)	(6.3)
Total internal R&D expenses	143.2	127.4	100.1	(15.8)	(27.3)
Research and development expenses	\$ 387.1	\$ 344.4	\$ 272.0	\$ (42.7)	\$ (72.4)

These amounts are not necessarily predictive of future R&D expenses. In an effort to allocate our spending most effectively, we continually evaluate the products under development, based on the performance of such products in pre-clinical and/or clinical trials, our expectations regarding the likelihood of their regulatory approval and our view of their commercial viability, among other factors.

The increase in the expenses related to ALKS 3831 in 2016, as compared to 2015, was primarily due to the ENLIGHTEN-1 and ENLIGHTEN-2 pivotal trials, which were initiated in December 2015 and February 2016, respectively. The decrease in expenses related to ALKS 5461 in 2016, as compared to 2015, and the increase in expenses in 2015, as compared to 2014, were primarily due to the timing of the three core phase 3 studies related to the program. We announced the results of the FORWARD-3 and FORWARD-4 studies in January 2016 and topline results from FORWARD-5 were announced in October 2016. The ALKS 5461 pivotal clinical development program was initiated in March 2014. The decrease in expenses related to ARISTADA and ARISTADA line extensions in 2016, as compared to 2015, and the increase in 2015, as compared to 2014, were primarily due to the timing of the phase 1 clinical study of extended dosing intervals of aripiprazole lauroxil in patients with schizophrenia. ARISTADA was approved by the FDA in October 2015 following an NDA filing in August 2014, based on the positive phase 3 results announced in April 2014. Also, in December 2014, we initiated a phase 1 clinical study of extended dosing intervals of ARISTADA in patients with schizophrenia. Based on the results of this study, we submitted a sNDA to the FDA in August 2016. The increase in expenses related to ALKS 6428 was primarily due to the initiation of the

[Table of Contents](#)

phase 3 study evaluating the safety, tolerability and efficacy of ALKS 6428 in patients with opioid dependence in September 2015. The increase in expenses related to ALKS 8700 in each of the three years presented was primarily due to the timing of study activity. We initiated the two-year, multicenter, open-label phase 3 study designed to assess the safety of ALKS 8700 in December 2015, following the completion of a phase 1 study of ALKS 8700 initiated in 2014.

The increase in other external R&D expenses was primarily due to a \$10.0 million non-refundable, upfront payment made as partial consideration of a grant to us of rights and licenses pursuant to a collaboration and license option agreement with Reser Therapeutics, Inc., as well as an increase in external expenses related to our early-stage, pre-clinical development activity.

For additional detail on the status of our key development programs, refer to “Key Development Programs” within “Item 1—Business” in this Annual Report. Expenses incurred under the ALKS 7119 and ALKS 4230 development programs in 2016, 2015 and 2014 were not material.

The increase in employee-related expenses was primarily due to an increase in headcount. Our R&D-related headcount increased by 20% in 2016, as compared to 2015, and by 20% in 2015 as compared to 2014, respectively.

Selling, General and Administrative Expenses

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016 - 2015	2015 - 2014
Selling, general and administrative expense	\$ 374.1	\$ 311.6	\$ 199.9	\$ (62.5)	\$ (111.7)

The increase in selling, general and administrative (“SG&A”) expense in 2016, as compared to 2015, was primarily due to a \$28.9 million increase in employee-related expenses and a \$27.1 million increase in marketing and professional services expenses. The increase in employee-related expenses was primarily due to a 15% increase in our SG&A-related headcount during 2016. The increase in marketing and professional services expenses was primarily due to additional brand investments in both VIVITROL and ARISTADA in 2016, as well as an increase in patient access support services, such as reimbursement and transition assistance, for both of these products.

The increase in SG&A expense in 2015, as compared to 2014, was primarily due to the preparation of the launch of ARISTADA in October 2015, which consisted of an \$82.9 million increase in employee-related expenses and a \$24.3 million increase in marketing and professional services expenses. The increase in employee-related expenses was primarily due to a 92% increase in SG&A-related headcount and a \$26.4 million increase in share-based compensation expense, due to the increase in the amount of equity awards granted, the vesting of performance-based restricted stock units in October 2015 that were tied to the approval of ARISTADA, and recent equity grants were awarded with higher grant-date fair values than older grants due to the increase in our stock price. The increase in marketing and professional services expenses was primarily due to pre-launch activities for ARISTADA.

Amortization of Acquired Intangible Assets

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016 - 2015	2015 - 2014
Amortization of acquired intangible assets	\$ 61.0	\$ 57.7	\$ 58.2	\$ (3.3)	\$ 0.5

Our amortizable intangible assets consist of technology and collaborative arrangements acquired as part of the acquisition of EDT in September 2011, which are being amortized over 12 to 13 years. We amortize our amortizable intangible assets using the economic use method, which reflects the pattern that the economic benefits of the intangible assets are consumed as revenue is generated from the underlying patent or contract.

As part of the Gainesville Transaction, we sold certain of the intellectual property we acquired from EDT that had an original cost of \$57.8 million. Based on our most recent analysis, amortization of intangible assets included within our consolidated balance sheet at December 31, 2016 is expected to be approximately \$60.0 million, \$60.0 million, \$55.0 million, \$50.0 million and \$45.0 million in the years ending December 31, 2017 through 2021, respectively.

[Table of Contents](#)

Other (Expense) Income, Net

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	Favorable/(Unfavorable) 2016 - 2015	2015 - 2014
Interest income	\$ 3.8	\$ 3.3	\$ 2.0	\$ 0.5	\$ 1.3
Interest expense	(14.9)	(13.2)	(13.4)	(1.7)	0.2
Change in the fair value of contingent consideration	7.9	(2.3)	—	10.2	(2.3)
Gain on Gainesville Transaction	—	9.6	—	(9.6)	9.6
Gain on sale of property, plant and equipment	—	2.9	41.9	(2.9)	(39.0)
Gain on sale of investment in Civitas Therapeutics, Inc.	—	—	29.6	—	(29.6)
Gain on sale of investment in Acceleron Pharma Inc.	—	—	15.3	—	(15.3)
Other (expense) income, net	(2.5)	—	(2.3)	(2.5)	2.3
Total other (expense) income, net	\$ (5.7)	\$ 0.3	\$ 73.1	\$ (6.0)	\$ (72.8)

The increase in interest expense in 2016, as compared to 2015, was due to the amendment of Term Loan B-1 in October 2016, pursuant to which, among other things, the due date of Term Loan B-1 was extended from September 25, 2019 to September 25, 2021 (the “Refinancing”). The interest rate under Term Loan B-1 was unchanged and remains at LIBOR plus 2.75% with a LIBOR floor of 0.75%. We incurred a charge of \$2.1 million in connection with the Refinancing, which is included in interest expense.

In April 2015, we completed the Gainesville Transaction and received \$54.0 million in cash, \$2.1 million in warrants to acquire Recro common stock and \$57.6 million in contingent consideration tied to low double digit royalties on net sales of the IV/IM and parenteral forms of Meloxicam and any other product with the same active ingredient as Meloxicam IV/IM that is discovered or identified using certain of our intellectual property to which Recro was provided a right of use, through license or transfer, pursuant to the Gainesville Transaction (the “Meloxicam Products”), and up to \$120.0 million in milestone payments upon the achievement of certain regulatory and sales milestones related to the Meloxicam Products. We determined the fair value of the contingent consideration through three valuation approaches, which are described in greater detail in *Critical Accounting Estimates, Contingent Consideration*, later in “Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Annual Report. At each reporting date, we update our assessment of the fair value of this contingent consideration and reflect any changes to the fair value within the consolidated statements of operations and comprehensive loss, and will continue to do so until the milestones and/or royalties included in the contingent consideration have been settled.

During the years ended December 31, 2016 and 2015, we determined that the fair value of the contingent consideration increased by \$7.9 million and decreased by \$2.3 million, respectively. The increase in contingent consideration in 2016 was primarily due to the change in the structure of the development milestones, which is discussed in greater detail in *Critical Accounting Estimates, Contingent Consideration*, later in “Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Annual Report and a shorter time to payment on the milestones and royalties included in the contingent consideration. The decrease in contingent consideration recorded in 2015 was primarily due to a delay in the timing of future clinical events.

Gain on the sale of property, plant and equipment in 2014 consisted of the following two transactions: in April 2014, we sold certain of our land, buildings and equipment at our Athlone, Ireland facility that had a carrying value of \$2.2 million, in exchange for \$17.5 million and recorded a gain of \$12.3 million, as \$3.0 million of the sale proceeds were placed in escrow pending the completion of certain additional services we were obligated to perform, which were completed in December 2015. In October 2014, we sold certain of our commercial-scale pulmonary manufacturing equipment, which had a carrying value of \$0.4 million, to Acorda in exchange for \$30.0 million.

In October 2014, in connection with the acquisition of Civitas by Acorda, we received \$27.2 million and \$2.4 million was placed in escrow, for our approximate 6% equity interest in Civitas. We received the amounts held in escrow in October 2015. During the second quarter of 2014, we sold our investment in Acceleron Pharma Inc., which consisted of equity securities, for a gain of \$15.3 million.

[Table of Contents](#)

(Benefit) Provision for Income Taxes

(In millions)	Year Ended December 31,			Change	
	2016	2015	2014	2016 - 2015	2015 - 2014
(Benefit) provision for income taxes	\$ (5.9)	\$ 3.2	\$ 16.0	\$ 9.1	\$ 12.8

The income tax benefit for the year ended December 31, 2016 was primarily due to U.S. federal research credits. The favorable change in the income taxes in the year ended December 31, 2016, as compared to 2015, was due to a reduction in income earned in the U.S. The income tax provision for the years ended December 31, 2015 and 2014 was primarily due to U.S. federal and state taxes on income earned in the U.S.

No provision for income tax has been provided on undistributed earnings of our foreign subsidiaries because such earnings may be repatriated to Ireland without incurring any tax liability. Cumulative unremitted earnings of overseas subsidiaries totaled approximately \$133.7 million at December 31, 2016.

At December 31, 2016, we maintained a valuation allowance of \$4.8 million against certain U.S. state deferred tax assets and \$137.1 million against certain Irish deferred tax assets as we determined that it is more-likely-than-not that these net deferred tax assets will not be realized. If we demonstrate consistent profitability in the future, the evaluation of the recoverability of these deferred tax assets may change and the remaining valuation allowance may be released in part or in whole.

As of December 31, 2016, we had \$1.1 billion of Irish NOL carryforwards, \$8.0 million of U.S. federal NOL carryforwards and \$7.4 million of U.S. state NOL carryforwards, \$53.1 million of federal R&D credits, \$9.0 million of alternative minimum tax credits and \$9.4 million of U.S. state tax credits which either expire on various dates through 2036 or can be carried forward indefinitely. These loss carryforwards and credits are available to reduce certain future Irish and U.S. taxable income and tax, respectively, if any. These loss carryforwards are subject to review and possible adjustment by the appropriate taxing authorities. These loss carryforwards, which may be utilized in any future period, may be subject to limitations based upon changes in the ownership of our ordinary shares. We have performed a review of ownership changes in accordance with the Code and have determined that it is more-likely-than-not that, as a result of the Business Combination, we experienced a change of ownership. As a consequence, a portion of our U.S. federal NOL carryforwards and tax credit carryforwards are subject to an annual limitation of \$127.0 million.

Liquidity and Capital Resources

Our financial condition is summarized as follows:

(In millions)	December 31, 2016			December 31, 2015		
	U.S.	Ireland	Total	U.S.	Ireland	Total
Cash and cash equivalents	\$ 81.2	\$105.2	\$186.4	\$ 70.8	\$110.3	\$181.1
Investments—short-term	184.4	126.5	310.9	202.4	151.2	353.6
Investments—long-term	60.1	61.8	121.9	129.1	135.0	264.1
Total cash and investments	\$325.7	\$293.5	\$619.2	\$402.3	\$396.5	\$798.8
Outstanding borrowings—current and long-term	\$283.7	\$ —	\$283.7	\$349.9	\$ —	\$349.9

At December 31, 2016, our investments consisted of the following:

(In millions)	Amortized Cost	Gross Unrealized		Estimated Fair Value
		Gains	Losses	
Investments—short-term	\$ 310.9	\$ 0.1	\$ (0.1)	\$ 310.9
Investments—long-term available-for-sale	119.0	—	(0.5)	118.5
Investments—long-term held-to-maturity	3.4	—	—	3.4
Total	\$ 433.3	\$ 0.1	\$ (0.6)	\$ 432.8

Sources and Uses of Cash

We used \$63.8 million and \$40.4 million and generated cash from operations of \$11.1 million during the years ended December 31, 2016, 2015 and 2014, respectively. We expect that our existing cash and investments will be sufficient to finance our anticipated working capital and other cash requirements, such as capital expenditures and

[Table of Contents](#)

principal and interest payments on our long-term debt, for at least the twelve months following the date from which our financial statements were issued. Subject to market conditions, interest rates and other factors, we may pursue opportunities to obtain additional financing in the future, including debt and equity offerings, corporate collaborations, bank borrowings, arrangements relating to assets or other financing methods or structures.

Our investment objectives are, first, to preserve liquidity and conserve capital and, second, to generate investment income. We mitigate credit risk in our cash reserves by maintaining a well-diversified portfolio that limits the amount of investment exposure as to institution, maturity and investment type. Our available-for-sale investments consist primarily of short- and long-term U.S. government and agency debt securities and corporate debt securities. We classify available-for-sale investments in an unrealized loss position, which do not mature within 12 months, as long-term investments. We have the intent and ability to hold these investments until recovery, which may be at maturity, and it is more-likely-than-not that we would not be required to sell these securities before recovery of their amortized cost. At December 31, 2016, we performed an analysis of our investments with unrealized losses for impairment and determined that they were temporarily impaired.

Information about our cash flows, by category, is presented in the accompanying consolidated statements of cash flows. The following table summarizes our cash flows for the years ended December 31, 2016, 2015 and 2014:

(In millions)	Year Ended December 31.		
	2016	2015	2014
Cash and cash equivalents, beginning of period	\$ 181.1	\$ 224.1	\$ 167.6
Cash (used in) provided by operating activities	(63.8)	(40.4)	11.1
Cash provided by (used in) investing activities	127.2	(43.5)	(263.4)
Cash (used in) provided by financing activities	(58.1)	40.9	308.8
Cash and cash equivalents, end of period	\$ 186.4	\$ 181.1	\$ 224.1

Operating Activities

The \$23.4 million increase in cash used in operating activities in 2016, as compared to 2015, was primarily due to a \$57.8 million increase in the amount of cash paid to our employees and a \$76.2 million increase in the amount of cash paid to our suppliers, partially offset by a \$98.2 million increase in the amount of cash we collected from our customers. The increase in the amount of cash paid to our employees is primarily due to the increase in our headcount and the increase in the amount of cash paid to our suppliers is due to the increase in R&D and commercial activity, as previously discussed.

The \$51.5 million increase in cash used in operating activities in 2015, as compared to 2014, was primarily due to a \$53.4 million increase in the amount of cash paid to our employees and a \$18.5 million increase in the amount of cash paid to our suppliers, partially offset by a \$10.9 million increase in the amount of cash we collected from our customers. The increase in the amount of cash paid to our employees is primarily due to the increase in our headcount and the increase in the amount of cash paid to our suppliers is due to the increase in R&D and commercial activity, as previously discussed.

Investing Activities

Cash provided by our investing activities increased by \$170.7 million in 2016, as compared to 2015, which was primarily due to the increase in net sales of investments of \$226.8 million, which were primarily used to fund operations in 2016. The increase in cash provided by our investing activities was partially offset by the \$50.0 million in cash we received in 2015 from the Gainesville Transaction, as previously discussed. Cash used in investing activities decreased by \$219.9 million in 2015, as compared to 2014, which was primarily due to a decrease in the net purchases of investments of \$260.2 million. The net purchases of investments in 2014 was greater than that in 2015 due to certain significant transactions occurring in 2014 including: the receipt of \$250.0 million in gross proceeds from the sale of 5.9 million of our ordinary shares to the Invesco Funds in January 2014; the receipt of \$17.5 million from the sale of certain of our land, buildings and equipment located at our Athlone, Ireland facility in April 2014; and the receipt of \$57.2 million from Civitas, \$30.0 million of which was from the sale of certain commercial-scale pulmonary manufacturing equipment and \$27.2 million for our approximate 6% equity interest in Civitas when they were acquired by Acorda in October 2015. We used the majority of the proceeds from these transactions to purchase available-for-sale investments.

[Table of Contents](#)

In 2016, our capital spending decreased slightly when compared to 2015 and increased in 2015 when compared to 2014. These fluctuations were primarily due to the timing of our capital projects, primarily for the construction of facilities and equipment at our Wilmington, Ohio location for the manufacture of products currently in development and existing proprietary products. Amounts included as construction in progress at December 31, 2016 primarily include capital expenditures at our manufacturing facility in Wilmington, Ohio. We expect to spend approximately \$75.0 million during the year ended December 31, 2017 for capital expenditures. We continue to evaluate our manufacturing capacity based on expectations of demand for our products and will continue to record such amounts within construction in progress until such time as the underlying assets are placed into service, or we determine we have sufficient existing capacity and the assets are no longer required, at which time we would recognize an impairment charge. We continue to periodically evaluate whether facts and circumstances indicate that the carrying value of these long-lived assets to be held and used may not be recoverable.

Financing Activities

The increase in cash used in financing activities in 2016, as compared to 2015, was primarily due to a \$60.9 million principal payment for a term loan which matured in September 2016, which had an original principal balance of \$75.0 million, bore interest at LIBOR plus 2.75%, with no LIBOR floor. In addition, there was a \$12.2 million decrease in cash received from employee stock option exercises. The decrease in cash provided by financing activities in 2015, as compared to 2014, was primarily due to the Invesco transaction, as noted above. We also spent \$13.1 million more in employee taxes related to the net share settlement of equity awards in 2015, as compared to 2014, but received \$3.8 million less in proceeds from the exercise of stock options by our employees.

Borrowings

At December 31, 2016, our borrowings consisted of \$287.3 million outstanding under Term Loan B-1. Please refer to Note 10, *Long-Term Debt*, in the accompanying “Notes to Consolidated Financial Statements” for a discussion of our outstanding term loans.

Contractual Obligations

The following table summarizes our obligations to make future payments under our current contracts at December 31, 2016:

Contractual Obligations (In thousands)	Total	Less Than One Year (2017)	One to Three Years (2018 - 2019)	Three to Five Years (2020 - 2021)	More than Five Years (After 2021)
Term Loan B-1—Principal	\$ 287,250	\$ 3,000	\$ 6,000	\$ 278,250	\$ —
Term Loan B-1—Interest	56,333	10,014	19,714	26,605	—
Operating lease obligations	24,817	6,055	12,367	5,729	666
Purchase obligations	431,950	431,950	—	—	—
Total contractual cash obligations	\$ 800,350	\$ 451,019	\$ 38,081	\$ 310,584	\$ 666

As interest on Term Loan B-1 is based on a one, three or six month LIBOR rate of our choosing, we assumed LIBOR to be 0.75%, which is the LIBOR rate floor under the terms of Term Loan B-1 as the one-month LIBOR rate at December 31, 2016 was 0.72%. This table excludes any liabilities pertaining to uncertain tax positions as we cannot make a reliable estimate of the period of cash settlement with the respective taxing authorities.

At December 31, 2016, we had \$4.7 million of net liabilities associated with uncertain tax positions. We do not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next 12 months.

In September 2006, we entered into a license agreement with the Rensselaer Polytechnic Institute (“RPI”), which granted us exclusive rights to a family of opioid receptor compounds discovered at RPI. Under the terms of the agreement, RPI granted us an exclusive worldwide license to certain patents and patent applications relating to its compounds designed to modulate opioid receptors. We are responsible for the continued research and development of any resulting product candidates. We are obligated to pay annual fees of up to \$0.2 million, and tiered royalty payments of between 1% and 4% of annual net sales in the event any products developed under the agreement are commercialized. In addition, we are obligated to make milestone payments in the aggregate of up to \$7.0 million upon certain

[Table of Contents](#)

agreed-upon development events. All amounts paid to RPI to date under this license agreement have been expensed and are included in R&D expenses.

Due to the contingent nature of the payments under the RPI arrangement, we cannot predict the amount or period in which royalty, milestone and other payments may be made and accordingly they are not included in the table of contractual obligations.

Off-Balance Sheet Arrangements

At December 31, 2016, we were not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Estimates

Our consolidated financial statements are prepared in accordance with GAAP. In connection with the preparation of our financial statements, we are required to make assumptions and estimates about future events, and apply judgments on historical experience, current trends and other factors that management believes to be relevant at the time our consolidated financial statements are prepared. On a regular basis, we review the accounting policies, assumptions, estimates and judgments to ensure that our financial statements are presented fairly and in accordance with GAAP. However, because future events and their effects cannot be determined with certainty, actual results could differ from our assumptions and estimates, and such differences could be material.

Our significant accounting policies are discussed in Note 2, *Summary of Significant Accounting Policies*, of the “Notes to Consolidated Financial Statements.” We believe that the following accounting estimates are the most critical to aid in fully understanding and evaluating our reported financial results, and they require our most difficult, subjective or complex judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain. We have reviewed these critical accounting estimates and related disclosures with the Audit and Risk Committee of our Board of Directors.

Manufacturing and Royalty Revenue

Our manufacturing and royalty revenues are earned under the terms of collaboration agreements with pharmaceutical companies, the most significant of which include Janssen for INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA, as well as RISPERDAL CONSTA, Acorda for AMPYRA/FAMPYRA and AstraZeneca for BYDUREON. Manufacturing revenues are recognized when persuasive evidence of an arrangement exists, delivery has occurred and title to the product and associated risk of loss has passed to the customer, the sales price is fixed or determinable and collectability is reasonably assured.

The sales price for certain of our manufacturing revenues is based on the end-market sales price earned by our collaborative partners. As the end-market sale occurs after we have shipped our product and the risk of loss has passed to our collaborative partner, we estimate the sales price for our product based on information supplied to us by our collaborative partners, our historical transaction experience and other third-party data. Differences between the actual manufacturing revenues and estimated manufacturing revenues are reconciled and adjusted for in the period in which they become known, which is generally within the quarter. The difference between actual and estimated manufacturing revenues has not been material.

Royalty revenues are related to the sale of products by our collaborative partners that incorporate our technologies. Royalties, with the exception of AMPYRA, are earned under the terms of a license agreement in the period the products are sold by our collaborative partner, and the royalty earned can be reliably measured and collectability is reasonably assured. Sales information is provided to us by our collaborative partners and may require estimates to be made. Differences between actual royalty revenues and estimated royalty revenues are reconciled and adjusted for in the period in which they become known, which is generally within the quarter. The difference between actual and estimated royalty revenues has not been material. Royalties on AMPYRA are earned in the period product is shipped to Acorda. We also earn royalties on shipments of AMPYRA to Acorda manufactured by third-party manufacturers.

[Table of Contents](#)

Product Sales, Net

We recognize revenue from product sales of VIVITROL and ARISTADA when persuasive evidence of an arrangement exists, and title to the product and associated risk of loss has passed to the customer, the sales price is fixed or determinable and collectability is reasonably assured. We sell VIVITROL and ARISTADA to pharmaceutical wholesalers, specialty distributors and specialty pharmacies.

