Horizon Pharma plc
Form 10-Q
August 07, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(MARK ONE)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2017

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 001-35238

HORIZON PHARMA PUBLIC LIMITED COMPANY

(Exact name of registrant as specified in its charter)

Ireland (State or other jurisdiction of incorporation or organization)	Not Applicable (I.R.S. Employer Identification No.)
Connaught House, 1st Floor	Not Applicable

1 Burlington Road, Dublin 4, D04 C5Y6, Ireland
(Address of principal executive offices) (Zip Code)

011 353 1 772 2100

(Registrant's telephone number, including area code)

Not applicable

(Former name, former address and former fiscal year, if changed since last report)

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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of ''large accelerated filer,'' ''accelerated filer,'' ''smaller reporting company,'' and ''emerging growth company'' in Rule 12b–2 of the Exchange Act.

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

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

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

Number of registrant's ordinary shares, nominal value $0.0001, outstanding as of July 28, 2017: 163,354,268.

HORIZON PHARMA PLC

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

HORIZON PHARMA PLC

CONDENSED CONSOLIDATED BALANCE SHEETS

(UNAUDITED)

(In thousands, except share data)

	As of June 30, 2017	As of December 31, 2016
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$554,269	$509,055
Restricted cash	7,266	7,095
Accounts receivable, net	390,844	305,725
Inventories, net	102,244	174,788
Prepaid expenses and other current assets	45,988	49,619
Total current assets	1,100,611	1,046,282
Property and equipment, net	22,657	23,484
Developed technology, net	2,580,875	2,767,184
Other intangible assets, net	5,846	6,251
Goodwill	427,944	445,579
Deferred tax assets, net	2,163	911
Other assets	29,845	2,368
TOTAL ASSETS	$4,169,941	$4,292,059
LIABILITIES AND SHAREHOLDERS’ EQUITY		
CURRENT LIABILITIES:		
Long-term debt—current portion	$8,500	$7,750
Accounts payable	81,884	52,479
Accrued expenses	112,452	182,765
Accrued trade discounts and rebates	413,201	297,556
Accrued royalties—current portion	61,575	61,981
Deferred revenues—current portion	4,254	3,321
Total current liabilities	681,866	605,852
LONG-TERM LIABILITIES:		
Exchangeable notes, net	306,022	298,002
Long-term debt, net, net of current	1,577,822	1,501,741
Accrued royalties, net of current	268,144	272,293
Deferred revenues, net of current	7,856	7,763
Deferred tax liabilities, net	210,821	296,568
Other long-term liabilities	88,642	46,061

Total long-term liabilities	2,459,307	2,422,428
COMMITMENTS AND CONTINGENCIES		
SHAREHOLDERS' EQUITY:		
Ordinary shares, $0.0001 nominal value; 300,000,000 shares authorized; 163,698,457 and 162,004,956 shares issued at June 30, 2017 and December 31, 2016, respectively, and 163,314,091 and 161,620,590 shares outstanding at June 30, 2017 and December 31, 2016, respectively	16	16
Treasury stock, 384,366 ordinary shares at June 30, 2017 and December 31, 2016	(4,585)	(4,585)
Additional paid-in capital	2,177,377	2,119,455
Accumulated other comprehensive loss	(2,132)	(3,086)
Accumulated deficit	(1,141,908)	(848,021)
Total shareholders' equity	1,028,768	1,263,779
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$4,169,941	$4,292,059

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

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HORIZON PHARMA PLC

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME

(UNAUDITED)

(In thousands, except share and per share data)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Net sales	$289,507	$257,378	$510,366	$462,068
Cost of goods sold	130,150	81,126	269,266	158,359
Gross profit	159,357	176,252	241,100	303,709
OPERATING EXPENSES:				
Research and development	163,101	11,210	176,162	23,932
Selling, general and administrative	181,923	133,575	355,988	275,514
Total operating expenses	345,024	144,785	532,150	299,446
Operating (loss) income	(185,667)	31,467	(291,050)	4,263
OTHER EXPENSE, NET:				
Interest expense, net	(31,608)	(19,228)	(63,591)	(38,686)
Foreign exchange gain (loss)	151	15	(108)	(158)
Gain on divestiture	5,856	—	5,856	—
Loss on debt extinguishment	—	—	(533)	—
Other expense, net	(35)	(26)	—	(40)
Total other expense, net	(25,636)	(19,239)	(58,376)	(38