Product sales are recorded net of sales reserves and allowances. Sales of many pharmaceutical products in the U.S. are subject to increased pricing pressure from managed care groups, institutions, government agencies and other groups seeking discounts. We and other pharmaceutical and biotechnology companies selling products in the U.S. market are required to provide statutorily defined rebates and discounts to various U.S. government and state agencies in order to participate in the Medicaid program and other government-funded programs. The sensitivity of our estimates can vary by program and type of customer. Estimates associated with Medicaid and other U.S. government allowances may become subject to adjustment in a subsequent period. We record product sales net of the following significant categories of product sales allowances:

- *Medicaid Rebates*—we record accruals for rebates to states under the Medicaid Drug Rebate Program as a reduction of sales when the product is shipped into the distribution channel. We rebate individual states for all eligible units purchased under the Medicaid program based on a rebate per unit calculation, which is based on our Average Manufacturer Prices. We estimate expected unit sales and rebates per unit under the Medicaid program and adjust our rebate estimates based on actual unit sales and rebates per unit. To date, actual Medicaid rebates have not differed materially from our estimates;
- *Chargebacks*—wholesaler and specialty pharmacy chargebacks are discounts that occur when contracted customers purchase directly from an intermediary wholesale purchaser. Contracted customers, which consist primarily of federal government agencies purchasing under the Federal Supply Schedule, generally purchase the product at its contracted price, plus a mark-up from the wholesaler. The wholesaler, in-turn, charges back to us the difference between the price initially paid by the wholesaler and the contracted price paid to the wholesaler by the customer. The allowance for wholesaler chargebacks is based on actual and expected utilization of these programs. Wholesaler chargebacks could exceed historical experience and our estimates of future participation in these programs. To date, actual wholesaler chargebacks have not differed materially from our estimates;
- *Product Discounts*—cash consideration, including sales incentives, given by us under distribution service agreements with a number of wholesaler, distributor and specialty pharmacy customers that provide them with the opportunity to earn discounts in exchange for the performance of certain services. To date, actual product discounts have not differed materially from our estimates;
- *Co-pay Assistance*—the Company has a program whereby a patient can receive monetary assistance each month toward their product co-payment, co-insurance or deductible, provided the patient meets certain eligibility criteria. Reserves are recorded upon the product sale. To date, actual co-pay assistance has not differed materially from the Company's estimates; and
- *Product Returns*—we record an estimate for product returns at the time our customer takes title to our product. We estimate the liability based on our historical return levels and specifically identified anticipated returns due to known business conditions and product expiry dates. Once product is returned, it is destroyed. At December 31, 2016, our product return reserve was estimated to be approximately 1.6% of our VIVITROL product sales and 1.5% of our ARISTADA product sales.

[Table of Contents](#)

Our provisions for sales and allowances reduced gross product sales as follows:

(In millions)	Medicaid Rebates	Chargebacks	Product Discounts	Co-Pay Assistance	Product Returns	Other	Total
Balance, December 31, 2014	\$ 3.7	\$ 0.1	\$ 0.9	\$ —	\$ 5.5	\$ 1.9	\$ 12.1
Provision:							
Current period	31.4	17.8	13.2	7.2	3.3	6.1	79.0
Prior period	0.8	—	—	(0.7)	(1.1)	—	(1.0)
Total	32.2	17.8	13.2	6.5	2.2	6.1	78.0
Actual:							
Current period	(14.2)	(17.3)	(10.7)	(6.7)	(0.9)	(4.4)	(54.2)
Prior period	(4.5)	—	(0.5)	—	(0.1)	(0.2)	(5.3)
Total	(18.7)	(17.3)	(11.2)	(6.7)	(1.0)	(4.6)	(59.5)
Balance, December 31, 2015	\$ 17.2	\$ 0.6	\$ 2.9	\$ (0.2)	\$ 6.7	\$ 3.4	\$ 30.6
Provision:							
Current period	92.1	31.5	35.3	9.2	7.1	12.1	187.3
Prior period	2.1	—	(0.2)	(0.7)	—	—	1.2
Total	94.2	31.5	35.1	8.5	7.1	12.1	188.5
Actual:							
Current period	(48.7)	(30.6)	(30.6)	(8.9)	(1.0)	(10.8)	(130.6)
Prior period	(18.9)	(0.4)	(1.8)	—	0.7	(0.9)	(21.3)
Total	(67.6)	(31.0)	(32.4)	(8.9)	(0.3)	(11.7)	(151.9)
Balance, December 31, 2016	\$ 43.8	\$ 1.1	\$ 5.6	\$ (0.6)	\$ 13.5	\$ 3.8	\$ 67.2

Investments

We hold investments in U.S. government and agency obligations, debt securities issued by foreign agencies and backed by foreign governments and corporate debt securities. In accordance with the accounting standard for fair value measurements, we have classified our financial assets as Level 1, 2 or 3 within the fair value hierarchy. Fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets that we have the ability to access. Fair values determined by Level 2 inputs utilize data points that are observable such as quoted prices, interest rates and yield curves. Fair values determined by Level 3 inputs utilize unobservable data points for the asset.

Substantially all of our investments are classified as “available-for-sale” and are recorded at their estimated fair value. The valuation of our available-for-sale securities for purposes of determining the amount of gains and losses is based on the specific identification method. Our held-to-maturity investments are restricted investments held as collateral under certain letters of credit related to our lease arrangements and are recorded at amortized cost.

The earnings on our investment portfolio may be adversely affected by changes in interest rates, credit ratings, collateral value, the overall strength of credit markets and other factors that may result in other-than-temporary declines in the value of the securities. On a quarterly basis, we review the fair market value of our investments in comparison to amortized cost. If the fair market value of a security is less than its carrying value, we perform an analysis to assess whether we intend to sell or whether we would more-likely-than-not be required to sell the security before the expected recovery of the amortized cost basis. Where we intend to sell a security, or may be required to do so, the security’s decline in fair value is deemed to be other-than-temporary, and the full amount of the unrealized loss is recorded within earnings as an impairment loss. Regardless of our intent to sell a security, we perform additional analysis on all securities with unrealized losses to evaluate losses associated with the creditworthiness of the security. Credit losses are identified where we do not expect to receive cash flows sufficient to recover the amortized cost basis of a security.

For equity securities, when assessing whether a decline in fair value below our cost basis is other-than-temporary, we consider the fair market value of the security, the duration of the security’s decline and the financial condition of the issuer. We then consider our intent and ability to hold the equity security for a period of time sufficient to recover our carrying value. Where we have determined that we lack the intent and ability to hold an equity security to its expected recovery, the security’s decline in fair value is deemed to be other-than-temporary and is recorded within earnings as an impairment loss.

[Table of Contents](#)

Share-Based Compensation

We have a share-based compensation plan, which includes incentive stock options, non-qualified stock options and restricted stock units. See Note 2, *Summary of Significant Accounting Policies*, and Note 13, *Share-Based Compensation*, in our “Notes to Consolidated Financial Statements” for a complete discussion of our share-based compensation plans.

The fair value of restricted stock units is equal to the closing price of our shares on the date of grant. The fair value of stock option awards is determined through the use of a Black-Scholes option-pricing model. The Black-Scholes model requires us to estimate certain subjective assumptions. These assumptions include the expected option term, which takes into account both the contractual term of the option and the effect of our employees’ expected exercise and post-vesting termination behavior, expected volatility of our ordinary shares over the option’s expected term, which is developed using both the historical volatility of our ordinary shares and implied volatility from our publicly traded options, the risk-free interest rate over the option’s expected term and an expected annual dividend yield. Due to the differing exercise and post-vesting termination behavior of our employees and non-employee directors, we establish separate Black-Scholes input assumptions for three distinct employee populations: our senior management; our non-employee directors; and all other employees. For the years ended December 31, 2016, 2015 and 2014, the ranges in weighted-average assumptions were as follows:

	Year Ended December 31,		
	2016	2015	2014
Expected option term	5 - 7 years	5 - 7 years	5 - 7 years
Expected stock volatility	39 % - 53 %	38 % - 46 %	39 % - 46 %
Risk-free interest rate	0.95 % - 2.14 %	1.29 % - 2.02 %	1.46 % - 2.24 %
Expected annual dividend yield	—	—	—

In addition to the above, we apply judgment in developing estimates of award forfeitures. For the year ended December 31, 2016, we used an estimated forfeiture rate of zero for our non-employee directors, 2.25% for members of senior management and 6.0% for all other employees.

For all of the assumptions used in valuing stock options and estimating award forfeitures, our historical experience is generally the starting point for developing our assumptions, which may be modified to reflect information available at the time of grant that would indicate that the future is reasonably expected to differ from the past.

Amortization and Impairment of Long-Lived Assets

Long-lived assets, other than goodwill which is separately tested for impairment, are evaluated for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. When evaluating long-lived assets for potential impairment, we first compare the carrying value of the asset to the asset’s estimated future cash flows (undiscounted and without interest charges). If the estimated future cash flows are less than the carrying value of the asset, we calculate an impairment loss. The impairment loss calculation compares the carrying value of the asset to the asset’s estimated fair value, which may be based on estimated future cash flows (discounted and with interest charges). We recognize an impairment loss if the amount of the asset’s carrying value exceeds the asset’s estimated fair value. If we recognize an impairment loss, the adjusted carrying amount of the asset becomes its new cost basis. For a depreciable long-lived asset, the new cost basis will be depreciated over the remaining useful life of that asset.

When reviewing long-lived assets for impairment, we group long-lived assets with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Our impairment loss calculations contain uncertainties because they require management to make assumptions and to apply judgment to estimate future cash flows and asset fair values, including forecasting useful lives of the assets and selecting the discount rate that reflects the risk inherent in future cash flows.

Our amortizable intangible assets include technology and collaborative arrangements that were acquired as part of the Business Combination. These intangible assets are being amortized as revenue is generated from these products, which we refer to as the economic benefit amortization model. This amortization methodology involves calculating a ratio of actual current period sales to total anticipated sales for the life of the product and applying this ratio to the carrying amount of the intangible asset.

In order to determine the pattern in which the economic benefits of our intangible assets are consumed, we estimated the future revenues to be earned under our collaboration agreements and our NanoCrystal and OCR technology-based intangible assets from the date of acquisition to the end of their respective useful lives. The factors used to estimate such future revenues included: (i) our and our collaborative partners' projected future sales of the existing commercial products based on these intangible assets; (ii) our projected future sales of new products based on these intangible assets which we anticipate will be launched commercially; (iii) the patent lives of the technologies underlying such existing and new products; and (iv) our expectations regarding the entry of generic and/or other competing products into the markets for such existing and new products. These factors involve known and unknown risks and uncertainties, many of which are beyond our control and could cause the actual economic benefits of these intangible assets to be materially different from our estimates.

Based on our most recent analysis, amortization of intangible assets included within our consolidated balance sheet at December 31, 2016, is expected to be approximately \$60.0 million, \$60.0 million, \$55.0 million, \$50.0 million and \$45.0 million in the years ending December 31, 2017 through 2021, respectively. Although we believe such available information and assumptions are reasonable, given the inherent risks and uncertainties underlying our expectations regarding such future revenues, there is the potential for our actual results to vary significantly from such expectations. If revenues are projected to change, the related amortization of the intangible asset will change in proportion to the change in revenue.

If there are any indications that the assumptions underlying our most recent analysis would be different than those utilized within our current estimates, our analysis would be updated and may result in a significant change in the anticipated lifetime revenue of the products associated with our amortizable intangible assets. For example, the occurrence of an adverse event could substantially increase the amount of amortization expense associated with our acquired intangible assets as compared to previous periods or our current expectations, which may result in a significant negative impact on our future results of operations.

Goodwill

We evaluate goodwill for impairment for our reporting units annually, as of October 31, and whenever events or changes in circumstances indicate its carrying value may not be recoverable. A reporting unit is an operating segment, as defined by the segment reporting accounting standards, or a component of an operating segment. A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and is reviewed by management. Two or more components of an operating segment may be aggregated and deemed a single reporting unit for goodwill impairment testing purposes if the components have similar economic characteristics. As of December 31, 2016, we have one operating segment and two reporting units. Our goodwill, which solely relates to Business Combination, has been assigned to one reporting unit which consists of the former EDT business.

We have the option to first assess qualitative factors to determine whether it is necessary to perform a two-step impairment test. If we elect this option and determine, as a result of the qualitative assessment, that it is more likely than not that the fair value of our reporting unit is less than its carrying amount, the quantitative two step impairment test is required; otherwise, no further testing is required. Among other relevant events and circumstances that affect the fair value of reporting units, we consider individual factors, such as microeconomic conditions, changes in the industry and the markets in which we operate as well as historical and expected future financial performance. Alternatively, we may elect to not first assess qualitative factors and immediately perform the quantitative two step impairment test.

The first step of the quantitative two-step goodwill impairment test requires us to compare the fair value of the reporting unit to its respective carrying value, which includes goodwill. If the fair value of the reporting unit exceeds its carrying value, the goodwill is not considered impaired. If the carrying value is higher than the fair value, there is an indication that an impairment may exist and the second step is required. In step two, the implied fair value of goodwill is calculated as the excess of the fair value of a reporting unit over the fair values assigned to its assets and liabilities. If the implied fair value of goodwill is less than the carrying value of the reporting unit's goodwill, the difference is recognized as an impairment loss.

At October 31, 2016, we decided to perform the quantitative two-step goodwill impairment test primarily due to the length of time since we had last performed such a test. We worked with a third-party valuation firm and established

[Table of Contents](#)

fair value for the purpose of impairment testing by using an average of the income approach and the market approach. The income approach employs a discounted cash flow model that takes into account: (i) assumptions that market participants would use in their estimates of fair value; (ii) current period actual results; and (iii) budgeted results for future periods that have been vetted by senior management. The discounted cash flow model incorporates the same fundamental pricing concepts used to calculate fair value in an acquisition due diligence process and a discount rate that takes into consideration our estimated cost of capital adjusted for the uncertainty inherent in an acquisition. The market approach employs market multiples for comparable publicly traded companies in the pharmaceutical and biotechnology industries obtained from industry sources, taking into consideration the nature, scope and size of the acquired reporting unit. In the market approach, estimates of fair value are established using an average of both revenue and EBITDA multiples, adjusted for the reporting unit's performance relative to peer companies.

We determined that the fair value of the former EDT business reporting unit was substantially in excess of its respective carrying value and there was no impairment in the value of this asset as of October 31, 2016. A decline in the estimated fair value of a reporting unit could result in goodwill impairment, and a related non-cash impairment charge against earnings, if the estimated fair value for the reporting unit is less than the carrying value of the net assets of the reporting unit, including its goodwill. A large decline in estimated fair value of a reporting unit could result in an adverse effect on our financial condition and results of operations. In order to evaluate the sensitivity of the fair value calculations relating to our goodwill impairment assessment, we applied a hypothetical decrease to the estimated fair value of the former EDT business reporting unit and we determined that a decrease in fair value of approximately 87% would be required before this reporting unit would have a carrying value in excess of its fair value.

Contingent Consideration

We record contingent consideration we receive at fair value on the acquisition date. We estimate the fair value of contingent consideration through valuation models that incorporate probability-adjusted assumptions related to the achievement of milestones and thus likelihood of receiving related payments. We revalue our contingent consideration each reporting period, with changes in the fair value of contingent consideration recognized within the consolidated statements of operations and comprehensive loss. Changes in the fair value of contingent consideration can result from changes to one or multiple inputs, including adjustments to the discount rates, changes in the amount or timing of cash flows, changes in the assumed achievement or timing of any development or sales-based milestones and changes in the assumed probability associated with regulatory approval.

The period over which we discount contingent consideration is based on the current development stage of the product candidates, the specific development plan for that product candidate adjusted for the probability of completing the development step, and the date on which contingent payments would be triggered. In estimating the probability of success, we utilize data regarding similar milestone events from several sources, including industry studies and our own experience. These fair value measurements are based on significant inputs not observable in the market. Significant judgment was employed in determining the appropriateness of these assumptions at the acquisition date and for each subsequent period. Accordingly, changes in assumptions described above could have a material impact on the increase or decrease in the fair value of contingent consideration recorded in any given period.

At December 31, 2016, our contingent consideration relates to consideration received as part of the Gainesville Transaction. The Company is eligible to receive low double-digit royalties on net sales of IV/IM and parenteral forms of Meloxicam and up to \$125.0 million in milestone payments upon the achievement of certain regulatory and sales milestones related to the Meloxicam Products, including, pursuant to the First Amendment to the Purchase Agreement, at Recro's election, either (i) \$10.0 million upon the submission of an NDA filing for the first Meloxicam Product and \$30.0 million upon regulatory approval of an NDA for the first Meloxicam Product or (ii) an aggregate of \$45.0 million upon regulatory approval of an NDA for the first Meloxicam Product.

In accordance with the accounting standard for fair value measurements, our contingent consideration has been classified as a Level 3 asset as its fair value is based on significant inputs not observable in the market. The fair value of the contingent consideration was determined as follows:

- We are entitled to receive either (i) \$10.0 million upon the submission of an NDA filing for the first Meloxicam Product and \$30.0 million upon regulatory approval of an NDA for the first Meloxicam Product or (ii) an aggregate of \$45.0 million upon regulatory approval of an NDA for the first Meloxicam Product. The fair value of the two regulatory milestones were estimated based on applying the likelihood of achieving the regulatory

[Table of Contents](#)

milestones and applying a discount rate from the expected time the milestones occur to the balance sheet date. We expect the regulatory milestone events to occur within the next year and two years, respectively, and used a discount rate of 2.8% and 3.6%, respectively, for each of these events. We then assessed the likelihood of Recro opting to pay us under either scenario (i) or scenario (ii) to arrive at a probability weighted present value for these regulatory milestones;

- We are entitled to receive future royalties on net sales of Meloxicam Products. To estimate the fair value of the future royalties, we assessed the likelihood of a Meloxicam Product being approved for sale and estimated the expected future sales given approval and IP protection. We then discounted these expected payments using a discount rate of 16.0%, which we believe captures a market participant's view of the risk associated with the expected payments; and
- We are entitled to receive payments upon achieving certain sales milestones on future sales of the Meloxicam Product. The sales milestones were determined through the use of a real options approach, where net sales are simulated in a risk-neutral world. To employ this methodology, we used a risk-adjusted expected growth rate based on its assessments of expected growth in net sales of the approved Meloxicam Product, adjusted by an appropriate factor capturing their respective correlation with the market. A resulting expected (probability-weighted) milestone payment was then discounted at a cost of debt plus a risk adjustment, which ranged from 10.6% to 12.3%.

Significant judgment was employed in determining the appropriateness of these assumptions at the acquisition date and for each subsequent period. Accordingly, changes in assumptions described above could have a material impact on the increase or decrease in the fair value of contingent consideration we record in any given period.

Valuation of Deferred Tax Assets

We evaluate the need for deferred tax asset valuation allowances based on a more-likely-than-not standard. The ability to realize deferred tax assets depends on the ability to generate sufficient taxable income within the carryback or carryforward periods provided for in the tax law for each applicable tax jurisdiction. We consider the following possible sources of taxable income when assessing the realization of deferred tax assets:

- future reversals of existing taxable temporary differences;
- future taxable income exclusive of reversing temporary differences and carryforwards;
- taxable income in prior carryback years; and
- tax-planning strategies.

The assessment regarding whether a valuation allowance is required or should be adjusted also considers all available positive and negative evidence factors including, but not limited to:

- nature, frequency and severity of recent losses;
- duration of statutory carryforward periods;
- historical experience with tax attributes expiring unused; and
- near- and medium-term financial outlook.

It is difficult to conclude a valuation allowance is not required when there is significant objective and verifiable negative evidence, such as cumulative losses in recent years. We utilize a rolling three years of actual and current year anticipated results as the primary measure of cumulative losses in recent years.

The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in our financial statements or tax returns and future profitability. Our accounting for deferred tax consequences represents our best estimate of those future events. Changes in our current estimates, due to unanticipated events or otherwise, could have a material effect on our financial condition and results of operations.

Recent Accounting Pronouncements

Please refer to Note 2, *Summary of Significant Accounting Policies*, "New Accounting Pronouncements" in our "Notes to Consolidated Financial Statements" for a discussion of new accounting standards.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We hold securities in our investment portfolio that are sensitive to market risks. Our securities with fixed interest rates may have their market value adversely impacted by a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectation due to a fall in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates. However, because we classify our investments in debt securities as available-for-sale, no gains or losses are recognized due to changes in interest rates unless such securities are sold prior to maturity or declines in fair value are determined to be other-than-temporary. Should interest rates fluctuate by 10%, our interest income would change by an immaterial amount over an annual period. We do not believe that we have a material exposure to interest rate risk as our investment policies specify credit quality standards for our investments and limit the amount of credit exposure from any single issue, issuer or type of investment.

We do not believe that inflation and changing prices have had a material impact on our results of operations, and as approximately 60% of our investments at December 31, 2016 are in debt securities issued by the U.S. government or its agencies, our exposure to liquidity and credit risk is not believed to be significant.

At December 31, 2016, our borrowings consisted of \$287.3 million outstanding under our Term Loan B-1. Term Loan B-1 bears interest at a LIBOR rate of our choosing (one, three or six months), plus 2.75% with a LIBOR floor of 0.75%. As the one-month LIBOR rate was 0.72% at December 31, 2016, and the LIBOR floor under Term Loan B-1 is 0.75%, we do not expect changes in the three-month LIBOR to have a material effect on our financial statements through December 31, 2017. A 10% increase in the one-month LIBOR rate would increase the amount of interest we owe under this agreement during the year ending December 31, 2017 by approximately \$0.1 million.

Currency Exchange Rate Risk

Manufacturing and royalty revenues we receive on certain of our products and services are a percentage of the net sales made by our licensees and a portion of these sales are made in countries outside the U.S. and are denominated in currencies in which the product is sold, which is predominantly the Euro. The manufacturing and royalty payments on these non-U.S. sales are calculated initially in the currency in which the sale is made and are then converted into USD to determine the amount that our partners pay us for manufacturing and royalty revenues. Fluctuations in the exchange ratio of the USD and these non-U.S. currencies will have the effect of increasing or decreasing our revenues even if there is a constant amount of sales in non-U.S. currencies. For example, if the USD weakens against a non-U.S. currency, then our revenues will increase given a constant amount of sales in such non-U.S. currency. For the year ended December 31, 2016, an average 10% strengthening of the USD relative to the currencies in which these products are sold would have resulted in revenues being reduced by approximately \$18.3 million.

We incur significant operating costs in Ireland and face exposure to changes in the exchange ratio of the USD and the Euro arising from expenses and payables at our Irish operations that are settled in Euro. The impact of changes in the exchange ratio of the USD and the Euro on our USD denominated revenues earned in countries other than the U.S. is largely offset by the opposite impact of changes in the exchange ratio of the USD and the Euro on operating expenses and payables incurred at our Irish operations that are settled in Euro. For the year ended December 31, 2016, an average 10% weakening in the USD relative to the Euro would have resulted in an increase to our expenses denominated in Euro of approximately \$6.4 million.

Item 8. Financial Statements and Supplementary Data

Selected Quarterly Financial Data (unaudited)

(In thousands, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Year Ended December 31, 2016					
REVENUES:					
Manufacturing and royalty revenues	\$ 106,159	\$ 137,034	\$ 110,250	\$ 133,804	\$ 487,247
Product sales, net	49,374	57,519	69,802	79,451	256,146
Research and development revenue	1,241	612	189	259	2,301
Total revenues	<u>156,774</u>	<u>195,165</u>	<u>180,241</u>	<u>213,514</u>	<u>745,694</u>
EXPENSES:					
Cost of goods manufactured and sold	27,711	33,998	35,456	34,957	132,122
Research and development	101,072	97,006	99,444	89,626	387,148
Selling, general and administrative	89,719	96,121	91,145	97,145	374,130
Amortization of acquired intangible assets	15,156	15,157	15,323	15,323	60,959
Total expenses	<u>233,658</u>	<u>242,282</u>	<u>241,368</u>	<u>237,051</u>	<u>954,359</u>
OPERATING LOSS	(76,884)	(47,117)	(61,127)	(23,537)	(208,665)
OTHER EXPENSE, NET	(135)	(596)	(4,215)	(776)	(5,722)
LOSS BEFORE INCOME TAXES	<u>(77,019)</u>	<u>(47,713)</u>	<u>(65,342)</u>	<u>(24,313)</u>	<u>(214,387)</u>
INCOME TAX (BENEFIT) PROVISION	404	(520)	(2,655)	(3,172)	(5,943)
NET LOSS	<u>\$ (77,423)</u>	<u>\$ (47,193)</u>	<u>\$ (62,687)</u>	<u>\$ (21,141)</u>	<u>\$ (208,444)</u>
LOSS PER SHARE—BASIC AND DILUTED	<u>\$ (0.51)</u>	<u>\$ (0.31)</u>	<u>\$ (0.41)</u>	<u>\$ (0.14)</u>	<u>\$ (1.38)</u>

(In thousands, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Year Ended December 31, 2015					
REVENUES:					
Manufacturing and royalty revenues	\$ 128,744	\$ 113,162	\$ 114,072	\$ 119,310	\$ 475,288
Product sales, net	31,137	37,172	37,903	42,816	149,028
Research and development revenue	1,333	1,036	678	972	4,019
Total revenues	<u>161,214</u>	<u>151,370</u>	<u>152,653</u>	<u>163,098</u>	<u>628,335</u>
EXPENSES:					
Cost of goods manufactured and sold	39,974	30,418	33,806	34,791	138,989
Research and development	70,278	87,882	92,558	93,686	344,404
Selling, general and administrative	63,050	71,539	89,497	87,472	311,558
Amortization of acquired intangible assets	15,220	14,052	14,207	14,206	57,685
Total expenses	<u>188,522</u>	<u>203,891</u>	<u>230,068</u>	<u>230,155</u>	<u>852,636</u>
OPERATING LOSS	(27,308)	(52,521)	(77,415)	(67,057)	(224,301)
OTHER (EXPENSE) INCOME, NET ⁽¹⁾	(2,839)	9,476	(605)	(5,736)	296
LOSS BEFORE INCOME TAXES	<u>(30,147)</u>	<u>(43,045)</u>	<u>(78,020)</u>	<u>(72,793)</u>	<u>(224,005)</u>
INCOME TAX PROVISION (BENEFIT)	510	3,064	2,995	(3,411)	3,158
NET LOSS	<u>\$ (30,657)</u>	<u>\$ (46,109)</u>	<u>\$ (81,015)</u>	<u>\$ (69,382)</u>	<u>\$ (227,163)</u>
LOSS PER SHARE—BASIC AND DILUTED	<u>\$ (0.21)</u>	<u>\$ (0.31)</u>	<u>\$ (0.54)</u>	<u>\$ (0.46)</u>	<u>\$ (1.52)</u>

(1) In April 2015, we entered into the Gainesville Transaction and recorded a Gain on the Gainesville Transaction of \$9.9 million in the second quarter of 2015. In the fourth quarter, we reduced the Gain on the Gainesville Transaction to \$9.6 million due to an increase in transaction costs.

All financial statements, other than the quarterly financial data as required by Item 302 of Regulation S-K summarized above, required to be filed hereunder, are filed as an exhibit hereto, are listed under Item 15(a) (1) and (2), and are incorporated herein by reference.

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

Not applicable.

[Table of Contents](#)

Item 9A. Controls and Procedures

Disclosure Controls and Procedures and Internal Control Over Financial Reporting

Controls and Procedures

Our management has evaluated, with the participation of our principal executive officer and principal financial officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of December 31, 2016. Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that (a) the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (b) such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting as defined in Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, the issuer's principal executive and principal financial officers, or persons performing similar functions, and effected by the issuer's board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of the assets of the issuer;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the issuer are being made only in accordance with authorizations of management and directors of the issuer; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the issuer'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. 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.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2016. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in its 2013 Internal Control—Integrated Framework.

Based on this assessment, our management has concluded that, as of December 31, 2016, our internal control over financial reporting was effective.

[Table of Contents](#)

The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included in this Annual Report, on page F-1.

Item 9B. Other Information

The Company's policy governing transactions in its securities by its directors, officers and employees permits its officers, directors and employees to enter into trading plans in accordance with Rule 10b5-1 under the Exchange Act. During the quarter ended December 31, 2016, Ms. Kathryn L. Biberstein, Dr. Elliot W. Ehrich and Messrs. Shane Cooke, James M. Frates, and Mark Stejbach, each an executive officer of the Company, entered into trading plans in accordance with Rule 10b5-1, and the Company's policy governing transactions in its securities by its directors, officers and employees. The Company undertakes no obligation to update or revise the information provided herein, including for revision or termination of an established trading plan.

PART III

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

The information required by this item is incorporated herein by reference to the Proxy Statement for our 2017 Annual General Meeting of Shareholders.

Item 11. *Executive Compensation*

The information required by this item is incorporated herein by reference to the Proxy Statement for our 2017 Annual General Meeting of Shareholders.

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

The information required by this item is incorporated herein by reference to the Proxy Statement for our 2017 Annual General Meeting of Shareholders.

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

The information required by this item is incorporated herein by reference to the Proxy Statement for our 2017 Annual General Meeting of Shareholders.

Item 14. *Principal Accounting Fees and Services*

The information required by this item is incorporated herein by reference to the Proxy Statement for our 2017 Annual General Meeting of Shareholders.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

- (a)(1) Consolidated Financial Statements—The consolidated financial statements of Alkermes plc, required by this item, are submitted in a separate section beginning on page F-1 of this Annual Report.
- (2) Financial Statement Schedules—All schedules have been omitted because the absence of conditions under which they are required or because the required information is included in the consolidated financial statements or notes thereto.
- (3) See the Exhibit Index immediately following the signature page of this Annual Report. The exhibits listed on the Exhibit Index are filed or furnished as part of this Annual Report or are incorporated into this Annual Report by reference.

Item 16. *Form 10-K Summary*

None.

EXHIBIT INDEX

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
2.1 *	Purchase and Sale Agreement, dated March 7, 2015, by and among Alkermes Pharma Ireland Limited, Daravita Limited, Eagle Holdings USA, Inc., Recro Pharma, Inc., and Recro Pharma LLC.	Exhibit 2.1 of the Alkermes plc Current Report on Form 8-K/A (File No. 001-35299)	April 16, 2015
2.1.1 #	First Amendment to Purchase and Sale Agreement, dated December 8, 2016 by and among Alkermes Pharma Ireland Limited, Daravita Limited, Eagle Holdings USA, Inc., Recro Pharma, Inc., and Recro Gainesville LLC.		
3.1	Memorandum and Articles of Association of Alkermes plc.	Exhibit 3.1 to the Alkermes plc Current Report on Form 8-K (File No. 001-35299)	May 26, 2016
10.1	Lease Agreement between Alkermes, Inc. and PDM Unit 850, LLC, dated as of April 22, 2009.	Exhibit 10.5 to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	May 28, 2009
10.1.1	First Amendment to Lease Agreement between Alkermes, Inc. and PDM Unit 850, LLC, dated as of June 18, 2009.	Exhibit 10.2 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	August 6, 2009
10.1.2	Second Amendment to Lease Agreement between Alkermes, Inc. and PDM Unit 850, LLC, dated as of November 12, 2013.	Exhibit 10.74 of the Alkermes plc Transition Report on Form 10-KT (File No. 001-35299)	February 27, 2014
10.1.3	Third Amendment to Lease Agreement between Alkermes, Inc. and PDM 850 Unit, LLC, dated as of May 15, 2014.	Exhibit 10.2 of the Alkermes plc Quarterly Report on Form 10-Q (File No. 001-35299)	July 31, 2014
10.1.4	Fourth Amendment to Lease Agreement between Alkermes, Inc. and Gl TC 850 Winter Street, LLC, dated as of December 30, 2014.	Exhibit 10.7 to the Alkermes plc Quarterly Report on Form 10-Q (File No. 001-35299)	July 30, 2015
10.2	License Agreement, dated as of February 13, 1996, between Medisorb Technologies International L.P. and Janssen Pharmaceutica Inc. (United States) (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.2 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.2.1 *	Third Amendment To Development Agreement, Second Amendment To Manufacturing and Supply Agreement and First Amendment To License Agreements by and between Janssen Pharmaceutica International Inc. and Alkermes Controlled Therapeutics Inc. II, dated April 1, 2000 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.5 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 8, 2005

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.2.2 *	Second Amendment, dated as of August 16, 2012, to the License Agreement, dated as of February 13, 1996, as amended, by and between Alkermes, Inc. (“Alkermes”) and Janssen Pharmaceutica, Inc. (“Janssen US”) and the License Agreement, dated as of February 21, 1996, as amended, by and between Alkermes and JPI Pharmaceutica International, a division of Cilag GmbH International (“JPI”) (Janssen US and JPI together, “Janssen”), and the Fifth Amendment, dated as of August 16, 2012, to the Manufacturing and Supply Agreement, dated as of August 6, 1997, as amended, by and between Alkermes and Janssen.	Exhibit 10.3 of the Alkermes plc Quarterly Report on Form 10-Q (File No. 001-35299)	November 1, 2012
10.3	License Agreement, dated as of February 21, 1996, between Medisorb Technologies International L.P. and Janssen Pharmaceutica International (worldwide except United States) (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.3 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.4	Manufacturing and Supply Agreement, dated August 6, 1997, by and among JPI Pharmaceutica International, Janssen Pharmaceutica, Inc. and Alkermes Controlled Therapeutics Inc. II (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.4 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.4.1 *	Fourth Amendment To Development Agreement and First Amendment To Manufacturing and Supply Agreement by and between Janssen Pharmaceutica International Inc. and Alkermes Controlled Therapeutics Inc. II, dated December 20, 2000 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.4 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 8, 2005
10.4.2	Addendum to the Manufacturing and Supply Agreement by and among JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II, dated August 1, 2001.	Exhibit 10.4.2 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.4.3	Letter Agreement and Exhibits to Manufacturing and Supply Agreement, dated February 1, 2002, by and among JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.4.3 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.4.4 *	Amendment to Manufacturing and Supply Agreement by and between JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II, dated December 22, 2003 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.6 to the Alkermes plc Quarterly Report on Form 10-Q (File No. 011-35299)	July 30, 2015

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.4.5 *	Fourth Amendment To Manufacturing and Supply Agreement by and between JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II, dated January 10, 2005 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.9 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 8, 2005
10.5 *	Development and License Agreement, dated as of May 15, 2000, by and between Alkermes Controlled Therapeutics Inc. II and Amylin Pharmaceuticals, Inc., as amended on October 24, 2005 and July 17, 2006 (assigned, as amended, to Alkermes, Inc. in July 2006).	Exhibit 10.28 to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	May 21, 2010
10.6 *	Agreement by and between JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II, dated December 21, 2002 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.6 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 8, 2005
10.6.1 *	Amendment to Agreement by and between JPI Pharmaceutica International, Janssen Pharmaceutica Inc. and Alkermes Controlled Therapeutics Inc. II, dated December 16, 2003 (assigned to Alkermes, Inc. in July 2006).	Exhibit 10.7 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 8, 2005
10.7	Amended and Restated License Agreement, dated September 26, 2003, by and between Acorda Therapeutics, Inc. and Elan Corporation, plc.	Exhibit 10.14 of the Acorda Therapeutics, Inc. Quarterly Report on Form 10-Q/A (File No.000-50513; film No. 11821367)	July 20, 2011
10.7.1 *	Supply Agreement, dated September 26, 2003, by and between Acorda Therapeutics, Inc. and Elan Corporation, plc.	Exhibit 10.22 of the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	May 23, 2013
10.7.2	Amendment No. 1 to the Amended and Restated License Agreement, to the Supply Agreement and the Sublicense Consent Between Elan Pharma International Limited, Acorda Therapeutics, Inc. and Biogen Idec International GmbH dated June 30, 2009.	Exhibit 10.56 to Acorda Therapeutics, Inc.'s Quarterly Report on Form 10-Q (File No.000-50513; film No. 09999376)	August 10, 2009
10.7.3	Amendment No. 2, dated as of March 29, 2012, to the Amended and Restated License Agreement, dated September 26, 2003, as amended and the Supply Agreement, dated September 26, 2003, as amended.	Exhibit 10.46 of the Acorda Therapeutics, Inc. Annual Report on Form 10-K (File No.000-50513; film no. 13653677)	February 28, 2013
10.7.4	Amendment No. 3, dated as of February 14, 2013, to the Amended and Restated License Agreement, dated September 26, 2003, as amended and the Supply Agreement, dated September 26, 2003, as amended.	Exhibit 10.1 of the Acorda Therapeutics, Inc. Quarterly Report on Form 10-Q (File No. 000-50513; film No. 13831684)	May 10, 2013

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.7.5*	Development and Supplemental Agreement between Elan Pharma International Limited and Acorda Therapeutics, Inc. dated January 14, 2011.	Exhibit 10.21 of the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	May 23, 2013
10.8 *	License Agreement by and among Elan Pharmaceutical Research Corp., d/b/a Nanosystems and Elan Pharma International Limited and Janssen Pharmaceutica N.V. dated as of March 31, 1999.	Exhibit 10.23 of the Alkermes plc Annual Report on Form 10-(File No. 001-35299)	May 23, 2013
10.8.1	First Amendment, dated as of July 31, 2003, to the License Agreement by and among Elan Drug Delivery, Inc. (formerly Elan Pharmaceutical Research Corp.) and Elan Pharma International Limited and Janssen Pharmaceutica NV dated March 31, 1999.	Exhibit 10.24 of the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	May 23, 2013
10.8.2 *	Agreement Amendment No. 2, dated as of July 31, 2009, to the License Agreement by and among Elan Pharmaceutical Research Corp., d/b/a Nanosystems and Elan Pharma International Limited and Janssen Pharmaceutica N.V. dated as of March 31, 1999, as amended by the First Amendment, dated as of July 31, 2003.	Exhibit 10.25 of the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	May 23, 2013
10.9	Amendment to First Lien Credit Agreement, dated September 25, 2012, among Alkermes, Inc., Alkermes plc, the guarantors party thereto, the lenders party thereto, Morgan Stanley Senior Funding, Inc. as Administrative Agent and Collateral Agent and the arrangers and agents party thereto.	Exhibit 10.1 of the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 25, 2012
10.9.1	Amendment No. 2, dated as of February 14, 2013, to Amended and Restated Credit Agreement, dated as of September 16, 2011, as amended and restated on September 25, 2012, among Alkermes, Inc., Alkermes plc, the guarantors party thereto, the lenders party thereto, Morgan Stanley Senior Funding, Inc. as Administrative Agent and Collateral Agent and the arrangers and agents party thereto.	Exhibit 10.1 of the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	February 19, 2013
10.9.2	Amendment No. 3 and Waiver to Amended and Restated Credit Agreement, dated as of May 22, 2013, among Alkermes, Inc., Alkermes plc, Alkermes Pharma Ireland Limited, Alkermes US Holdings, Inc., Morgan Stanley Senior Funding, Inc. as Administrative Agent and Collateral Agent and the lenders party thereto.	Exhibit 10.52 of the Alkermes plc Annual Report on Form 10-K (File No. 011-35299)	May 23, 2013

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.9.3	Amendment No. 4, dated as of October 12, 2016, to Amended and Restated Credit Agreement, dated as of September 16, 2011, as amended and restated on September 25, 2012, as further amended by Amendment No. 2 on February 14, 2013 and as amended by Amendment No. 3 and Waiver to Amended and Restated Credit Agreement dated as of May 22, 2013, among Alkermes, Inc., Alkermes plc, the guarantors party thereto, the lenders party thereto and Morgan Stanley Senior Funding, Inc. as Administrative Agent and Collateral Agent.	Exhibit 10.2 of the Alkermes plc Quarterly Report on Form 10-Q (File No. 011-35299)	November 2, 2016
10.10 †	Employment agreement, dated as of December 12, 2007, by and between Richard F. Pops and Alkermes, Inc.	Exhibit 10.1 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 11, 2008
10.10.1 †	Amendment to Employment Agreement, dated as of October 7, 2008, by and between Alkermes, Inc. and Richard F. Pops.	Exhibit 10.5 to the Alkermes, Inc. Current Report on Form 8-K (File No. 001-14131)	October 7, 2008
10.10.2 †	Amendment No. 2 to Employment Agreement by and between Alkermes, Inc. and Richard F. Pops, dated September 10, 2009.	Exhibit 10.2 to the Alkermes, Inc. Current Report on Form 8-K (File No. 001-14131)	September 11, 2009
10.11 †	Form of Employment Agreement, dated as of December 12, 2007, by and between Alkermes, Inc. and each of Kathryn L. Biberstein, Elliot W. Ehrich, M.D., James M. Frates, Michael J. Landine, Gordon G. Pugh.	Exhibit 10.3 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	February 11, 2008
10.11.1 †	Form of Amendment to Employment Agreement by and between Alkermes, Inc. and each of each of Kathryn L. Biberstein, Elliot W. Ehrich, M.D., James M. Frates, Michael J. Landine, Gordon G. Pugh.	Exhibit 10.7 to the Alkermes, Inc. Current Report on Form 8-K (File No. 001-14131)	October 7, 2008
10.12 †	Form of Covenant Not to Compete, of various dates, by and between Alkermes, Inc. and each of Kathryn L. Biberstein and James M. Frates.	Exhibit 10.15 to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	May 30, 2008
10.13 †	Form of Covenant Not to Compete, of various dates, by and between Alkermes, Inc. and each of Elliot W. Ehrich, M.D., Michael J. Landine, and Gordon G. Pugh.	Exhibit 10.15(a) to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	May 30, 2008
10.14 †	Shane Cooke Offer Letter, dated as of September 15, 2011.	Exhibit 10.5 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.14.1 †	Employment Agreement by and between Alkermes Pharma Ireland Limited and Shane Cooke, dated as of September 16, 2011.	Exhibit 10.6 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.15 †	Offer Letter between Alkermes, Inc. and Mark P. Stejbach, effective as of February 15, 2012.	Exhibit 10.2 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	March 5, 2012
10.15.1 †	Employment Agreement by and between Alkermes, Inc. and Mark P. Stejbach, dated as of February 29, 2012.	Exhibit 10.1 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	March 5, 2012
10.15.2 †	Amendment to Employment Agreement, dated as of July 21, 2015, by and between Mark P. Stejbach and Alkermes, Inc.	Exhibit 10.2 to the Alkermes plc Quarterly Report on Form 10-Q (File No. 011-35299)	July 30, 2015
10.16 †	Form of Employment Agreement by and between Alkermes, Inc. and each of Iain M. Brown and David J. Gaffin	Exhibit 10.1 to the Alkermes plc Quarterly Report on Form 10-Q (File No. 011-35299)	November 2, 2016
10.17 †	James L. Botkin Offer Letter, dated as of September 15, 2011	Exhibit 10.7 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.17.1 †	Employment Agreement by and between Alkermes Gainesville LLC and James L. Botkin, dated as of September 16, 2011.	Exhibit 10.8 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.18 †	Form of Indemnification Agreement by and between Alkermes, Inc. and each of its directors and executive officers.	Exhibit 10.1 to the Alkermes, Inc. Current Report on Form 8-K (File No. 001-14131)	March 25, 2010
10.19 †	Form of Deed of Indemnification for Alkermes plc Officers.	Exhibit 10.1 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.20 †	Form of Deed of Indemnification for Alkermes plc Directors/Secretary.	Exhibit 10.2 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.21 †	Form of Deed of Indemnification for Alkermes, Inc. and Subsidiaries Directors/Secretary.	Exhibit 10.3 to the Alkermes plc Current Report on Form 8-K (File No. 011-35299)	September 20, 2011
10.22 †	Alkermes, Inc. Amended and Restated 1999 Stock Option Plan.	Appendix A to the Alkermes, Inc. Definitive Proxy Statement on Form DEF 14/A (File No. 001-14131)	July 27, 2007
10.22.1 †	Form of Incentive Stock Option Certificate pursuant to the 1999 Stock Option Plan, as amended.	Exhibit 10.35 to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	June 14, 2006

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.22.2 †	Form of Non-Qualified Stock Option Certificate pursuant to the 1999 Stock Option Plan, as amended.	Exhibit 10.36 to the Alkermes, Inc. Annual Report on Form 10-K (File No. 001-14131)	June 14, 2006
10.23 †	2006 Stock Option Plan for Non-Employee Directors.	Exhibit 10.4 to the Alkermes, Inc. Quarterly Report on Form 10-Q (File No. 001-14131)	November 9, 2006
10.23.1 †	Amendment to 2006 Stock Option Plan for Non-Employee Directors.	Appendix C to the Alkermes, Inc. Definitive Proxy Statement on Form DEF 14/A (File No. 001-14131)	July 27, 2007
10.24†	Alkermes plc Amended and Restated 2008 Stock Option and Incentive Plan, as amended.	Exhibit 10.1 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.1 †	Alkermes plc 2008 Stock Option and Incentive Plan, Stock Option Award Certificate (Non-Employee Director).	Exhibit 10.4 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.2 †	Alkermes plc 2008 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Time Vesting Only - Irish).	Exhibit 10.5 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.3 †	Alkermes plc 2008 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Time Vesting Only – U.S.).	Exhibit 10.6 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.4 †	Alkermes plc 2008 Stock Option and Incentive Plan, Stock Option Award Certificate (Time Vesting Non-Qualified Option – Irish).	Exhibit 10.7 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.24.5 †	Alkermes plc 2008 Stock Option and Incentive Plan, Stock Option Award Certificate (Time Vesting Non-Qualified Option – U.S.).	Exhibit 10.8 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.6 †	Alkermes plc 2008 Stock Option and Incentive Plan, Stock Option Award Certificate (Incentive Stock Option – U.S.).	Exhibit 10.9 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.24.7 †	Alkermes, Inc. 2008 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Performance Vesting Only).	Exhibit 10.2 to the Alkermes, Inc. Current Report on Form 8-K (File No. 001-14131)	May 22, 2009
10.25 †	Alkermes plc 2011 Stock Option and Incentive Plan, as amended.	Exhibit 10.1 to the Alkermes plc Current Report on Form 8-K (File No. 001-35299)	May 26, 2016
10.25.1 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Incentive Stock Option – U.S.), as amended.	Exhibit 10.26.1 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.25.2 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Time Vesting Non-Qualified Option – U.S.), as amended.	Exhibit 10.26.2 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.25.3 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Performance Vesting Non-Qualified Option – U.S.).	Exhibit 10.26.3 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.25.4 †	Alkermes plc 2011 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Time Vesting Only – U.S.), as amended.	Exhibit 10.75 of the Alkermes plc Transition Report on Form 10-KT (File No. 011-35299)	February 27, 2014
10.25.5 †	Alkermes plc 2011 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Performance Vesting Only – U.S.), as amended.	Exhibit 10.26.5 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.25.6 †	Alkermes plc 2011 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Time Vesting Only - Irish), as amended.	Exhibit 10.77 of the Alkermes plc Transition Report on Form 10-KT (File No. 011-35299)	February 27, 2014
10.25.7 †	Alkermes plc 2011 Stock Option and Incentive Plan, Restricted Stock Unit Award Certificate (Performance Vesting Only - Irish).	Exhibit 10.26.7 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016

[Table of Contents](#)

Exhibit No.	Description of Exhibit	Incorporated by reference herein	
		Form	Date
10.25.8 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Non-Employee Director).	Exhibit 10.3 to the Alkermes plc Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-35299)	April 28, 2016
10.25.9 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Time Vesting Non-Qualified Option – Irish).	Exhibit 10.26.9 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
10.25.10 †	Alkermes plc 2011 Stock Option and Incentive Plan, Stock Option Award Certificate (Performance Vesting Non-Qualified Option – Irish).	Exhibit 10.26.10 to the Alkermes plc Annual Report on Form 10-K (File No. 001-35299)	February 25, 2016
21.1 #	List of subsidiaries		
23.1 #	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm		
24.1 #	Power of Attorney (included on the signature pages hereto)		
31.1 #	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934		
31.2 #	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934		
32.1 ‡	Certification 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 Label Linkbase Document		
101.PRE +#	XBRL Taxonomy Extension Presentation Linkbase Document		
†	Indicates a management contract or any compensatory plan, contract or arrangement.		
+	XBRL (Extensible Business Reporting Language).		
#	Filed herewith.		
‡	Furnished herewith.		
*	Confidential treatment has been granted or requested for certain portions of this exhibit. Such portions have been filed separately with the SEC pursuant to a confidential treatment request.		

Report of Independent Registered Public Accounting Firm

To Board of Directors and Shareholders of Alkermes plc

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations and comprehensive loss, of shareholders' equity and of cash flows present fairly, in all material respects, the financial position of Alkermes plc and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 17, 2017

ALKERMES PLC AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
December 31, 2016 and 2015

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
<small>(In thousands, except share and per share amounts)</small>		
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 186,378	\$ 181,109
Investments—short-term	310,856	353,669
Receivables, net	191,102	155,487
Inventory	62,998	38,411
Prepaid expenses and other current assets	39,344	26,286
Total current assets	790,678	754,962
PROPERTY, PLANT AND EQUIPMENT, NET	264,785	254,819
INTANGIBLE ASSETS—NET	318,227	379,186
INVESTMENTS—LONG-TERM	121,931	264,071
GOODWILL	92,873	92,873
CONTINGENT CONSIDERATION	63,200	55,300
DEFERRED TAX ASSETS	47,768	40,856
OTHER ASSETS	26,961	13,677
TOTAL ASSETS	\$ 1,726,423	\$ 1,855,744
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	\$ 207,055	\$ 168,735
Long-term debt—short-term	3,000	65,737
Deferred revenue—short-term	1,938	1,735
Total current liabilities	211,993	236,207
LONG-TERM DEBT	280,666	284,207
OTHER LONG-TERM LIABILITIES	17,161	13,080
DEFERRED REVENUE—LONG-TERM	7,122	7,975
Total liabilities	516,942	541,469
COMMITMENTS AND CONTINGENCIES (Note 16)		
SHAREHOLDERS' EQUITY:		
Preferred shares, par value, \$0.01 per share; 50,000,000 shares authorized; zero issued and outstanding at December 31, 2016 and December 31, 2015, respectively	—	—
Ordinary shares, par value, \$0.01 per share; 450,000,000 shares authorized; 154,191,281 and 152,128,941 shares issued; 152,430,514 and 150,700,989 shares outstanding at December 31, 2016, and December 31, 2015, respectively	1,539	1,518
Treasury shares, at cost (1,760,767 and 1,427,952 shares at December 31, 2016 and December 31, 2015, respectively)	(72,639)	(58,661)
Additional paid-in capital	2,231,797	2,114,711
Accumulated other comprehensive loss	(3,274)	(3,795)
Accumulated deficit	(947,942)	(739,498)
Total shareholders' equity	1,209,481	1,314,275
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 1,726,423	\$ 1,855,744

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

ALKERMES PLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
Years Ended December 31, 2016, 2015 and 2014

	<u>Year Ended December 31,</u>		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
	<i>(In thousands, except per share amounts)</i>		
REVENUES:			
Manufacturing and royalty revenues	\$ 487,247	\$ 475,288	\$ 516,876
Product sales, net	256,146	149,028	94,160
Research and development revenue	2,301	4,019	7,753
Total revenues	<u>745,694</u>	<u>628,335</u>	<u>618,789</u>
EXPENSES:			
Cost of goods manufactured and sold (exclusive of amortization of acquired intangible assets shown below)	132,122	138,989	175,832
Research and development	387,148	344,404	272,043
Selling, general and administrative	374,130	311,558	199,905
Amortization of acquired intangible assets	60,959	57,685	58,153
Total expenses	<u>954,359</u>	<u>852,636</u>	<u>705,933</u>
OPERATING LOSS	<u>(208,665)</u>	<u>(224,301)</u>	<u>(87,144)</u>
OTHER (EXPENSE) INCOME, NET:			
Interest income	3,752	3,330	1,972
Interest expense	(14,889)	(13,247)	(13,430)
Change in the fair value of contingent consideration	7,900	(2,300)	—
Gain on the Gainesville Transaction	—	9,636	—
Gain on sale of property, plant and equipment	—	2,862	41,933
Gain on sale of investment in Civitas Therapeutics, Inc.	—	—	29,564
Gain on sale of investment in Acceleron Pharma Inc.	—	—	15,296
Other (expense) income, net	(2,485)	15	(2,220)
Total other (expense) income, net	<u>(5,722)</u>	<u>296</u>	<u>73,115</u>
LOSS BEFORE INCOME TAXES	<u>(214,387)</u>	<u>(224,005)</u>	<u>(14,029)</u>
(BENEFIT) PROVISION FOR INCOME TAXES	<u>(5,943)</u>	<u>3,158</u>	<u>16,032</u>
NET LOSS	<u>\$ (208,444)</u>	<u>\$ (227,163)</u>	<u>\$ (30,061)</u>
LOSS PER COMMON SHARE:			
Basic and diluted	<u>\$ (1.38)</u>	<u>\$ (1.52)</u>	<u>\$ (0.21)</u>
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:			
Basic and diluted	<u>151,484</u>	<u>149,206</u>	<u>145,274</u>
COMPREHENSIVE LOSS:			
Net loss	\$ (208,444)	\$ (227,163)	\$ (30,061)
Holding gains (loss), net of a tax provision (benefit) of \$237, \$(292) and \$7,739, respectively	522	(661)	1,586
Less: Reclassification adjustment for gains included in net (loss) income	—	—	(15,296)
COMPREHENSIVE LOSS	<u>\$ (207,922)</u>	<u>\$ (227,824)</u>	<u>\$ (43,771)</u>

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

ALKERMES PLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
Years Ended December 31, 2016, 2015 and 2014

	Ordinary Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Treasury Stock		Total
	Shares	Amount				Shares	Amount	
(In thousands, except share data)								
BALANCE — December 31, 2013	138,482,571	\$ 1,382	\$ 1,553,337	\$ 10,574	\$ (482,274)	(689,945)	\$ (17,833)	\$ 1,065,186
Issuance of ordinary shares, net	5,917,160	59	248,347	—	—	—	—	248,406
Issuance of ordinary shares under employee stock plans	4,145,419	41	47,536	—	—	—	—	47,577
Receipt of Alkermes' shares for the purchase of stock options or to satisfy minimum tax withholding obligations related to share based awards	—	—	1,379	—	—	(316,686)	(14,219)	(12,840)
Share-based compensation expense	—	—	59,912	—	—	—	—	59,912
Excess tax benefit from share-based compensation	—	—	32,367	—	—	—	—	32,367
Unrealized loss on marketable securities, net of tax provision of \$7,739	—	—	—	(13,710)	—	—	—	(13,710)
Net loss	—	—	—	—	(30,061)	—	—	(30,061)
BALANCE — December 31, 2014	148,545,150	\$ 1,482	\$ 1,942,878	\$ (3,136)	\$ (512,335)	(1,006,631)	\$ (32,052)	\$ 1,396,837
Issuance of ordinary shares under employee stock plans	3,538,308	35	44,934	—	—	—	—	44,969
Receipt of Alkermes' shares for the purchase of stock options or to satisfy minimum tax withholding obligations related to share based awards	45,483	1	704	—	—	(421,321)	(26,609)	(25,904)
Share-based compensation expense	—	—	97,619	—	—	—	—	97,619
Excess tax benefit from share-based compensation	—	—	28,576	—	—	—	—	28,576
Unrealized loss on marketable securities, net of tax benefit of \$(292)	—	—	—	(659)	—	—	—	(659)
Net loss	—	—	—	—	(227,163)	—	—	(227,163)
BALANCE — December 31, 2015	152,128,941	\$ 1,518	\$ 2,114,711	\$ (3,795)	\$ (739,498)	(1,427,952)	\$ (58,661)	\$ 1,314,275
Issuance of ordinary shares under employee stock plans	2,027,571	20	20,288	—	—	—	—	20,308
Receipt of Alkermes' shares for the purchase of stock options or to satisfy minimum tax withholding obligations related to share based awards	34,769	1	510	—	—	(332,815)	(13,978)	(13,467)
Share-based compensation expense	—	—	94,458	—	—	—	—	94,458
Excess tax benefit from share-based compensation	—	—	1,830	—	—	—	—	1,830
Unrealized gain on marketable securities, net of tax provision of \$237	—	—	—	521	—	—	—	521
Net loss	—	—	—	—	(208,444)	—	—	(208,444)
BALANCE — December 31, 2016	154,191,281	\$ 1,539	\$ 2,231,797	\$ (3,274)	\$ (947,942)	(1,760,767)	\$ (72,639)	\$ 1,209,481

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

ALKERMES PLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years Ended December 31, 2016, 2015 and 2014

	Year Ended December 31,		
	2016	2015	2014
	(In thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	\$ (208,444)	\$ (227,163)	\$ (30,061)
Adjustments to reconcile net loss to cash flows from operating activities:			
Depreciation and amortization	94,256	85,596	98,087
Share-based compensation expense	94,396	97,341	59,579
Deferred income taxes	(9,689)	(37,580)	(19,192)
Excess tax benefit from share-based compensation	(4,229)	(28,576)	(32,367)
Gain on sale of investment in Civitas Therapeutics, Inc.	—	—	(29,564)
Gain on the Gainesville Transaction	—	(9,636)	—
Change in the fair value of contingent consideration	(7,900)	2,300	—
Loss on debt refinancing	2,075	—	—
Gain on sale of property, plant and equipment	—	(3,272)	(40,099)
Gain on sale of investment of Acceleron Pharma Inc.	—	—	(15,296)
Other non-cash charges	2,936	(1,351)	9,192
Changes in assets and liabilities (excluding the effect of dispositions):			
Receivables	(35,616)	(16,455)	(17,397)
Inventory	(26,381)	3,687	(4,210)
Prepaid expenses and other assets	(15,014)	15,931	(27,027)
Accounts payable and accrued expenses	45,870	76,155	56,896
Deferred revenue	(649)	(629)	(996)
Other long-term liabilities	4,587	3,292	3,594
Cash flows (used in) provided by operating activities	<u>(63,802)</u>	<u>(40,360)</u>	<u>11,139</u>
CASH FLOWS FROM INVESTING ACTIVITIES:			
Additions of property, plant and equipment	(43,657)	(52,877)	(33,651)
Proceeds from the sale of equipment	194	535	44,365
Investment in Reser Therapeutics, Inc.	(15,000)	—	—
Purchases of investments	(375,099)	(508,683)	(642,455)
Sales and maturities of investments	560,805	467,573	341,154
Net proceeds from the Gainesville Transaction	—	49,966	—
Investment in Civitas Therapeutics, Inc.	—	—	27,190
Cash flows provided by (used in) investing activities	<u>127,243</u>	<u>(43,486)</u>	<u>(263,397)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from the issuance of ordinary shares, net	—	—	248,406
Proceeds from the issuance of ordinary shares under share-based compensation arrangements	20,308	44,969	47,577
Excess tax benefit from share-based compensation	4,229	28,576	32,367
Employee taxes paid related to net share settlement of equity awards	(13,467)	(25,904)	(12,840)
Payment made for debt refinancing	(3,429)	—	—
Principal payments of long-term debt	(65,813)	(6,750)	(6,750)
Cash flows (used in) provided by financing activities	<u>(58,172)</u>	<u>40,891</u>	<u>308,760</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	5,269	(42,955)	56,502
CASH AND CASH EQUIVALENTS—Beginning of period	181,109	224,064	167,562
CASH AND CASH EQUIVALENTS—End of period	\$ 186,378	\$ 181,109	\$ 224,064
SUPPLEMENTAL CASH FLOW DISCLOSURE:			
Cash paid for interest	\$ 12,458	\$ 12,323	\$ 12,489
Cash paid for taxes	\$ 5,531	\$ 705	\$ 2,799
Non-cash investing and financing activities:			
Purchased capital expenditures included in accounts payable and accrued expenses	\$ 5,766	\$ 6,054	\$ 3,483
Fair value of warrants received as part of the Gainesville Transaction	—	2,123	—
Fair value of contingent consideration received as part of the Gainesville Transaction	—	57,600	—

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

**ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

Alkermes plc (the “Company”) is a fully integrated, global biopharmaceutical company that applies its scientific expertise and proprietary technologies to research, develop and commercialize, both with partners and on its own, pharmaceutical products that are designed to address unmet medical needs of patients in major therapeutic areas. The Company has a diversified portfolio of commercial drug products and a clinical pipeline of product candidates that address central nervous system (“CNS”) disorders such as schizophrenia, depression, addiction, and multiple sclerosis. Headquartered in Dublin, Ireland, the Company has a research and development (“R&D”) center in Waltham, Massachusetts; R&D and manufacturing facilities in Athlone, Ireland; and a manufacturing facility in Wilmington, Ohio.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of Alkermes plc and its wholly-owned subsidiaries: Alkermes Ireland Holdings Limited; Daravita Pharma Ireland Limited; Daravita Limited; Alkermes Science Four Limited; Alkermes Science Five Limited; Alkermes Science Six Limited; Alkermes Pharma Ireland Limited; Alkermes U.S. Holdings, Inc.; Alkermes, Inc.; Alkermes Controlled Therapeutics, Inc.; Alkermes Europe, Ltd.; Alkermes Finance Ireland Limited; Alkermes Finance Ireland (No. 2) Limited; Alkermes Finance Ireland (No. 3) Limited; and Alkermes Finance S.à r.l. Intercompany accounts and transactions have been eliminated.

On March 7, 2015, the Company entered into a definitive agreement to sell its Gainesville, GA manufacturing facility, the related manufacturing and royalty revenue associated with certain products manufactured at the facility, and the rights to IV/IM and parenteral forms of Meloxicam (the “Gainesville Transaction”) to Recro Pharma, Inc. (“Recro”) and Recro Pharma LLC (together with Recro, the “Purchasers”). The consolidated financial statements include the accounts of Alkermes Gainesville LLC, which represent the entities sold, for the period from January 1, 2015 through April 10, 2015; and the year ended December 31, 2014.

During the year ended December 31, 2016, Eagle Holdings USA, a subsidiary of Alkermes plc, was merged with and into its parent company, Alkermes U.S. Holdings, Inc.

Use of Estimates

The preparation of the Company’s consolidated financial statements in accordance with accounting principles generally accepted in the United States (“U.S.”) (“GAAP”) requires management to make estimates, judgments and assumptions that may affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, the Company evaluates its estimates and judgments and methodologies, including those related to revenue recognition and related allowances, its collaborative relationships, clinical trial expenses, the valuation of inventory, impairment and amortization of intangibles and long-lived assets, share-based compensation, income taxes including the valuation allowance for deferred tax assets, valuation of investments, contingent consideration and litigation. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

Cash and Cash Equivalents

The Company values its cash and cash equivalents at cost plus accrued interest, which the Company believes approximates their market value. The Company considers only those investments which are highly liquid, readily convertible into cash and so near their maturity, generally three months from the date of purchase, that they present insignificant risk of change in value because of interest rate changes to be cash equivalents.

Receivables, net

Included in receivables, net at December 31, 2016 and 2015, were unbilled accounts receivable of \$20.0 million and \$19.3 million, respectively. The Company’s allowance for doubtful accounts was \$0.1 million at December 31, 2016 and 2015.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Investments

The Company has investments in various types of securities, consisting primarily of U.S. government and agency obligations, corporate debt securities and debt securities issued by foreign agencies and backed by foreign governments. The Company generally holds its interest bearing investments with major financial institutions and in accordance with documented investment policies. The Company limits the amount of credit exposure to any one financial institution or corporate issuer. At December 31, 2016, substantially all these investments were classified as available for sale and were recorded at fair value.

Holding gains and losses on available for sale investments are considered “unrealized” and are reported within “Accumulated other comprehensive loss,” a component of shareholders’ equity. The Company uses the specific identification method for reclassifying unrealized gains and losses into earnings when investments are sold. The Company conducts periodic reviews to identify and evaluate each investment that has an unrealized loss, in accordance with the meaning of other than temporary impairment and its application to certain investments, as required by GAAP. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis. Unrealized losses on available for sale securities that are determined to be temporary, and not related to credit loss, are recorded in “Accumulated other comprehensive loss.”

For securities with unrealized losses, the Company performs an analysis to assess whether it intends to sell or whether it would more likely than not be required to sell the security before the expected recovery of its amortized cost basis. If the Company intends to sell a security, or may be required to do so, the security’s decline in fair value is deemed to be other than temporary and the full amount of the unrealized loss is recorded within earnings as an impairment loss. Regardless of the Company’s intent to sell a security, the Company performs additional analysis on all securities with unrealized losses to evaluate losses associated with the creditworthiness of the security. Credit losses are identified where the Company does not expect to receive cash flows sufficient to recover the amortized cost basis of a security.

The Company’s held-to-maturity investments are restricted investments held as collateral under letters of credit related to certain of the Company’s agreements and are included in “Investments—long-term,” in the accompanying consolidated balance sheets.

Fair Value of Financial Instruments

The Company’s financial assets and liabilities are recorded at fair value and are classified as Level 1, 2 or 3 within the fair value hierarchy, as described in the accounting standards for fair value measurement. The Company’s financial assets and liabilities consist of cash equivalents, investments, contingent consideration and warrants to purchase the common stock of a publicly traded company are classified within the fair value hierarchy as follows:

- *Level 1*—these valuations are based on a market approach using quoted prices in active markets for identical assets. Valuations of these products do not require a significant degree of judgment. Assets utilizing Level 1 inputs at December 31, 2016 included U.S. treasury securities and a fixed term deposit account;
- *Level 2*—these valuations are based on a market approach using quoted prices obtained from brokers or dealers for similar securities or for securities for which the Company has limited visibility into their trading volumes. Valuations of these financial instruments do not require a significant degree of judgment. Assets and liabilities utilizing Level 2 inputs at December 31, 2016 included U.S. government agency debt securities, debt securities issued by foreign agencies and backed by foreign governments and investments in corporate debt securities that are trading in the credit markets; and
- *Level 3*—these valuations are based on an income approach using certain inputs that are unobservable and are significant to the overall fair value measurement. Valuations of these products require a significant degree of judgment. At December 31, 2016, assets utilizing Level 3 inputs included contingent consideration and warrants to purchase the common stock of Recro.

The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents, accounts receivable, other current assets, accounts payable and accrued expenses approximate fair value due to their short-term nature.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Inventory

Inventory is stated at the lower of cost and net realizable value. Cost is determined using the first-in, first-out method. Included in inventory are raw materials used in production of pre-clinical and clinical products, which have alternative future use and are charged to R&D expense when consumed. The cost elements included within inventory include three primary categories for commercial products: cost of raw materials; direct labor; and overhead. Overhead is based on the normal capacity of the Company's production facilities and does not include costs from abnormally low production or idle capacity, which are expensed directly to the consolidated statement of operations.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost, subject to review for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Expenditures for repairs and maintenance are charged to expense as incurred and major renewals and improvements are capitalized. Depreciation is calculated using the straight-line method over the following estimated useful lives of the assets:

Asset group	Term
Buildings and improvements	15 - 40 years
Furniture, fixtures and equipment	3 - 10 years
Leasehold improvements	Shorter of useful life or lease term

Business Acquisitions and Divestitures

The Company's consolidated financial statements include the operations of an acquired business after the completion of the acquisition. The Company accounts for acquired businesses using the acquisition method of accounting. The acquisition method of accounting for acquired businesses requires, among other things, that assets acquired and liabilities assumed be recognized at their estimated fair values as of the acquisition date, and that the fair value of acquired in-process research and development be recorded on the balance sheet. Also, transaction costs are expensed as incurred. Any excess of the purchase price over the assigned values of the net assets acquired is recorded as goodwill. Contingent consideration, if any, is included within the acquisition cost and is recognized at its fair value on the acquisition date. A liability resulting from contingent consideration is re-measured to fair value at each reporting date until the contingency is resolved. Changes in the fair value of the contingent consideration are recognized in earnings.

The Company's consolidated financial statements include gains and losses from divested businesses. The Company accounts for the deconsolidation of a subsidiary, or derecognition of a group of assets, by recognizing a gain or loss in net income attributable to the Company, measured as the difference between the fair value of any consideration received and the carrying amount of the former subsidiary's assets and liabilities, or the carrying amount of the group of assets. If consideration received for the divested business includes contingent consideration, the Company elects, for the components of the contingent consideration that are not derivative instruments, such as future regulatory milestones, sales milestones and royalties, to include them in the contingent consideration portion of the arrangement at fair value. The Company has elected the fair value option for the subsequent accounting of the contingent consideration. The Company will continue to revalue the contingent consideration at each reporting date until each milestone and/or royalty have been achieved or ceased, with any changes in the fair value of the contingent consideration recognized in earnings.

Contingent Consideration

The Company records contingent consideration it receives at fair value on the acquisition date. The Company estimates the fair value of contingent consideration through valuation models that incorporate probability-adjusted assumptions related to the achievement of milestones and thus likelihood of receiving related payments. The Company revalues its contingent consideration each reporting period, with changes in the fair value of contingent consideration recognized within the consolidated statements of operations and comprehensive loss. Changes in the fair value of contingent consideration can result from changes to one or multiple inputs, including adjustments to discount rates, changes in the amount or timing of cash flows, changes in the assumed achievement or timing of any development or sales-based milestones and changes in the assumed probability associated with regulatory approval.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The period over which the Company discounts its contingent consideration is based on the current development stage of the product candidate, the specific development plan for that product candidate, adjusted for the probability of completing the development steps, and when contingent payments would be triggered. In estimating the probability of success, the Company utilizes data regarding similar milestone events from several sources, including industry studies and the Company's own experience. These fair value measurements are based on significant inputs not observable in the market. Significant judgment was employed in determining the appropriateness of these assumptions at the acquisition date and for each subsequent period. Accordingly, changes in assumptions described above could have a material impact on the increase or decrease in the fair value of contingent consideration recorded in any given period.

Goodwill and Intangible Assets

Goodwill represents the excess cost of the Company's investment in the net assets of acquired companies over the fair value of the underlying identifiable net assets at the date of acquisition. The Company's goodwill consists solely of goodwill created as a result of the Company's acquisition of Elan Drug Technologies ("EDT") from Elan Corporation, plc in September 2011 and has been assigned to one reporting unit. A reporting unit is an operating segment or one level below an operating segment or a component to which goodwill is assigned when initially recorded.

Goodwill is not amortized but is reviewed for impairment on an annual basis, as of October 31, and whenever events or changes in circumstances indicate that the carrying value of the goodwill might not be recoverable. The Company has the option to first assess qualitative factors to determine whether it is necessary to perform the two-step impairment test. If the Company elects this option and believes, as a result of the qualitative assessment, that it is more-likely-than-not that the fair value of its reporting unit is less than its carrying amount, the quantitative two-step impairment test is required; otherwise, no further testing is required. Alternatively, the Company may elect to not first assess qualitative factors and immediately perform the quantitative two-step impairment test. In the first step, the Company compares the fair value of its reporting unit to its carrying value. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of its reporting unit, then the second step of the impairment test is performed in order to determine the implied fair value of the Company's reporting unit's goodwill. If the carrying value of the Company's reporting unit's goodwill exceeds its implied fair value, then the Company would record an impairment loss equal to the difference.

The Company's finite-lived intangible assets, consisting of core developed technology and collaboration agreements acquired as part of the acquisition of EDT, were recorded at fair value at the time of their acquisition and are stated within the Company's consolidated balance sheets net of accumulated amortization and impairments. The finite-lived intangible assets are amortized over their estimated useful lives using the economic use method, which reflects the pattern that the economic benefits of the intangible assets are consumed as revenue is generated from the underlying patent or contract. The useful lives of the Company's intangible assets are primarily based on the legal or contractual life of the underlying patent or contract, which does not include additional years for the potential extension or renewal of the contract or patent.

Impairment of Long-Lived Assets

The Company reviews long-lived assets to be held and used for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used, or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their estimated fair values. Long-lived assets to be disposed of are carried at fair value less costs to sell them.

Revenue Recognition

Collaborative Arrangements

The Company has entered into collaboration agreements with pharmaceutical companies including Ortho-McNeil-Janssen Pharmaceuticals, Inc. and Janssen Pharmaceutica International, a division of Cilag International AG ("Janssen") for INVEGA SUSTENNA®/XEPLION® and INVEGA TRINZA®/TREVICTA® as well as RISPERDAL CONSTA®.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Acorda Therapeutics, Inc. ("Acorda") for AMPYRA®/FAMPYRA® and AstraZeneca for BYDUREON®. Substantially all of the products developed under the Company's collaborative arrangements are currently being marketed as approved products. The Company receives payments for manufacturing services and/or royalties on net product sales.

Manufacturing revenues—The Company recognizes manufacturing revenues from the sale of products it manufactures for resale by its collaborative partners. Manufacturing revenues are recognized when persuasive evidence of an arrangement exists, delivery has occurred and title to the product and associated risk of loss has passed to the customer, the sales price is fixed or determinable and collectability is reasonably assured. The sales price for certain of the Company's manufacturing revenues is based on the end-market sales price earned by its collaborative partners. As the end-market sale occurs after the Company has shipped its product and the risk of loss has passed to its collaborative partner, the Company estimates the sales price for such products based on information supplied to it by the Company's collaborative partners, its historical transaction experience and other third-party data. Differences between actual manufacturing revenues and estimated manufacturing revenues are reconciled and adjusted for in the period in which they become known, which is generally within the quarter. The difference between actual and estimated manufacturing revenues has not been material.

Royalty revenues—The Company recognizes royalty revenues related to the sale of products by its collaborative partners that incorporates the Company's technologies. Royalties, with the exception of those from AMPYRA, are earned under the terms of a license agreement in the period the products are sold by the Company's collaborative partner and collectability is reasonably assured. Royalties on AMPYRA are earned in the period the product is shipped to Acorda. Certain of the Company's royalty revenues are recognized by the Company based on information supplied to the Company by its collaborative partners and require estimates to be made. Differences between actual royalty revenues and estimated royalty revenues are reconciled and adjusted for in the period in which they become known, which is generally within the quarter. The difference between actual and estimated royalty revenues has not been material.

Research and development revenue—R&D revenue consists of funding that compensates the Company for formulation, pre-clinical and clinical testing under R&D arrangements with its collaborative partners. The Company generally bills its collaborative partners under R&D arrangements using a full-time equivalent ("FTE") or hourly rate, plus direct external costs, if any.

Certain of the Company's collaboration agreements entitle it to additional payments upon the achievement of performance-based milestones. Milestones that involve substantial effort on the Company's part and the achievement of which are not considered probable at the inception of the collaboration are considered "substantive milestones," and are recognized in their entirety in the period in which the milestone is achieved. Consideration received from the achievement of milestones that are not considered to be "substantive milestones" are included with other collaboration consideration, such as upfront payments and research funding, and are recognized under the proportional performance method whereby revenue is limited to the lesser of the cumulative amount of payments received or the cumulative amount of revenue earned.

Product Sales, Net

The Company's product sales, net consist of sales of VIVITROL®, and upon its approval by the U.S. Federal Drug Administration ("FDA") in October 2015, ARISTADA®, in the U.S. to wholesalers, specialty distributors and specialty pharmacies. Product sales are recognized when persuasive evidence of an arrangement exists, title to the product and associated risk of loss has passed to the customer, which is considered to occur when the product has been received by the customer, the sales price is fixed or determinable and collectability is reasonably assured.

The Company records its product sales net of the following significant categories of sales discounts and allowances at the time of shipment:

- *Medicaid rebates*—relates to the Company's estimated obligations to states under established reimbursement arrangements. Rebate accruals are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a liability which is included in other current liabilities. The Company's liability for Medicaid rebates consists of estimates for claims that a state will make for the current quarter, claims for prior quarters that have been estimated for which an invoice has not been received, invoices received for claims from the prior quarters that have not been paid, and an estimate of potential claims

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

that will be made for inventory that exists in the distribution channel at period end. To date, the difference between actual and estimated Medicaid rebates has not been material;

- *Chargebacks*—wholesaler and specialty pharmacy chargebacks are discounts that occur when contracted customers purchase directly from an intermediary wholesale purchaser. Contracted customers, which consist primarily of federal government agencies purchasing under the federal supply schedule, generally purchase the product at its contracted price, plus a mark-up from the wholesaler. The wholesaler, in-turn, charges back to the Company the difference between the price initially paid by the wholesaler and the contracted price paid to the wholesaler by the customer. The allowance for chargebacks is based on actual and expected utilization of these programs. Chargebacks could exceed historical experience and the Company's estimates of future participation in these programs. To date, the difference between actual and estimated chargebacks has not been material;
- *Product Discounts*—cash consideration, including sales incentives, given by us under distribution service agreements with a number of wholesaler, distributor and specialty pharmacy customers that provide them with the opportunity to earn discounts in exchange for the performance of certain services. To date, the difference between actual and estimated product discounts has not been material;
- *Co-pay Assistance*—the Company has a program whereby a patient can receive monetary assistance each month toward their product co-payment, co- insurance or deductible, provided the patient meets certain eligibility criteria. Reserves are recorded upon the product sale. To date, the difference between actual and estimated co-pay assistance has not been material; and
- *Product Returns*—the Company records a reserve for future product returns on gross product sales. This estimate is based on historical return rates as well as specifically identified anticipated returns due to known business conditions and product expiry dates. Return amounts are recorded as a deduction to arrive at product sales, net. Once product is returned, it is destroyed. At December 31, 2016, the product return reserve was estimated to be approximately 1.6% and 1.5% of gross product sales for VIVITROL and ARISTADA, respectively, collectively amounting to \$13.5 million.

Other

The Company recognizes revenues from the license and the sale of intellectual property, deemed to have standalone value, when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collectability is reasonably assured. The Company considers delivery to have occurred when the buyer has use of, and is able to benefit from, the intellectual property and the Company has no remaining obligations under the arrangement.

Foreign Currency

The Company's functional and reporting currency is the U.S. dollar. Transactions in foreign currencies are recorded at the exchange rate prevailing on the date of the transaction. The resulting monetary assets and liabilities are translated into U.S. dollars at exchange rates prevailing on the subsequent balance sheet date. Gains and losses as a result of translation adjustments are recorded within "Other (expense) income, net" in the accompanying consolidated statements of operations and comprehensive loss. During the years ended December 31, 2016, 2015 and 2014, the Company recorded a gain on foreign currency translation of \$0.1 million, \$1.4 million and \$0.6 million, respectively.

Concentrations

Financial instruments that potentially subject the Company to concentrations of credit risk are accounts receivable and marketable securities. Billings to large pharmaceutical companies account for the majority of the Company's accounts receivable, and collateral is generally not required from these customers. To mitigate credit risk, the Company monitors the financial performance and credit worthiness of its customers. The following represents revenue and receivables from the Company's customers exceeding 10% of the total in each category as of and for the years ended December 31, 2016, 2015 and 2014:

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Customer	Year Ended December 31,					
	2016		2015		2014	
	Receivables	Revenue	Receivables	Revenue	Receivables	Revenue
Janssen	33 %	36 %	44 %	40 %	44 %	41 %
Acorda	17 %	15 %	— %	17 %	17 %	13 %

The Company holds its interest-bearing investments with major financial institutions and, in accordance with documented investment policies, the Company limits the amount of credit exposure to any one financial institution or corporate issuer. The Company's investment objectives are, first, to assure liquidity and conservation of capital and, second, to obtain investment income.

Geographic Information

Company revenues by geographic location, as determined by the location of the customer, and the location of its assets, are as follows:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Revenue by region:			
U.S.	\$ 557,312	\$ 448,639	\$ 398,189
Ireland	4,407	3,902	7,691
Rest of world	183,975	175,794	212,909
Assets by region:			
Current assets:			
U.S.	\$ 382,168	\$ 360,154	\$ 385,715
Ireland	407,761	394,281	490,577
Rest of world	749	527	501
Long-term assets:			
U.S.:			
Intangible assets	\$ —	\$ —	\$ —
Goodwill	—	—	3,677
Other	236,175	294,158	226,479
Ireland:			
Intangible assets	\$ 318,227	\$ 379,186	\$ 479,412
Goodwill	92,873	92,873	90,535
Other	288,470	334,565	242,162

Research and Development Expenses

For each of its R&D programs, the Company incurs both external and internal expenses. External R&D expenses include costs related to clinical and non-clinical activities performed by contract research organizations, consulting fees, laboratory services, purchases of drug product materials and third-party manufacturing development costs. Internal R&D expenses include employee-related expenses, occupancy costs, depreciation and general overhead. The Company tracks external R&D expenses for each of its development programs, however, internal R&D expenses are not tracked by individual program as they benefit multiple programs or its technologies in general.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses are primarily comprised of employee-related expenses associated with sales and marketing, finance, human resources, legal, information technology and other administrative personnel, outside marketing, advertising and legal expenses and other general and administrative costs.

Advertising costs are expensed as incurred. During the years ended December 31, 2016, 2015 and 2014, advertising costs totaled \$24.0 million, \$10.6 million and \$8.6 million, respectively.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Share-Based Compensation

The Company's share-based compensation programs grant awards which include stock options and restricted stock units ("RSUs"), which vest with the passage of time and, to a limited extent, vest based on the achievement of certain performance criteria. The Company issues new shares upon stock option exercise or the vesting of RSUs. Certain of the Company's employees are retirement eligible under the terms of the Company's stock option plans (the "Plans"), and stock option awards to these employees generally vest in full upon retirement. Since there are no effective future service requirements for these employees, the fair value of these awards is expensed in full on the grant date or upon meeting the retirement eligibility criteria, whichever is later.

Stock Options

Stock option grants to employees expire ten years from the grant date and generally vest one-fourth per year over four years from the anniversary of the date of grant, provided the employee remains continuously employed with the Company, except as otherwise provided in the plan. Stock option grants to directors are for ten-year terms and generally vest over a one-year period provided the director continues to serve on the Company's board of directors through the vesting date, except as otherwise provided in the plan. The estimated fair value of options is recognized over the requisite service period, which is generally the vesting period. Share-based compensation expense is based on awards ultimately expected to vest. Forfeitures are estimated based on historical experience at the time of grant and revised in subsequent periods if actual forfeitures differ from those estimates.

The fair value of stock option grants is based on estimates as of the date of grant using a Black-Scholes option valuation model. The Company uses historical data as the basis for estimating option terms and forfeitures. Separate groups of employees that have similar historical stock option exercise and forfeiture behavior are considered separately for valuation purposes. The ranges of expected terms disclosed below reflect different expected behavior among certain groups of employees. Expected stock volatility factors are based on a weighted average of implied volatilities from traded options on the Company's ordinary shares and historical share price volatility of the Company's ordinary shares, which is determined based on a review of the weighted average of historical daily price changes of the Company's ordinary shares. The risk-free interest rate for periods commensurate with the expected term of the share option is based on the U.S. treasury yield curve in effect at the time of grant. The dividend yield on the Company's ordinary shares is estimated to be zero as the Company has not paid and does not expect to pay dividends. The exercise price of options granted is equal to the closing price of the Company's ordinary shares traded on the NASDAQ Global Select Stock Market on the date of grant.

The fair value of each stock option grant was estimated on the grant date with the following weighted-average assumptions:

	Year Ended December 31,		
	2016	2015	2014
Expected option term	5 - 7 years	5 - 7 years	5 - 7 years
Expected stock volatility	39 % - 53 %	38 % - 46 %	39 % - 46 %
Risk-free interest rate	0.95 % - 2.14 %	1.29 % - 2.02 %	1.46 % - 2.24 %
Expected annual dividend yield	—	—	—

Time-Vested Restricted Stock Units

Time-vested RSUs awarded to employees generally vest one-fourth per year over four years from the anniversary of the date of grant, provided the employee remains continuously employed with the Company. Shares of the Company's ordinary shares are delivered to the employee upon vesting, subject to payment of applicable withholding taxes. The fair value of time-vested RSUs is equal to the closing price of the Company's ordinary shares traded on the NASDAQ Global Select Stock Market on the date of grant. Compensation expense, including the effect of forfeitures, is recognized over the applicable service period.

Performance-Based Restricted Stock Units

Performance-based RSUs awarded to employees vest upon the achievement of certain performance criteria. The estimated fair value of these RSUs is based on the market value of the Company's ordinary shares on the date of grant. Compensation expense for performance-based RSUs is recognized from the moment the Company determines the

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

performance criteria will be met to the date the Company deems the event is likely to occur. Cumulative adjustments are recorded quarterly to reflect subsequent changes in the estimate outcome of performance-related conditions until the date results are determined.

Income Taxes

The Company recognizes income taxes under the asset and liability method. Deferred income taxes are recognized for differences between the financial reporting and tax bases of assets and liabilities at enacted statutory tax rates in effect for the years in which the differences are expected to reverse. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. In evaluating the Company's ability to recover its deferred tax assets, the Company considers all available positive and negative evidence including its past operating results, the existence of cumulative income in the most recent fiscal years, changes in the business in which the Company operates and its forecast of future taxable income. In determining future taxable income, the Company is responsible for assumptions utilized including the amount of Irish, U.S. and other foreign 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 the Company is using to manage the underlying businesses.

The Company accounts for uncertain tax positions using a more-likely-than-not threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors including, but 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. The Company evaluates its tax position on a quarterly basis. The Company also accrues for potential interest and penalties related to unrecognized tax benefits in income tax expense.

Comprehensive Loss

Comprehensive loss consists of net loss and other comprehensive loss. Other comprehensive loss includes changes in equity that are excluded from net loss, such as unrealized holding gains and losses on available-for-sale marketable securities.

Loss Per Share

Basic loss per share is calculated based upon net loss available to holders of ordinary shares divided by the weighted average number of ordinary shares outstanding. For the calculation of diluted earnings per share, the Company uses the weighted average number of ordinary shares outstanding, as adjusted for the effect of potential dilutive securities, including stock options and RSUs.

Segment Information

The Company operates as one business segment, which is the business of developing, manufacturing and commercializing medicines designed to yield better therapeutic outcomes and improve the lives of patients with serious diseases. The Company's chief decision maker, the Chairman and Chief Executive Officer, reviews the Company's operating results on an aggregate basis and manages the Company's operations as a single operating unit.

Employee Benefit Plans

401(K) Plan

The Company maintains a 401(k) retirement savings plan (the "401(k) Plan"), which covers substantially all of its U.S.-based employees. Eligible employees may contribute up to 100% of their eligible compensation, subject to certain Internal Revenue Service ("IRS") limitations. The Company matches 100% of employee contributions up to the first 5% of employee pay, up to IRS limits. Employee and Company contributions are fully vested when made. During the years ended December 31, 2016, 2015 and 2014, the Company contributed \$8.1 million, \$6.6 million and \$4.7 million, respectively, to match employee deferrals under the 401(k) Plan.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Defined Contribution Plan

The Company maintains a defined contribution plan for its Ireland-based employees (the “Defined Contribution Plan”). The Defined Contribution Plan provides for eligible employees to contribute up to the maximum of 40%, depending upon their age, of their total taxable earnings subject to an earnings cap of €115,000. The Company provides a match of up to 18% of taxable earnings depending upon an individual’s contribution level. During the years ended December 31, 2016, 2015 and 2014, the Company contributed \$3.2 million, \$3.0 million and \$3.7 million, respectively, in contributions to the Defined Contribution Plan.

New Accounting Pronouncements

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

In May 2014, the FASB issued guidance that outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The guidance is based on the principle that an entity should recognize revenue to depict the transfer of 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. The guidance also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. Numerous updates have been issued subsequent to the initial guidance that provide clarification on a number of specific issues as well as requiring additional disclosures. Entities have the option of using either a full retrospective or a modified retrospective approach for the adoption of the new standard, and this guidance becomes effective for the Company in its year ending December 31, 2018. The Company is still assessing the impact of the new guidance on its consolidated financial statements, as well as evaluating the disclosure requirements under the new standard. The Company expects to adopt the new standard using the modified retrospective method.

In June 2014, the FASB issued guidance that clarifies the accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. Existing GAAP does not contain explicit guidance on how to account for these share-based payments. The new guidance requires that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition. Entities have the option of prospectively applying the guidance to awards granted or modified after the effective date or retrospectively applying the guidance to all awards with performance targets that are outstanding as of the beginning of the earliest annual period presented in the financial statements. The Company adopted this guidance on January 1, 2016, and this guidance does not have an impact on its consolidated financial statements.

In August 2014, the FASB issued guidance related to an entity’s ability to continue as a going concern. This standard requires management to evaluate, for each annual and interim reporting period, whether there are conditions and events, considered in the aggregate, that raise substantial doubt about an entity’s ability to continue as a going concern within one year after the date the financial statements are issued or are available to be issued. If substantial doubt is raised, additional disclosures around management’s plan to alleviate these doubts are required. This update became effective for all annual periods and interim reporting periods ending after December 15, 2016. The adoption of this standard did not have any impact on the Company’s current disclosures in the financial statements.

In January 2015, the FASB issued guidance that simplifies income statement presentation by eliminating the concept of extraordinary items. The Company adopted this guidance on January 1, 2016, and this guidance does not have an impact on its consolidated financial statements.

In January 2016, the FASB issued guidance that enhances the reporting model for financial instruments through addressing certain aspects of recognition, measurement, presentation and disclosure of financial instruments. The amendments in this update include: requiring equity securities to be measured at fair value with changes in fair value recognized through the income statement; simplifying the impairment assessment of equity instruments without readily determinable fair values by requiring a qualitative assessment to identify impairment; eliminating the requirement to disclose the fair value of financial instruments measured at amortized cost for entities that are not public business

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

entities; eliminating the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet; requiring public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes; requiring an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments; requiring separate presentation of financial assets and financial liabilities by measurement category and form of financial asset; and clarifying that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. This guidance becomes effective for the Company in its year ending December 31, 2018, and the Company is currently assessing the impact that this standard will have on its consolidated financial statements.

In February 2016, the FASB issued guidance to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and this guidance is the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. This guidance becomes effective for the Company in its year ending December 31, 2019, and the Company is currently assessing the impact that this standard will have on its consolidated financial statements.

In March 2016, the FASB issued guidance as part of its simplification initiative to eliminate the requirement to retroactively adopt the equity method of accounting when an investment qualifies for the use of the equity method as a result of an increase in the level of ownership interest or degree of influence. This guidance becomes effective for the Company in its year ending December 31, 2017, and the Company does not currently expect this guidance to have an impact on its consolidated financial statements.

In March 2016, the FASB issued guidance as part of its simplification initiative that involves several aspects of the accounting for share-based payment transactions. The amendments in this update established that: all excess tax benefits and tax deficiencies be recognized as income tax expense or benefit in the income statement; excess tax benefits be classified as an operating activity in the statement of cash flows; the entity make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest, which is current GAAP, or account for forfeitures as they occur; the threshold to qualify for equity classification permits withholding up to the maximum statutory tax rates in the applicable jurisdictions; and cash paid by an employer when directly withholding shares for tax withholding purposes be classified as a financing activity in the statement of cash flows. This guidance becomes effective for the Company in the first quarter of 2017. The Company has assessed the impact this standard will have on its consolidated financial statements and has determined that upon adoption of the new standard, a cumulative-effect adjustment of approximately \$61.5 million will be recorded within retained earnings, related to the recognition of net deferred tax assets on certain U.S. tax credit and net operating loss ("NOL") carryforwards.

In August 2016, the FASB issued guidance to address diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This guidance becomes effective for the Company in its year ending December 31, 2018, and the Company is currently assessing the impact that this standard will have on its consolidated financial statements.

In October 2016, the FASB issued guidance to simplify and improve accounting on transfers of assets between affiliated entities. The updated guidance eliminates the prohibition for all intra-entity asset transfers, except for inventory. This guidance becomes effective for the Company in the first quarter of 2018, and the Company is currently assessing the impact that this standard will have on its consolidated financial statements.

In November 2016, the FASB issued guidance to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This guidance becomes effective for the Company in its year ending December 31, 2018, and the Company is currently assessing the impact that this standard will have on its consolidated financial statements.

3. DIVESTITURE

On April 10, 2015, the Company completed the sale of its manufacturing facility in Gainesville, GA, the manufacturing and royalty revenue associated with products manufactured at that facility, and global rights to IV/IM and

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

parenteral forms of Meloxicam (the “Disposition” or “Gainesville Transaction”) to Recro, a Pennsylvania corporation listed on the NASDAQ and Recro Pharma LLC (the “Acquisition Sub” and together with Recro, the “Purchasers”) pursuant to a Purchase and Sale Agreement (the “Purchase Agreement”) entered into on March 7, 2015 among the Company and the Purchasers.

In accordance with the terms of the Purchase Agreement, at the closing of the Disposition, the Purchasers made an initial cash payment to the Company of \$50.0 million, a \$4.0 million payment relating to the net working capital, and issued us a seven-year warrant to purchase an aggregate of 350,000 shares of Recro common stock at a per share exercise price equal to \$19.46, two times the closing price of Recro’s common stock on the day prior to closing. The Company is also eligible to receive low double-digit royalties on net sales of IV/IM and parenteral forms of Meloxicam and any other product with the same active ingredient as Meloxicam IV/IM that is discovered or identified using certain of the Company’s intellectual property to which Recro was provided a right of use, through license or transfer, pursuant to the Gainesville Transaction (together, the “Meloxicam Products”) and up to \$125.0 million in milestone payments upon the achievement of certain regulatory and sales milestones related to the Meloxicam Products, including, pursuant to the First Amendment to the Purchase Agreement, at Recro’s election, either (i) \$10.0 million upon the submission of an NDA filing for the first Meloxicam Product and \$30.0 million upon regulatory approval of an NDA for the first Meloxicam Product or (ii) an aggregate of \$45.0 million upon regulatory approval of an NDA for the first Meloxicam Product.

The gain on the Gainesville Transaction was determined as follows:

	<u>April 10, 2015</u> (In thousands)
Sales Proceeds:	
Cash	\$ 54,010
Fair value of warrants	2,123
Fair value of contingent consideration	57,600
Total consideration received	\$ 113,733
Less net assets sold	(101,373)
Less transaction costs	(2,724)
Gain on the Gainesville Transaction	<u>\$ 9,636</u>

The Company recorded the gain on the Gainesville Transaction within the accompanying consolidated statement of operations and comprehensive loss. The Company determined that the sale of assets in connection with the Gainesville Transaction did not constitute a strategic shift and that it did not and would not have a major effect on its operations and financial results. Accordingly, the operations from the Gainesville Transaction were not reported in discontinued operations.

Geraldine Henwood, President and Chief Executive Officer of Recro, was a member of the Company’s board of directors. On March 7, 2015, Ms. Henwood notified the board of the Company that she was resigning as a member of the board of directors effective immediately. Ms. Henwood’s decision was not the result of any disagreement between the Company and herself on any matter, including with respect to the Company’s operations, policies or practices.

During the years ended December 31, 2015 and 2014, the Gainesville, GA facility and associated intellectual property (“IP”) generated income before income taxes of \$4.5 million and \$22.8 million, respectively.

At December 31, 2016, the Company determined the value of the Gainesville Transaction’s contingent consideration using the following valuation approaches:

- The fair value of the regulatory milestones were estimated based on applying the likelihood of achieving the regulatory milestones and applying a discount rate from the expected time each milestone occurs to the balance sheet date. The Company expects the regulatory milestone events to occur within the next year and two years, respectively, and used a discount rate of 2.8% and 3.6%, respectively, for each of these events. The Company then assessed the likelihood of Recro opting to pay us under scenario (i) or scenario (ii) to arrive at a probability weighted present value for these regulatory milestones;
- To estimate the fair value of future royalties on net sales of IV/IM and parenteral forms of Meloxicam, the Company assessed the likelihood of IV/IM and parenteral forms of Meloxicam being approved for sale and

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

estimated the expected future sales given approval and IP protection. The Company then discounted these expected payments using a discount rate of 16.0%, which the Company believes captures a market participant's view of the risk associated with the expected payments; and

- The sales milestones were determined through the use of a real options approach, where net sales are simulated in a risk-neutral world. To employ this methodology, the Company used a risk-adjusted expected growth rate based on its assessments of expected growth in net sales of the approved IV/IM and parenteral forms of Meloxicam, adjusted by an appropriate factor capturing their respective correlation with the market. A resulting expected (probability-weighted) milestone payment was then discounted at a cost of debt plus a risk adjustment, which ranged from 10.6% to 12.3%.

At December 31, 2016, the Company determined that the value of the Gainesville Transaction's contingent consideration was \$63.2 million. The Company recorded the increase of \$7.9 million and decrease of \$2.3 million in the value of the contingent consideration during the years ended December 31, 2016 and 2015, respectively, within "Change in the fair value of contingent consideration" in the accompanying consolidated statements of operations and comprehensive loss.

The warrants the Company received to purchase 350,000 shares of Recro common stock were determined to have a fair value of \$2.1 million on the closing date of the transaction. At December 31, 2016, the Company determined that the value of these warrants had decreased to \$1.4 million and were recorded within "Other long-term assets" in the accompanying consolidated balance sheets. The company used a Black-Scholes model with the following assumptions to determine the fair value of these warrants at December 31, 2016:

Closing stock price at December 31, 2016	\$ 8.06
Warrant strike price	\$ 19.46
Expected term (years)	5.27
Risk-free rate	1.93 %
Volatility	80.0 %

The decrease in the fair value of the warrants of \$0.4 million and \$0.3 million during the years ended December 31, 2016 and 2015, respectively, was recorded within "Other (expense) income, net" in the accompanying consolidated statements of operations and comprehensive loss.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. INVESTMENTS

Investments consist of the following:

	<u>Amortized</u> <u>Cost</u>	<u>Gross Unrealized</u> <u>Gains</u> <u>Losses⁽¹⁾</u>		<u>Estimated</u> <u>Fair Value</u>
(In thousands)				
December 31, 2016				
Short-term investments:				
Available-for-sale securities:				
U.S. government and agency debt securities	\$ 177,203	\$ 96	\$ (51)	\$ 177,248
Corporate debt securities	128,119	47	(53)	128,113
International government agency debt securities	5,511	—	(16)	5,495
Total short-term investments	<u>310,833</u>	<u>143</u>	<u>(120)</u>	<u>310,856</u>
Long-term investments:				
Available-for-sale securities:				
U.S. government and agency debt securities	81,839	—	(391)	81,448
Corporate debt securities	31,223	—	(89)	31,134
International government agency debt securities	5,992	—	(18)	5,974
	<u>119,054</u>	<u>—</u>	<u>(498)</u>	<u>118,556</u>
Held-to-maturity securities:				
Fixed term deposit account	1,667	—	(7)	1,660
Certificates of deposit	1,715	—	—	1,715
	<u>3,382</u>	<u>—</u>	<u>(7)</u>	<u>3,375</u>
Total long-term investments	<u>122,436</u>	<u>—</u>	<u>(505)</u>	<u>121,931</u>
Total investments	<u>\$ 433,269</u>	<u>\$ 143</u>	<u>\$ (625)</u>	<u>\$ 432,787</u>
December 31, 2015				
Short-term investments:				
Available-for-sale securities:				
Corporate debt securities	\$ 175,098	\$ 20	\$ (179)	\$ 174,939
U.S. government and agency debt securities	141,789	51	(104)	141,736
International government agency debt securities	37,070	—	(76)	36,994
Total short-term investments	<u>353,957</u>	<u>71</u>	<u>(359)</u>	<u>353,669</u>
Long-term investments:				
Available-for-sale securities:				
U.S. government and agency debt securities	211,216	—	(764)	210,452
Corporate debt securities	38,381	—	(111)	38,270
International government agency debt securities	12,039	—	(71)	11,968
	<u>261,636</u>	<u>—</u>	<u>(946)</u>	<u>260,690</u>
Held-to-maturity securities:				
Fixed term deposit account	1,666	—	—	1,666
Certificates of deposit	1,715	—	—	1,715
	<u>3,381</u>	<u>—</u>	<u>—</u>	<u>3,381</u>
Total long-term investments	<u>265,017</u>	<u>—</u>	<u>(946)</u>	<u>264,071</u>
Total investments	<u>\$ 618,974</u>	<u>\$ 71</u>	<u>\$ (1,305)</u>	<u>\$ 617,740</u>

(1) Losses represent marketable securities that were in loss positions for less than one year.

The proceeds from the sales and maturities of marketable securities, which were primarily reinvested and resulted in realized gains and losses, were as follows:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Proceeds from the sales and maturities of marketable securities	\$ 560,805	\$ 467,573	\$ 341,154
Realized gains	\$ 206	\$ 111	\$ 15,364
Realized losses	\$ 28	\$ 3	\$ 31

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company's available-for-sale and held-to-maturity securities at December 31, 2016 had contractual maturities in the following periods:

(In thousands)	Available-for-sale		Held-to-maturity	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Within 1 year	\$ 282,361	\$ 282,344	\$ 1,715	\$ 1,715
After 1 year through 5 years	147,526	147,068	1,667	1,660
Total	\$ 429,887	\$ 429,412	\$ 3,382	\$ 3,375

At December 31, 2016, the Company believed that the unrealized losses on its available-for-sale investments were temporary. The investments with unrealized losses consisted primarily of corporate debt securities. In making the determination that the decline in fair value of these securities was temporary, the Company considered various factors, including, but not limited to: the length of time each security was in an unrealized loss position; the extent to which fair value was less than cost; financial condition and near-term prospects of the issuers; and the Company's intent not to sell these securities and the assessment that it is more likely than not that the Company would not be required to sell these securities before the recovery of their amortized cost basis.

In February 2016, the Company entered into a collaboration and license option agreement with Reset Therapeutics, Inc. ("Reset"), a related party. The Company made an upfront, non-refundable payment of \$10.0 million in partial consideration of the grant to the Company of the rights and licenses included in such agreement, which was included in R&D expense in the three months ended March 31, 2016, and simultaneously made a \$15.0 million investment in exchange for shares of Reset's Series B Preferred Stock. The Company is accounting for its investment in Reset under the equity method based on its percentage of ownership, its seat on the board of directors and its belief that it can exert significant influence over the operating and financial policies of Reset. During the year ended December 31, 2016, the Company recorded a reduction in its investment in Reset of \$1.7 million, which represents the Company's proportional share of Reset's net loss for the period. The Company's \$13.3 million investment at December 31, 2016 is included within "Other assets" in the accompanying consolidated balance sheets.

In May 2014, the Company entered into an agreement whereby it is committed to provide up to €7.4 million to a partnership, Fountain Healthcare Partners II, L.P. of Ireland ("Fountain"), which was created to carry on the business of investing exclusively in companies and businesses engaged in the healthcare, pharmaceutical and life sciences sectors. The Company's commitment represents approximately 7% of the partnership's total funding, and the Company is accounting for its investment in Fountain under the equity method. At December 31, 2016, the Company had made payments of, and its investment is equal to, \$2.5 million (€2.1 million), which is included within "Other assets" in the accompanying consolidated balance sheets. During the years ended December 31, 2016, 2015 and 2014, the Company recorded a reduction in its investment in Fountain of \$0.4 million, \$0.2 million and \$0.1 million respectively, which represented the Company's proportionate share of Fountain's net loss for this period.

The Company's investment in Civitas Therapeutics, Inc. ("Civitas") was zero at December 31, 2016 and 2015. In October 2014, Civitas was acquired by Acorda for \$525.0 million. As a result of this transaction, the Company received \$2.4 million in 2015 after release of amounts held in escrow, for its approximate 6% equity interest in Civitas. Prior to its acquisition by Acorda, the Company's investment in Civitas consisted of various issues of preferred stock, certain of which were accounted for under the cost method or equity method, depending upon if the preferred stock was considered to be "in-substance" common stock and the Company's belief that it may have been able to exercise significant influence over the operating and financial policies of Civitas. During the years ended December 31, 2016, 2015 and 2014, the Company recorded a reduction in its investment in Civitas of zero, zero and \$6.8 million, respectively, which represented the Company's proportionate share of Civitas' net losses for these periods.

During the year ended December 31, 2014, the Company sold its investment in Acceleron Pharma Inc. ("Acceleron"), which consisted of common stock and warrants to purchase the common stock of Acceleron. The Company received net proceeds of \$24.0 million and realized a gain of \$15.3 million from the sale of this investment. As a result, the Company reclassified the gain from accumulated other comprehensive loss to gain on sale of investment in Acceleron in its consolidated statements of operations and comprehensive loss.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. FAIR VALUE

The following table presents information about the Company's assets and liabilities that are measured at fair value on a recurring basis and indicates the fair value hierarchy and the valuation techniques the Company utilized to determine such fair value:

(In thousands)	December 31, 2016	Level 1	Level 2	Level 3
Assets:				
Cash equivalents	\$ 1,660	\$ 1,660	\$ —	\$ —
U.S. government and agency debt securities	258,696	156,370	102,326	—
Corporate debt securities	159,247	—	159,247	—
International government agency debt securities	11,469	—	11,469	—
Contingent consideration	63,200	—	—	63,200
Common stock warrants	1,392	—	—	1,392
Total	<u>\$ 495,664</u>	<u>\$ 158,030</u>	<u>\$ 273,042</u>	<u>\$ 64,592</u>
	December 31, 2015	Level 1	Level 2	Level 3
Assets:				
Cash equivalents	\$ 1,666	\$ 1,666	\$ —	\$ —
U.S. government and agency debt securities	352,188	214,456	137,732	—
Corporate debt securities	213,209	—	213,209	—
International government agency debt securities	48,962	—	48,962	—
Contingent consideration	55,300	—	—	55,300
Common stock warrants	1,821	—	—	1,821
Total	<u>\$ 673,146</u>	<u>\$ 216,122</u>	<u>\$ 399,903</u>	<u>\$ 57,121</u>

The Company transfers its financial assets and liabilities, measured at fair value on a recurring basis, between the fair value hierarchies at the end of each reporting period.

There were no transfers of any securities from Level 1 to Level 2 or from Level 2 to Level 1 during the year ended December 31, 2016. The following table is a rollforward of the fair value of the Company's investments whose fair value was determined using Level 3 inputs at December 31, 2016:

(In thousands)	Fair Value
Balance, January 1, 2016	\$ 57,121
Change in the fair value of contingent consideration	7,900
Decrease in the fair value of warrants	(429)
Balance, December 31, 2016	<u>\$ 64,592</u>

The Company's investments in U.S. government and agency debt securities, international government agency debt securities and corporate debt securities classified as Level 2 within the fair value hierarchy were initially valued at the transaction price and subsequently valued, at the end of each reporting period, utilizing market-observable data. The market-observable data included reportable trades, benchmark yields, credit spreads, broker/dealer quotes, bids, offers, current spot rates and other industry and economic events. The Company validated the prices developed using the market-observable data by obtaining market values from other pricing sources, analyzing pricing data in certain instances and confirming that the relevant markets are active.

The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents, accounts receivable, other current assets, accounts payable and accrued expenses approximate fair value due to their short-term nature. The fair value of the remaining financial instruments not currently recognized at fair value on the Company's consolidated balance sheets at December 31, 2016 consisted of a \$300.0 million term loan, bearing interest at LIBOR plus 2.75% with a LIBOR floor of 0.75% and matures on September 25, 2021 ("Term Loan B-1"). The estimated fair value of Term Loan B-1, which was based on quoted market price indications (Level 2 in the fair value hierarchy) and which may not be representative of actual values that could have been or will be realized in the future, was as follows at December 31, 2016:

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands)	Carrying Value	Estimated Fair Value
Term Loan B-1	\$ 283,666	\$ 289,045

6. INVENTORY

Inventory consists of the following:

(In thousands)	December 31, 2016	December 31, 2015
Raw materials	\$ 19,413	\$ 16,445
Work in process	21,811	12,423
Finished goods ⁽¹⁾	21,774	9,543
Total inventory	<u>\$ 62,998</u>	<u>\$ 38,411</u>

- (1) At December 31, 2016 and 2015, the Company had \$7.1 million and \$3.0 million, respectively, of finished goods inventory located at its third-party warehouse and shipping service provider.

7. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consist of the following:

(In thousands)	December 31, 2016	December 31, 2015
Land	\$ 5,913	\$ 5,913
Building and improvements	152,871	136,797
Furniture, fixture and equipment	251,437	218,718
Leasehold improvements	19,241	16,597
Construction in progress	41,254	51,542
Subtotal	470,716	429,567
Less: accumulated depreciation	(205,931)	(174,748)
Total property, plant and equipment, net	<u>\$ 264,785</u>	<u>\$ 254,819</u>

In April 2015, as part of the Gainesville Transaction, the Company sold certain of its land, buildings and equipment that had a carrying value of \$38.3 million. In April 2014, the Company sold certain of its land, buildings and equipment at its Athlone, Ireland facility that had a carrying value of \$2.2 million, in exchange for \$17.5 million. \$3.0 million of the sale proceeds was placed in escrow pending the completion of certain additional services the Company was obligated to perform, which were completed in December 2015. The deferred sales proceeds were earned as "Gain on sale of property, plant and equipment" as the services were provided. In October 2014, the Company sold certain commercial-scale pulmonary manufacturing equipment located at its Chelsea, Massachusetts manufacturing facility, which had a carrying value of \$0.4 million in exchange for \$30.0 million. The gain of \$29.6 million resulting from this transaction was included in "Gain on sale of property, plant and equipment" in the accompanying statements of operations and comprehensive loss.

Depreciation expense was \$33.3 million, \$27.9 million and \$39.9 million for the years ended December 31, 2016, 2015 and 2014, respectively. Also, during the years ended December 31, 2016, 2015 and 2014, the Company wrote off furniture, fixtures and equipment that had a carrying value of \$0.9 million, \$0.1 million and \$1.4 million, respectively, at the time of disposition.

Amounts included as construction in progress in the consolidated balance sheets primarily include capital expenditures at the Company's manufacturing facility in Wilmington, Ohio. The Company continues to evaluate its manufacturing capacity based on expectations of demand for its products and will continue to record such amounts within construction in progress until such time as the underlying assets are placed into service. The Company continues to periodically evaluate whether facts and circumstances indicate that the carrying value of its long-lived assets to be held and used may not be recoverable.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill and intangible assets consist of the following:

(In thousands)	Weighted Amortizable Life (Years)	Year Ended December 31, 2016			Year Ended December 31, 2015		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Goodwill		\$ 92,873	\$ —	\$ 92,873	\$ 92,873	\$ —	\$ 92,873
Finite-lived intangible assets:							
Collaboration agreements	12	\$ 465,590	\$ (218,318)	\$ 247,272	\$ 465,590	\$ (168,218)	\$ 297,372
NanoCrystal technology	13	74,600	(24,384)	50,216	74,600	(18,294)	56,306
OCR technologies	12	42,560	(21,821)	20,739	42,560	(17,052)	25,508
Total		\$ 582,750	\$ (264,523)	\$ 318,227	\$ 582,750	\$ (203,564)	\$ 379,186

The Company's finite-lived intangible assets consist of collaborative agreements and the NanoCrystal and OCR technologies acquired as part of the EDT acquisition. In April 2015, as part of the Gainesville Transaction, the Company reduced the value of its goodwill by \$1.3 million and sold and/or licensed certain of its collaboration agreements with third-party pharmaceutical companies and Oral Controlled Release ("OCR") technology, which had a gross carrying amount of \$34.1 million and \$23.7 million, respectively.

The Company recorded \$61.0 million, \$57.7 million and \$58.2 million of amortization expense related to its finite-lived intangible assets during the years ended December 31, 2016, 2015 and 2014, respectively. Based on the Company's most recent analysis, amortization of intangible assets included within its consolidated balance sheets at December 31, 2016 is expected to be approximately \$60.0 million, \$60.0 million, \$55.0 million, \$50.0 million and \$45.0 million in the years ending December 31, 2017 through 2021, respectively. Although the Company believes such available information and assumptions are reasonable, given the inherent risks and uncertainties underlying its expectations regarding such future revenues, there is the potential for the Company's actual results to vary significantly from such expectations. If revenues are projected to change, the related amortization of the intangible assets will change in proportion to the change in revenues.

On January 21, 2016, following the Company's press release regarding its ALKS 5461 development program, the Company's stock price declined by 44% from the previous day's closing price, which the Company considered to be an impairment triggering event. To determine if its goodwill was impaired, the Company assessed qualitative factors to determine whether it was necessary to perform the two-step impairment test. Based on the weight of all available evidence, the Company determined that the fair value of its reporting unit more-likely-than-not exceeded its carrying value.

During the three months ended December 31, 2016, the Company performed its annual goodwill impairment test. The Company decided to perform the quantitative two-step goodwill impairment test due to the length of time since it had last performed such a test. The Company worked with a third-party valuation firm and established fair value for the purpose of impairment testing by using an average of the income approach and the market approach. The income approach employs a discounted cash flow model that takes into account (i) assumptions that market participants would use in their estimates of fair value, (ii) current period actual results, and (iii) budgeted results for future periods that have been vetted by senior management. The discounted cash flow model incorporates the same fundamental pricing concepts used to calculate fair value in an acquisition due diligence process and a discount rate that takes into consideration the Company's estimated cost of capital adjusted for the uncertainty inherent in an acquisition. The market approach employs market multiples for comparable publicly traded companies in the pharmaceutical and biotechnology industries obtained from industry sources, taking into consideration the nature, scope and size of the acquired reporting unit. In the market approach, estimates of fair value are established using an average of both revenue and EBITDA multiples, adjusted for the reporting unit's performance relative to peer companies. The Company determined that the fair value of its reporting unit was substantially in excess of its respective carrying value and there was no impairment in the value of this asset as of October 31, 2016.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses consist of the following:

(In thousands)	December 31, 2016	December 31, 2015
Accounts payable	\$ 46,275	\$ 37,401
Accrued compensation	45,622	40,371
Accrued sales discounts, allowances and reserves	60,973	28,449
Accrued taxes	899	1,195
Accrued other	53,286	61,319
Total accounts payable and accrued expenses	<u>\$ 207,055</u>	<u>\$ 168,735</u>

10. LONG-TERM DEBT

Long-term debt consists of the following:

(In thousands)	December 31, 2016	December 31, 2015
Term Loan B-1, due September 25, 2021	\$ 283,666	\$ 287,207
Term Loan B-2, due September 25, 2016	—	62,737
Total	283,666	349,944
Less: current portion	(3,000)	(65,737)
Long-term debt	<u>\$ 280,666</u>	<u>\$ 284,207</u>

Term Loans

Term Loan B-1 was issued with a principal balance of \$300.0 million, interest payable of LIBOR plus 2.75% with a LIBOR floor of 0.75%, and an original issue discount of \$3.0 million. Term Loan B-1 amortizes in equal quarterly amounts of 0.25% of the original principal amount of the loan, with the balance payable at maturity. In October 2016, the Company amended Term Loan B-1, which, among other things, extended the due date from September 25, 2019 to September 25, 2021 (the “Refinancing”).

The Refinancing 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 a debt modification, the Company considered whether creditors remained the same or changed and whether the changes in debt terms were substantial. A change in the debt terms was considered to be substantial if the present value of the remaining cash flows under the new terms of Term Loan B-1 are at least 10% different from the present value of the remaining cash flows under the original terms of Term Loan B-1 (commonly referred to as the “10% Test”). The Company performed a separate 10% Test for each individual creditor participating in the loan syndication. The loans of any creditors no longer participating in the loan syndication were accounted for as a debt extinguishment.

Term Loan B-2 was issued with a principal balance of \$75.0 million, interest payable of LIBOR plus 2.75% with no LIBOR floor, and an original issue discount of \$0.4 million. Term Loan B-2 amortized in equal quarterly amounts of 1.25% of the original principal amount of the loan, with the balance payable at maturity. In September 2016, Term Loan B-2 matured and the Company repaid the outstanding principal balance of \$60.9 million in its entirety.

The Term Loan B-1 is guaranteed by certain subsidiaries of the Company (the “Guarantors”) and is secured by a first priority lien on substantially all of the assets and properties of the Company and the Guarantors (subject to certain exceptions and limitations).

Scheduled maturities with respect to Term Loan B-1 are as follows (in thousands):

Year Ending December 31:	
2017	\$ 3,000
2018	3,000
2019	3,000
2020	3,000
2021	275,250
Total	<u>\$ 287,250</u>

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Beginning on January 1, 2014, the Company became subject to mandatory prepayments of principal if certain excess cash flow thresholds, as defined in Term Loan B-1, were met.

Term Loan B-1 has an incremental facility capacity in an amount of \$140.0 million, plus additional amounts as long as the Company meets certain conditions, including a specified leverage ratio. Term Loan B-1 includes a number of restrictive covenants that, among other things and subject to certain exceptions and baskets, impose operating and financial restrictions on the Company and certain of its subsidiaries. Term Loan B-1 also contains customary affirmative covenants and events of default. The Company was in compliance with its debt covenants at December 31, 2016.

The Refinancing resulted in a \$2.1 million charge in the three months ended December 31, 2016, which was included in "Interest expense" in the accompanying consolidated statement of operations and comprehensive loss.

At December 31, 2016, the Company's balance of unamortized deferred financing costs and unamortized original issue discount costs were \$1.3 million and \$2.3 million, respectively. These costs are being amortized to interest expense over the estimated repayment period of Term Loan B-1 using the effective interest method. During the years ended December 31, 2016, 2015 and 2014, the Company had amortization expense of \$0.9 million, \$0.9 million and \$1.0 million, respectively, related to deferred financing costs and original issue discount.

11. LOSS PER SHARE

Basic loss per ordinary share is calculated based upon net loss available to holders of ordinary shares divided by the weighted average number of shares outstanding. For the years ended December 31, 2016, 2015 and 2014, as the Company was in a net loss position, the diluted loss per share did not assume conversion or exercise of stock options and awards as they would have an anti-dilutive effect on loss per share.

The following potential ordinary equivalent shares were not included in the net loss per ordinary share calculation because the effect would have been anti-dilutive:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Stock options	10,166	9,179	9,260
Restricted stock units	1,320	1,351	1,834
Total	11,486	10,530	11,094

12. SHAREHOLDERS' EQUITY

Share Repurchase Program

On September 16, 2011, the board of directors authorized the continuation of the Alkermes, Inc. share repurchase program to repurchase up to \$215.0 million of the Company's ordinary shares at the discretion of management from time to time in the open market or through privately negotiated transactions. At December 31, 2016, approximately \$101.0 million was available to repurchase ordinary shares pursuant to the repurchase program. All shares repurchased are recorded as treasury stock. The repurchase program has no set expiration date and may be suspended or discontinued at any time. During the years ended December 31, 2016 and 2015, the Company did not acquire any ordinary shares under the repurchase program.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

13. SHARE-BASED COMPENSATION*Share-based Compensation Expense*

The following table presents share-based compensation expense included in the Company's consolidated statements of operations and comprehensive loss:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Cost of goods manufactured and sold	\$ 8,633	\$ 8,880	\$ 6,940
Research and development	24,023	24,201	14,422
Selling, general and administrative	61,740	64,260	38,217
Total share-based compensation expense	<u>\$ 94,396</u>	<u>\$ 97,341</u>	<u>\$ 59,579</u>

During the years ended December 31, 2016, 2015 and 2014, \$1.1 million, \$1.1 million and \$0.8 million, respectively, of share-based compensation expense was capitalized and recorded as "Inventory" in the accompanying consolidated balance sheets.

Share-based Compensation Plans

The Company has two compensation plans pursuant to which awards are currently being made: (i) the 2011 Stock Option and Incentive Plan (the "2011 Plan"); and (ii) the 2008 Stock Option and Incentive Plan (the "2008 Plan"). The Company has two share-based compensation plans pursuant to which outstanding awards have been made, but from which no further awards can or will be made: (i) the 1999 Stock Option Plan (the "1999 Plan"); and (ii) the 2006 Stock Option Plan for Non-Employee Directors (the "2006 Plan"). The 2011 Plan and the 2008 Plan provide for the issuance of non-qualified and incentive stock options, restricted stock, restricted stock units, cash-based awards and performance shares to employees, officers and directors of, and consultants to, the Company in such amounts and with such terms and conditions as may be determined by the compensation committee of the Company's board of directors, subject to provisions of the 2011 Plan and the 2008 Plan.

At December 31, 2016, there were 11.3 million ordinary shares authorized for issuance under the Company's stock plans. The 2011 Plan provides that awards other than stock options will be counted against the total number of shares available under the plan in a 1.8-to-1 ratio and the 2008 Plan provides that awards other than stock options will be counted against the total number of shares available under the plan in a 2-to-1 ratio.

Stock Options

A summary of stock option activity is presented in the following table:

	Number of Shares	Weighted Average Exercise Price
Outstanding, January 1, 2016	12,978,806	\$ 31.86
Granted	2,750,800	\$ 36.16
Exercised	(1,155,030)	\$ 18.02
Forfeited	(311,788)	\$ 56.73
Expired	(60,621)	\$ 55.64
Outstanding, December 31, 2016	<u>14,202,167</u>	\$ 33.17
Exercisable, December 31, 2016	<u>8,878,873</u>	\$ 24.73

The weighted average grant date fair value of stock options granted during the years ended December 31, 2016, 2015 and 2014 was \$17.11, \$28.88 and \$21.44, respectively. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2016, 2015 and 2014 was \$35.0 million, \$127.7 million and \$114.5 million, respectively.

At December 31, 2016, there were 5.2 million stock options expected to vest with a weighted average exercise price of \$47.24 per share, a weighted average contractual remaining life of 8.5 years and an aggregate intrinsic value of \$64.6 million. At December 31, 2016, the aggregate intrinsic value of stock options exercisable was \$281.5 million with a weighted average remaining contractual term of 4.9 years. The number of stock options expected to vest was

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

determined by applying the pre-vesting forfeiture rate to the total outstanding options. The intrinsic value of a stock option is the amount by which the market value of the underlying stock exceeds the exercise price of the stock option.

At December 31, 2016, there was \$52.0 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted average period of 1.9 years. Cash received from option exercises under the Company's award plans during the years ended December 31, 2016, 2015 and 2014 was \$20.3 million, \$45.0 million and \$47.6 million, respectively, related to these awards.

Time-Vested Restricted Stock Units

A summary of time-vested RSU activity is presented in the following table:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested, January 1, 2016	1,545,632	\$ 50.38
Granted	1,264,425	\$ 32.27
Vested	(636,901)	\$ 40.86
Forfeited	(98,740)	\$ 43.46
Unvested, December 31, 2016	<u>2,074,416</u>	\$ 42.60

The weighted average grant date fair value of time-vested RSUs granted during the years ended December 31, 2016, 2015 and 2014 were \$32.27, \$71.16 and \$47.16, respectively. The total fair value of time-vested RSUs that vested during the years ended December 31, 2016, 2015 and 2014, was \$26.0 million, \$21.3 million and \$15.4 million, respectively.

At December 31, 2016, there was \$36.3 million of total unrecognized compensation cost related to unvested time-vested RSUs, which will be recognized over a weighted average remaining contractual term of 1.9 years.

Performance-Vesting Restricted Stock Units

In March 2014, the board of directors awarded RSUs to all employees of the Company. As of the date of the award, fifty percent of which vest upon the occurrence of the earlier of: (i) FDA approval for ARISTADA; or (ii) the achievement of the pre-specified primary endpoint in two phase 3 clinical studies of ALKS 5461; provided that, if such vesting event occurs during the first year after grant, the vesting of the initial 50% of the performance-based restricted stock unit award will not occur until the one-year anniversary of the grant date. The initial portion of these awards vested in October 2015 upon the approval of ARISTADA by the FDA. The remaining fifty percent of the award vested in October, 2016, on the one-year anniversary of the vesting date of the initial portion. In the years ended December 31, 2016 and 2015, the Company recognized cost of goods manufactured and sold of \$1.0 million and \$2.5 million; R&D expense of \$3.1 million and \$3.1 million; and SG&A expense of \$5.6 million and \$8.3 million, respectively, related to these awards.

A summary of performance-vesting RSU activity is presented in the following table:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested, January 1, 2016	280,665	\$ 47.17
Granted	—	\$ —
Vested	(270,409)	\$ 47.17
Forfeited	(10,256)	\$ 47.16
Unvested, December 31, 2016	<u>—</u>	\$ —

The grant date fair value of the performance-vesting RSUs was equal to the market value of the Company's ordinary shares on the date of grant.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

14. COLLABORATIVE ARRANGEMENTS

The Company has entered into various agreements related to its activities to research, develop, manufacture and commercialize product candidates and utilize its technology platforms. The collaboration revenue the Company has earned in the years ended December 31, 2016, 2015 and 2014 is as follows:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
MANUFACTURING AND ROYALTY REVENUE:			
Significant collaborative arrangements	\$ 431,302	\$ 401,236	\$ 365,904
All other collaborative arrangements	55,945	74,052	150,972
Total manufacturing and royalty revenue	\$ 487,247	\$ 475,288	\$ 516,876
RESEARCH AND DEVELOPMENT REVENUE:			
Significant collaborative arrangements	\$ 403	\$ 582	\$ 501
All other collaborative arrangements	1,898	3,437	7,252
Total research and development revenue	\$ 2,301	\$ 4,019	\$ 7,753

The Company's significant collaborative arrangements are described below:

Janssen**INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA**

Under its license agreement with Janssen Pharmaceutica N.V., the Company granted Janssen a worldwide exclusive license under its NanoCrystal technology to develop, commercialize and manufacture INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA and related products.

Under its license agreement, the Company received milestone payments upon the achievement of certain development goals from Janssen; there are no further milestones to be earned under this agreement. The Company receives tiered royalty payments between 5% and 9% of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA net sales in each country where the license is in effect, with the exact royalty percentage determined based on worldwide net sales. The tiered royalty payments consist of a patent royalty and a know-how royalty, both of which are determined on a country-by-country basis. The patent royalty, which equals 1.5% of net sales, is payable until the expiration of the last of the patents claiming the product in such country. The know-how royalty is a tiered royalty of 3.5%, 5.5% and 7.5% on aggregate worldwide net sales of below \$250 million, between \$250 million and \$500 million, and greater than \$500 million, respectively. The know-how royalty is payable for the later of 15 years from first commercial sale of a product in each individual country or March 31, 2019, subject in each case to the expiry of the license agreement. These royalty payments may be reduced in any country based on patent litigation or on competing products achieving certain minimum sales thresholds. The license agreement expires upon the later of (i) March 31, 2019 or (ii) the expiration of the last of the patents subject to the agreement. After expiration, Janssen retains a non-exclusive, royalty-free license to develop, manufacture and commercialize the products.

Janssen may terminate the license agreement in whole or in part upon three months' notice to the Company. The Company and Janssen have the right to terminate the agreement upon a material breach of the other party, which is not cured within a certain time period, or upon the other party's bankruptcy or insolvency.

Under its agreements with Janssen, the Company recognized royalty revenues from the sale of INVEGA SUSTENNA/XEPLION and INVEGA TRINZA/TREVICTA of \$184.2 million, \$149.7 million and \$127.8 million during the years ended December 31, 2016, 2015 and 2014, respectively.

RISPERDAL CONSTA

Under a product development agreement, the Company collaborated with Janssen on the development of RISPERDAL CONSTA. Under the development agreement, Janssen provided funding to the Company for the development of RISPERDAL CONSTA and Janssen is responsible for securing all necessary regulatory approvals for the product.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Under two license agreements, the Company granted Janssen and an affiliate of Janssen exclusive worldwide licenses to use and sell RISPERDAL CONSTA. Under its license agreements with Janssen, the Company receives royalty payments equal to 2.5% of Janssen's net sales of RISPERDAL CONSTA in each country where the license is in effect based on the quarter when the product is sold by Janssen. This royalty may be reduced in any country based on lack of patent coverage and significant competition from generic versions of the product. Janssen can terminate the license agreements upon 30 days' prior written notice to the Company. Either party may terminate the license agreements by written notice following a breach which continues for 90 days after the delivery of written notice thereof or the other party's insolvency. The licenses granted to Janssen expire on a country-by-country basis upon the later of: (i) the expiration of the last patent claiming the product in such country; or (ii) 15 years after the date of the first commercial sale of the product in such country, provided that in no event will the license granted to Janssen expire later than the twentieth anniversary of the first commercial sale of the product in such country, with the exception of certain countries where the fifteen-year limitation shall pertain regardless. After expiration, Janssen retains a non-exclusive, royalty-free license to manufacture, use and sell RISPERDAL CONSTA. The Company exclusively manufactures RISPERDAL CONSTA for commercial sale. Under its manufacturing and supply agreement with Janssen, the Company records manufacturing revenues when product is shipped to Janssen, based on 7.5% of Janssen's net unit sales price for RISPERDAL CONSTA.

The manufacturing and supply agreement terminates on expiration of the license agreements. In addition, either party may terminate the manufacturing and supply agreement upon a material breach by the other party, which is not resolved within 60 days after receipt of a written notice specifying the material breach or upon written notice in the event of the other party's insolvency or bankruptcy. Janssen may terminate the agreement upon six months' written notice to the Company. In the event that Janssen terminates the manufacturing and supply agreement without terminating the license agreements, the royalty rate payable to the Company on Janssen's net sales of RISPERDAL CONSTA would increase from 2.5% to 5.0%.

Under its agreements with Janssen, the Company recognized manufacturing revenues related to RISPERDAL CONSTA of \$64.9 million, \$76.5 million and \$91.0 million during the years ended December 31, 2016, 2015 and 2014, respectively. Under its agreements with Janssen, the Company recognized royalty revenues related to RISPERDAL CONSTA of \$22.3 million, \$24.2 million and \$29.6 million during the years ended December 31, 2016, 2015 and 2014, respectively.

Acorda

Under an amended and restated license agreement, the Company granted Acorda an exclusive worldwide license to use and sell and, solely in accordance with its supply agreement, to make or have made AMPYRA/FAMPYRA. Under its license agreement with Acorda, the Company receives certain commercial and development milestone payments, license revenues and a royalty of approximately 10% based on net sales of AMPYRA/FAMPYRA by Acorda or its sub-licensee, Biogen. This royalty payment may be reduced in any country based on lack of patent coverage, competing products achieving certain minimum sales thresholds and whether Alkermes manufactures the product.

In June 2009, the Company entered into an amendment of the amended and restated license agreement and the supply agreement with Acorda and, pursuant to such amendment, consented to the sublicense by Acorda to Biogen of Acorda's rights to use and sell FAMPYRA in certain territories outside of the U.S. (to the extent that such rights were to be sublicensed to Biogen) pursuant to its separate collaboration and license agreement with Acorda. Under this amendment, the Company agreed to modify certain terms and conditions of the amended and restated license agreement and the supply agreement with Acorda to reflect the sublicense by Acorda to Biogen.

Acorda has the right to terminate the amended and restated license agreement upon 90 days' written notice. The Company has the right to terminate the amended and restated license agreement for countries in which Acorda fails to launch a product within a specified time after obtaining the necessary regulatory approval or fails to file regulatory approvals within a commercially reasonable time after completion of and receipt of positive data from all pre-clinical and clinical studies required for filing a marketing authorization application. Either party has the right to terminate the amended and restated license agreement by written notice following a breach of the other party, which is not cured within a certain time-period, or upon the other party's entry into bankruptcy or dissolution proceedings. If the Company terminates Acorda's license in any country, the Company is entitled to a license from Acorda of its patent rights and know-how relating to the product as well as the related data, information and regulatory files, and to market the product in the applicable country, subject to an initial payment equal to Acorda's cost of developing such data, information and

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

regulatory files and to ongoing royalty payments to Acorda. Subject to the termination of the amended and restated license agreement, licenses granted under the amended and restated license agreement terminate on a country-by-country basis on the later of: (i) September 2018; or (ii) the expiration of the last to expire of our patents or the existence of a threshold level of competition in the marketplace.

Under its commercial manufacturing supply agreement with Acorda, the Company manufactures and supplies AMPYRA/FAMPYRA for Acorda (and its sub-licensee, Biogen). Under the terms of the agreement, Acorda may obtain up to 25% of its total annual requirements of product from a second-source manufacturer. The Company receives royalties equal to 8% of net selling price for all product manufactured by it and a compensating payment for product manufactured and supplied by a third party. The Company may terminate the commercial manufacturing supply agreement upon 12 months' prior written notice to Acorda and either party may terminate the commercial manufacturing supply agreement following a material and uncured breach of the commercial manufacturing supply or license agreement or the entry into bankruptcy or dissolution proceedings by the other party. In addition, subject to early termination of the commercial manufacturing supply agreement noted above, the commercial manufacturing supply agreement terminates upon the expiry or termination of the license agreement.

The Company is entitled to receive the following milestone payments under its amended and restated license agreement with Acorda for each of the third and fourth new indications of the product developed thereunder upon the:

- initiation of a phase 3 clinical trial: \$1.0 million;
- acceptance of a New Drug Application ("NDA") by the FDA: \$1.0 million;
- approval of the NDA by the FDA: \$1.5 million; and
- the first commercial sale: \$1.5 million.

In January 2011, the Company entered into a development and supplemental agreement to its amended and restated license agreement and commercial manufacturing supply agreement with Acorda. Under the terms of this agreement, the Company granted Acorda the right, either with the Company or with a third party, in each case in accordance with certain terms and conditions, to develop new formulations of dalfampridine or other aminopyridines. Under the terms of the agreement, Acorda has the right to select either a formulation developed by the Company or by a third party for commercialization.

The Company is entitled to development fees it incurs in developing formulations under the development and supplemental agreement and, if Acorda selects and commercializes any such formulation, to milestone payments (for new indications if not previously paid), license revenues and royalties in accordance with its amended and restated license agreement for the product, and either manufacturing fees as a percentage of net selling price for product manufactured by the Company or compensating fees for product manufactured by third parties.

If, under the development and supplemental agreement, Acorda selects a formulation not developed by the Company, then the Company will be entitled to various compensation payments and has the first option to manufacture such third-party formulation. The development and supplemental agreement expires upon the expiry or termination of the amended and restated license agreement and may be earlier terminated by either party following an uncured breach of the agreement by the other party.

Acorda's financial obligations under this development and supplemental agreement continue for a minimum of ten years from the first commercial sale of such new formulation, and may extend for a longer period of time, depending on the intellectual property rights protecting the formulation, regulatory exclusivity and/or the absence of significant market competition. These financial obligations survive termination.

During the years ended December 31, 2016, 2015 and 2014, the Company recognized \$114.2 million, \$104.7 million and \$81.3 million, respectively, of revenues from its arrangements with Acorda.

AstraZeneca

In May 2000, the Company entered into a development and license agreement with Amylin for the development of exendin products falling within the scope of its patents, including the once-weekly formulation of exenatide marketed as BYDUREON. In August 2012, Bristol-Myers acquired Amylin. From August 2012 through January 2014, Bristol-Myers and AstraZeneca jointly developed and commercialized Amylin's exendin products, including BYDUREON, through

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

their diabetes collaboration. In April 2013, Bristol-Myers completed its assumption of all global commercialization responsibility related to the marketing of BYDUREON from Amylin's former collaborative partner, Eli Lilly & Company. In February 2014, AstraZeneca acquired sole ownership of the intellectual property and global rights related to BYDUREON and Amylin's other exendin products, including Amylin's rights and obligations under the Company's development and license agreement.

Pursuant to the development and license agreement, AstraZeneca has an exclusive, worldwide license to the Company's polymer-based microsphere technology for the development and commercialization of injectable extended-release formulations of exendins and other related compounds. The Company receives funding for research and development and will also receive royalty payments based on future net product sales. Upon the achievement of certain development and commercialization goals, the Company received milestone payments consisting of cash and warrants for Amylin common stock and there are no further milestones to be earned under the agreement. In October 2005 and in July 2006, the Company amended the development and license agreement. Under the amended agreement: (i) the Company is responsible for formulation and is principally responsible for non-clinical development of any products that may be developed pursuant to the agreement and for manufacturing these products, except to the extent manufacturing rights have been transferred to Amylin; and (ii) the Company transferred certain of its technology related to the manufacture of BYDUREON to Amylin and agreed to the manufacture of BYDUREON by Amylin.

Under the Company's amended agreement, AstraZeneca is responsible for conducting clinical trials, securing regulatory approvals, and commercializing exenatide products including BYDUREON on a worldwide basis.

Until December 31, 2021, the Company will receive royalties equal to 8% of net sales from the first 40 million units of BYDUREON sold in any particular calendar year and 5.5% of net sales from units sold beyond the first 40 million units for that calendar year. Thereafter, during the term of the development and license agreement, the Company will receive royalties equal to 5.5% of net sales of products sold. The Company was entitled to, and received a \$7.0 million milestone payment related to the first commercial sale of BYDUREON in the EU and a \$7.0 million milestone payment related to the first commercial sale of BYDUREON in the U.S.

The development and license agreement expires on the later of: (i) 10 years from the first commercial sale of the last of the products covered by the development and license agreement; or (ii) the expiration or invalidation of all of the Company's patents licensed under this agreement. Upon expiration, all licenses become non-exclusive and royalty-free. AstraZeneca may terminate the development and license agreement for any reason upon 180 days' written notice to the Company. In addition, either party may terminate the development and license agreement upon a material default or breach by the other party that is not cured within 60 days after receipt of written notice specifying the default or breach. Alkermes may terminate the development and license agreement upon AstraZeneca's insolvency or bankruptcy.

During the years ended December 31, 2016, 2015 and 2014, the Company recognized \$45.6 million, \$46.1 million and \$36.6 million, respectively, of revenues from its arrangements with respect to BYDUREON.

15. INCOME TAXES

The Company's (benefit) provision for income taxes is comprised of the following:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Current income tax provision:			
U.S. federal	\$ 3,163	\$ 29,959	\$ 35,147
U.S. state	480	1,615	880
Ireland	—	77	820
Rest of world	103	94	95
Deferred income tax (benefit):			
U.S. federal	(9,278)	(18,336)	(2,654)
U.S. state	(269)	(604)	(565)
Ireland	(142)	(9,647)	(17,691)
Total tax (benefit) provision	\$ (5,943)	\$ 3,158	\$ 16,032

The current income tax provision for the years ended December 31, 2016, 2015 and 2014 was primarily due to U.S. federal and state taxes on income earned by the Company in the U.S. The favorable change in current income taxes in

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

the year ended December 31, 2016, as compared to 2015, was due to a reduction in income earned in the U.S. A \$4.2 million, \$28.6 million and an \$32.4 million benefit was recorded to additional paid-in capital in the years ended December 31, 2016, 2015 and 2014, respectively, with a corresponding reduction to current taxes payable. This was primarily due to the utilization of current year tax benefits and NOL carryforwards derived from the exercise of employee stock options and vesting of restricted stock units.

The deferred income tax benefit for the year ended December 31, 2016, was primarily due to current year temporary differences in the U.S. The deferred income tax benefit for the years ended December 31, 2015 and 2014 was primarily due to current year temporary differences in the U.S. and the creation of a deferred tax asset in Ireland for current year operating losses.

No provision for income tax has been provided on undistributed earnings of the Company's foreign subsidiaries because such earnings may be repatriated to Ireland without incurring any tax liability. Cumulative unremitted earnings of overseas subsidiaries totaled approximately \$133.7 million at December 31, 2016.

The distribution of the Company's loss before the provision for income taxes by geographical area consisted of the following:

(In thousands)	Year Ended December 31,		
	2016	2015	2014
Ireland	\$ (212,198)	\$ (289,105)	\$ (159,538)
U.S.	(18,935)	38,398	118,754
Rest of world	16,746	26,702	26,755
Loss before (benefit) provision for income taxes	<u>\$ (214,387)</u>	<u>\$ (224,005)</u>	<u>\$ (14,029)</u>

The components of the Company's net deferred tax assets (liabilities) were as follows:

(In thousands)	December 31, 2016	December 31, 2015
Deferred tax assets:		
Irish NOL carryforwards	\$ 156,147	\$ 128,635
Share-based compensation	52,479	42,519
Other	19,841	19,891
Less: valuation allowance	(141,859)	(106,746)
Total deferred tax assets	<u>86,608</u>	<u>84,299</u>
Deferred tax liabilities:		
Intangible assets	(20,805)	(26,935)
Property, plant and equipment	(17,541)	(15,217)
Other	(826)	(1,761)
Total deferred tax liabilities	<u>(39,172)</u>	<u>(43,913)</u>
Net deferred tax assets	<u>\$ 47,436</u>	<u>\$ 40,386</u>

The activity in the valuation allowance associated with deferred taxes consisted of the following:

(In thousands)	Balance at Beginning of Period	Additions ⁽¹⁾	Deductions ⁽²⁾	Balance at End of Period
Deferred tax asset valuation for the year ended December 31, 2014	\$ (69,659)	\$ (12,867)	\$ 10,730	\$ (71,796)
Deferred tax asset valuation for the year ended December 31, 2015	\$ (71,796)	\$ (34,950)	\$ —	\$ (106,746)
Deferred tax asset valuation for the year ended December 31, 2016	<u>\$ (106,746)</u>	<u>\$ (35,113)</u>	<u>\$ —</u>	<u>\$ (141,859)</u>

- (1) The additions in each of the periods presented relate primarily to Irish NOL's.
- (2) The reduction in the year ended December 31, 2014 relates primarily to the release of valuation allowances held against U.S. deferred tax assets. \$9.1 million of the decrease to the valuation allowance was credited against additional paid-in capital.

At December 31, 2016 and 2015, the Company maintained a valuation allowance of \$4.8 million and \$2.6 million, respectively, against certain U.S. state deferred tax assets and \$137.1 million and \$104.2 million, respectively, against

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

certain Irish deferred tax assets as the Company has determined that it is more-likely-than-not that these net deferred tax assets will not be realized. If the Company demonstrates consistent profitability in the future, the evaluation of the recoverability of these deferred tax assets could change and the remaining valuation allowances could be released in part or in whole.

Subsequent to the adoption of Accounting Standards Codification (“ASC”) 718 on April 1, 2006, an additional \$64.0 million of tax benefits from stock option exercises and the vesting of restricted stock units, in the form of NOL carryforwards and tax credit carryforwards have not been recognized in the financial statements. As a result of the expected adoption of ASU 2016-9 in the first quarter of 2017, the Company anticipates that it will record a cumulative-effect adjustment to retained earnings of \$61.5 million to record a net deferred tax asset relative to these tax attribute carryforwards.

As of December 31, 2016, the Company had \$1.1 billion of Irish NOL carryforwards, \$8.0 million of U.S. federal NOL carryforwards, \$7.4 million of state NOL carryforwards, \$53.1 million of federal R&D credits, \$9.0 million of alternative minimum tax (“AMT”) credits and \$9.4 million of state tax credits which will either expire on various dates through 2036 or can be carried forward indefinitely. These loss carryforwards and credits are available to reduce certain future Irish and foreign taxable income and tax, respectively, if any. These loss carryforwards and credits are subject to review and possible adjustment by the appropriate taxing authorities. These loss carryforwards and credits, which may be utilized in any future period, may be subject to limitations based upon changes in the ownership of the company's stock. The Company has performed a review of ownership changes in accordance with the U.S. Internal Revenue Code and the Company has determined that it is more-likely-than-not that, as a result of the Business Combination, the Company experienced a change of ownership. As a consequence, the Company's U.S. federal NOL carryforwards and tax credit carryforwards are subject to an annual limitation of \$127.0 million.

In addition to deferred tax assets and liabilities, the Company recorded deferred charges related to certain intercompany asset transfers. The deferred charges will either be amortized as income tax expense over the economic life of the assets or recorded to expense when the assets are sold to a third party. Deferred charges are included in the following accounts:

(In thousands)	December 31, 2016	December 31, 2015
Prepaid expenses and other current assets	\$ 188	\$ 188
Other assets - long-term	862	1,050
Total deferred charges	\$ 1,050	\$ 1,238

A reconciliation of the Company's statutory tax rate to its effective tax rate is as follows:

(In thousands, except percentage amounts)	Year Ended December 31,		
	2016	2015	2014
Statutory tax rate	12.5 %	12.5 %	12.5 %
Income tax provision at statutory rate	\$ (26,798)	\$ (28,001)	\$ (1,754)
Change in valuation allowance	35,290	37,312	11,150
Foreign rate differential ⁽¹⁾	2,723	13,951	28,600
Share-based compensation	2,072	738	1,801
Uncertain tax positions	910	1,213	1,440
U.S. state income taxes, net of U.S. federal benefit	(2)	557	727
Intercompany amounts ⁽²⁾	(5,209)	(3,649)	(7,459)
Irish rate differential ⁽³⁾	(5,231)	(7,318)	(4,775)
R&D credit	(10,572)	(12,193)	(14,013)
Other permanent items ⁽⁴⁾	874	548	315
Income tax (benefit) provision	\$ (5,943)	\$ 3,158	\$ 16,032
Effective tax rate	2.8 %	(1.4)%	(114.2)%

- (1) Represents income or losses of non-Irish subsidiaries, including U.S. subsidiaries, subject to tax at a rate other than the Irish statutory rate.
- (2) Intercompany amounts include cross-territory eliminations, the pre-tax effect of which has been eliminated in arriving at the Company's consolidated loss before taxes.

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- (3) Represents income or losses of Irish companies subject to tax at a rate other than the Irish statutory rate.
(4) Other permanent items include, but are not limited to, non-deductible meals and entertainment expenses, non-deductible lobbying expenses and non-deductible compensation of senior officers of the Company.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(In thousands)	Unrecognized Tax Benefits
Balance, December 31, 2013	\$ 1,125
Additions based on tax positions related to prior periods	363
Additions based on tax positions related to the current period	1,077
Balance, December 31, 2014	\$ 2,565
Additions based on tax positions related to prior periods	—
Additions based on tax positions related to the current period	1,213
Balance, December 31, 2015	\$ 3,778
Additions based on tax positions related to prior periods	(7)
Additions based on tax positions related to the current period	917
Balance, December 31, 2016	<u>\$ 4,688</u>

The unrecognized tax benefits at December 31, 2016, if recognized, would affect the Company's effective tax rate. The Company does not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next 12 months. The Company has elected to include interest and penalties related to uncertain tax positions as a component of its provision for taxes. For the years ended December 31, 2016, 2015 and 2014, the Company's accrued interest and penalties related to uncertain tax positions were not material.

The Company's major taxing jurisdictions include Ireland and the U.S. (federal and state). These jurisdictions have varying statutes of limitations. In the U.S., the 2013 through 2016 fiscal years remain subject to examination by the respective tax authorities. In Ireland, the years 2012 to 2016 remain subject to examination by the Irish tax authorities. Additionally, because of the Company's Irish and U.S. loss carryforwards and credit carryforwards, certain tax returns from fiscal years 1999 onward may also be examined. These years generally remain open for three to four years after the loss carryforwards and credit carryforwards have been utilized.

The year ended December 31, 2014 for Alkermes U.S. Holdings, Inc. is currently under examination by the Internal Revenue Service. The years ended December 31, 2015 and 2014 and the nine months ended December 31, 2013 for Alkermes U.S. Holdings, Inc. are currently under examination by the State of New York.

16. COMMITMENTS AND CONTINGENCIES

Lease Commitments

The Company leases certain of its offices, research laboratories and manufacturing facilities under operating leases that expire through the year 2022. Certain of the leases contain provisions for extensions of up to ten years. These lease commitments are primarily related to the Company's corporate headquarters in Ireland and its corporate office and R&D facility in Massachusetts. As of December 31, 2016, the total future annual minimum lease payments under the Company's non-cancelable operating leases are as follows:

(In thousands)	Payment Amount
Year Ended:	
2017	\$ 6,055
2018	6,157
2019	6,210
2020	4,010
2021	1,719
Thereafter	666
	<u>\$ 24,817</u>

Rent expense related to operating leases charged to operations was \$8.1 million, \$7.2 million and \$5.9 million for the years ended December 31, 2016, 2015 and 2014, respectively. The amounts in 2015 and 2014 were net of sublease

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

income of \$0.7 million. In addition to its lease commitments, the Company had open purchase orders totaling \$432.0 million at December 31, 2016.

In December 2015, the Company entered into an agreement pertaining to its leased manufacturing facility located in Chelsea, Massachusetts, assigning its right, title and interest in the lease to Civitas. The Company had recognized an asset retirement obligation in connection with this leased property and upon entering into the agreement with Civitas, reversed this liability. As a result, in the year ended December 31, 2015, the Company recorded a \$2.4 million gain within operating loss in the accompanying consolidated statements of operations and comprehensive loss.

Litigation

From time to time, the Company may be subject to legal proceedings and claims in the ordinary course of business. On a quarterly basis, the Company reviews the status of each significant matter and assesses its potential financial exposure. If the potential loss from any claim, asserted or unasserted, or legal proceeding is considered probable and the amount can be reasonably estimated, the Company would accrue a liability for the estimated loss. Because of uncertainties related to claims and litigation, accruals are based on the Company's best estimates based on available information. On a periodic basis, as additional information becomes available, or based on specific events such as the outcome of litigation or settlement of claims, the Company may reassess the potential liability related to these matters and may revise these estimates, which could result in material adverse adjustments to the Company's operating results. At December 31, 2016, there are no potential losses from claims, asserted or unasserted, or legal proceedings the Company feels are probable of occurring.

ARISTADA

On July 13, 2015, Otsuka Pharmaceutical Development & Commercialization, Inc. ("Otsuka PD&C") filed a Citizen Petition with the FDA which requested that the FDA refuse to approve the NDA for ARISTADA or delay approval of such NDA until the exclusivity rights covering long-acting aripiprazole expire in December 2017. The FDA approved ARISTADA on October 5, 2015 and, concurrent with such approval, denied Otsuka PD&C's Citizen Petition.

On October 15, 2015, Otsuka Pharm. Co., Otsuka PD&C, and Otsuka America Pharmaceutical, Inc. (collectively, "Otsuka") filed an action for declaratory and injunctive relief with the U.S. District Court for the District of Columbia (the "DC Court") against Sylvia Mathews Burwell, Secretary, U.S. Department of Health and Human Services; Dr. Stephen Ostroff, Acting Commissioner, FDA; and the FDA, requesting that the DC Court (a) expedite the legal proceedings; (b) declare that the FDA's denial of Otsuka's claimed exclusivity rights and approval of the ARISTADA NDA were arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law; (c) vacate FDA's approval of the ARISTADA NDA and vacate any FDA decisions or actions underlying or supporting or predicated upon that approval; (d) declare that Otsuka's claimed exclusivity rights preclude FDA from granting approval of the Alkermes NDA until the expiration of such exclusivity rights in December 2017; and (e) grant any and all other, further, and additional relief, including all necessary and appropriate protective preliminary, interim, or permanent relief, as the nature of the cause may require, including all necessary and appropriate declarations of rights and injunctive relief. The Company successfully intervened in, and received the DC Court's approval to become a party to, this action.

On July 28, 2016, the DC Court issued an opinion in favor of the Company and the FDA, affirming in all respects FDA's decision to approve ARISTADA for the treatment of schizophrenia, and denying the action filed by Otsuka for declaratory and injunctive relief. Otsuka has filed an appeal of the DC Court's decision with the U.S. Court of Appeals for the District of Columbia Circuit ("DC Circuit") asking the DC Circuit to reverse the DC Court's decision, vacate FDA's approval of the ARISTADA NDA and remand the case to the DC Court for consideration of any appropriate equitable remedy for Otsuka's lost exclusivity. The DC Circuit's appellate hearing for this matter occurred on December 12, 2016. The Company believes Otsuka's action is without merit and will continue to vigorously defend ARISTADA against such action. For information about risks relating to this action, see "Item 1A—Risk Factors" of this Annual Report and specifically the section entitled "Citizen Petitions and other actions filed with, or litigation against, the FDA or other regulatory agencies or litigation against Alkermes may negatively impact the approval of our products and our business."

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

AMPYRA

AMPYRA ANDA Litigation

Ten separate Paragraph IV Certification Notices have been submitted to the Company and/or its partner Acorda from Accord Healthcare, Inc. (“Accord”); Actavis Laboratories FL, Inc. (“Actavis”); Alkem Laboratories Ltd. (“Alkem”); Apotex Corporation and Apotex, Inc. (collectively, “Apotex”); Aurobindo Pharma Ltd. (“Aurobindo”); Mylan Pharmaceuticals, Inc. (“Mylan”); Par Pharmaceutical, Inc. (“Par”); Roxane Laboratories, Inc.; Sun Pharmaceutical Industries Limited and Sun Pharmaceuticals Industries Inc. (collectively, “Sun”); and Teva Pharmaceuticals USA, Inc., advising that each of these companies had submitted an ANDA to the FDA seeking marketing approval for generic versions of AMPYRA (dalfampridine) Extended Release Tablets, 10 mg. The ANDA filers have challenged the validity of the Orange Book-listed patents for AMPYRA, and they have also asserted that their generic versions do not infringe certain claims of these patents. In response, the Company and/or Acorda filed lawsuits against the ANDA filers in the U.S. District Court for the District of Delaware (the “Delaware Court”) asserting infringement of U.S. Patent Nos. 5,540,938 (which the Company owns), 8,007,826, 8,354,437, 8,440,703, and 8,663,685 (which are owned by Acorda). Requested judicial remedies include recovery of litigation costs and injunctive relief. Lawsuits with eight of the ANDA filers have been consolidated into a single case. The Delaware Court held a bench trial that concluded on September 23, 2016. All lawsuits were filed within 45 days from the date of receipt of each of the Paragraph IV Certification Notices. As a result, a 30-month statutory stay of approval period applies to each of the ANDAs under the Hatch-Waxman Act. The 30-month stay starts from January 22, 2015, which is the end of the new chemical entity exclusivity period for AMPYRA. This stay restricts the FDA from approving the ANDAs until July 2017 at the earliest, unless a Federal district court issues a decision adverse to all of the asserted Orange Book-listed patents prior to that date.

Mylan challenged the jurisdiction of the Delaware Court with respect to the Delaware action. In January 2015, the Delaware Court denied Mylan’s motion to dismiss. Subsequently, in January 2015, the Delaware Court granted Mylan’s request for an interlocutory appeal of its jurisdictional decision to the U.S. Court of Appeals for the Federal Circuit (the “Federal Circuit”). In March 2016, the Federal Circuit denied Mylan’s appeal, and the case remains in the Delaware Court. Mylan requested the Federal Circuit to reconsider its decision. However, on June 20, 2016, the Federal Circuit denied Mylan’s request. Mylan filed an appeal with the U.S. Supreme Court, which was denied. Due to Mylan’s motion to dismiss, the Company, along with Acorda, also filed another patent infringement suit against Mylan in the U.S. District Court for the Northern District of West Virginia asserting the same U.S. Patents and requesting the same judicial relief as in the Delaware action. In December 2014, the Company, along with Acorda, filed a motion in the Northern District of West Virginia to stay that action in deference to the Delaware proceeding. In February 2014, the District Court for the Northern District of West Virginia granted the Company’s motion to stay the proceeding. The patent infringement case against Mylan, however, is still proceeding in Delaware along with the cases against the other ANDA filers.

The Company and/or Acorda have entered into a settlement agreement with each of Accord, Actavis, Alkem, Apotex, Aurobindo, Par and Sun (collectively, the “Settling ANDA Filers”) to resolve the patent litigation that the Company and/or Acorda brought against the Settling ANDA Filers in the Delaware Court as described above. As a result of the settlement agreements, the Settling ANDA Filers will be permitted to market a generic version of AMPYRA in the U.S. at a specified date in 2025, or potentially earlier under certain circumstances. The parties have submitted their respective settlement agreements to the Federal Trade Commission and the Department of Justice, as required by federal law. The settlements with the Settling ANDA Filers do not resolve pending patent litigation that the Company and Acorda brought against the other ANDA filers, as described in this Annual Report.

The Company intends to vigorously enforce its intellectual property rights. For information about risks relating to the AMPYRA Paragraph IV litigations and other proceedings see “Item 1A—Risk Factors” in this Annual Report and specifically the section entitled “We face claims against our intellectual property rights and competition from generic drug manufacturers.”

AMPYRA IPR Proceedings

A hedge fund (acting with affiliated entities and individuals and proceeding under the name of the Coalition for Affordable Drugs) has filed inter partes review (“IPR”) petitions with the U.S. Patent and Trademark Office (the “USPTO”), challenging U.S. Patent Nos. 8,663,685; 8,440,703; 8,354,437 and 8,007,826 (which are owned by

ALKERMES PLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Acorda). In March 2016, the USPTO's Patent Trials and Appeal Board instituted the IPR. Oral argument for the IPR was held on January 19, 2017, and a ruling on the IPR petitions is expected in March 2017. The challenged patents are four of the five AMPYRA Orange-Book listed patents. The 30-month statutory stay period based on patent infringement suits filed by the Company and Acorda against ANDA filers is not impacted by these filings, and remains in effect.

BYDUREON, RISPERDAL CONSTA AND VIVITROL IPR Proceedings

On June 3, 2016, Luye Pharma Group Ltd., Luye Pharma (USA) Ltd., Shandong Luye Pharmaceutical Co., Ltd., and Nanjing Luye Pharmaceutical Co., Ltd. (collectively, "Luye") filed two separate IPR petitions challenging U.S. Patent Number 6,667,061 (the "061 Patent"), which is an Orange Book-listed patent for each of BYDUREON, RISPERDAL CONSTA and VIVITROL. The Company opposed the institution of these IPR petitions. On November 30, 2016, the USPTO's Patent Trials and Appeal Board instituted one of Luye's IPR petitions and denied instituting Luye's other IPR petition. Oral argument for the instituted IPR is currently scheduled for August 28, 2017. A decision on the instituted IPR would be expected, pursuant to the statutory time frame, by November 30, 2018.

The Company will vigorously defend the 061 Patent in the IPR proceedings. For information about risks relating to the 061 Patent IPR proceedings see "Item 1A—Risk Factors" in this Annual Report and specifically the sections entitled "Patent protection for our products is important and uncertain" and "Uncertainty over intellectual property in the pharmaceutical industry has been the source of litigation, which is inherently costly and unpredictable."

FIRST AMENDMENT TO PURCHASE AND SALE AGREEMENT

This First Amendment (this “Amendment”) to the Purchase and Sale Agreement (the “Agreement”), dated as of March 7, 2015, by and among Alkermes Pharma Ireland Limited, a private limited company incorporated in Ireland (“APIL”), Daravita Limited, a private limited company incorporated in Ireland (“Daravita”), Eagle Holdings USA, Inc., a Delaware corporation (“Eagle Holdings”), and together with APIL, “Sellers”), Recro Pharma, Inc., a Pennsylvania corporation (“Recro”) and Recro Gainesville LLC, a Massachusetts limited liability company and wholly-owned subsidiary of Recro (as successor to Recro Pharma LLC, together with Recro, “Purchasers”), is dated December 8, 2016.

RECITALS

WHEREAS, Sellers and Purchasers entered into the Agreement as of March 7, 2015; and

WHEREAS, pursuant to Section 11.9 of the Agreement, Sellers and Purchasers desire to amend the Agreement as set forth herein.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, and intending to be legally bound, the Parties hereby agree as follows:

ARTICLE I

DEFINITIONS

1.1 Defined Terms. Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement.

ARTICLE II

AMENDMENTS

2.1 Exhibit E. Section 2.1(a) of Exhibit E is hereby amended and restated as follows:

“(a) Development Milestone Earn-Out Consideration.

(i) The following amounts (“Development Milestone Earn-Out Consideration”) shall be payable in accordance with Section 2.8 of the Agreement and this Exhibit E upon achievement of the following events (“Development Milestones”) by Purchaser and its Affiliates, licensees and sublicensees, and shall be non-refundable and non-creditable and not subject to deduction or set-off:

<i>Development Milestone</i>	<i>Amount of Development Milestone Earn-Out Consideration (U.S. Dollars)</i>
Submission of an NDA for the first Earn-Out Product (the " <u>Submission Milestone</u> ")	\$10,000,000.00
Approval of an NDA for the first Earn-Out Product (the " <u>Approval Milestone</u> ")	\$30,000,000.00

(ii) Subject to Section 2.1(a)(iii) below, Purchaser shall notify and pay to APIL each Development Milestone Earn-Out Consideration payment within thirty (30) calendar days after the occurrence of the corresponding Development Milestone.

(iii) Purchaser may, at Purchaser's option, elect to defer payment of the Ten Million U.S. Dollars (\$10,000,000.00) otherwise due upon achievement of the Submission Milestone by providing written notice of such election to APIL within thirty (30) calendar days after achievement of the Submission Milestone ("Deferral Option"). If Purchaser chooses the Deferral Option, Purchaser shall pay Forty Five Million U.S. Dollars (\$45,000,000.00) within thirty (30) calendar days of the occurrence of the Approval Milestone in satisfaction of all Development Milestone Earn-Out Consideration obligations. Each payment made pursuant to Section 2.1(a) of this Exhibit E shall be made by wire transfer of immediately available funds to such account or accounts as are designated in writing by APIL."

ARTICLE III

GENERAL

3.1 Effect of Amendment. The Agreement is amended as set forth in this Amendment. Except as specifically provided for in this Amendment, all of the terms and conditions of the Agreement shall remain in full force and effect. Each reference in the Agreement to "hereof," "hereunder" and "this Agreement" shall, from and after the date of this Amendment, refer to the Agreement, as amended by this Amendment. Each reference in the Agreement to the "date of the Agreement" or similar references (such as "to the date hereof") shall refer to March 7, 2015.

3.2 Miscellaneous Provisions. The provisions of Article XI of the Agreement shall apply mutatis mutandis to this Amendment and to the Agreement as modified by this Amendment.

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IN WITNESS WHEREOF, this Amendment has been signed by or on behalf of each of the parties set forth below as of the day first above written.

ALKERMES PHARMA IRELAND LIMITED

By: /s/ Shane Cooke
Name: Shane Cooke
Title: Director

DARAVITA LIMITED

By: /s/ Shane Cooke
Name: Shane Cooke
Title: Director

EAGLE HOLDINGS USA, INC.

By: /s/ Michael Landine
Name: Michael Landine
Title: Director

RECRO PHARMA, INC.

By: /s/ Gerri Henwood
Name: Gerri Henwood
Title: President and Chief Executive Officer

RECRO GAINESVILLE LLC

By: /s/ Scott Rizzo
Name: Scott Rizzo
Title: President

[Signature Page to First Amendment to Purchase and Sale Agreement]

SUBSIDIARIES

Name	Jurisdiction
Alkermes Ireland Holdings Limited	Ireland
Alkermes Pharma Ireland Limited	Ireland
Alkermes Finance Ireland Limited	Ireland
Daravita Pharma Ireland Limited	Ireland
Alkermes Finance Ireland (No. 3) Limited	Ireland
Alkermes Science Four Limited	Ireland
Alkermes Science Five Limited	Ireland
Alkermes Science Six Limited	Bermuda
Daravita Limited	Ireland
Alkermes Finance S.à r.l.	Luxembourg
Alkermes Finance Ireland (No. 2) Limited	Ireland
Alkermes U.S. Holdings, Inc.	Delaware
Alkermes, Inc.	Pennsylvania
Alkermes Controlled Therapeutics, Inc.	Pennsylvania
Alkermes Europe, Ltd.	United Kingdom

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-192256) and Form S-8 (Nos. 333-179545, 333-184621, 333-200777 and 333-214952) of Alkermes plc of our report dated February 17, 2017 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
February 17, 2017

CERTIFICATIONS

I, Richard F. Pops, certify that:

1. I have reviewed this annual report on Form 10-K of Alkermes plc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Richard F. Pops

Richard F. Pops

*Chairman and Chief Executive Officer
(Principal Executive Officer)*

February 17, 2017

CERTIFICATIONS

I, James M. Frates, certify that:

1. I have reviewed this annual report on Form 10-K of Alkermes plc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ James M. Frates

James M. Frates
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

February 17, 2017

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Alkermes plc (the "Company") on Form 10-K for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Richard F. Pops, Chairman and Chief Executive Officer of the Company, and James M. Frates, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to our knowledge that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Richard F. Pops

Richard F. Pops
Chairman and Chief Executive Officer
(Principal Executive Officer)

/s/ James M. Frates

James M. Frates
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

February 17, 2017
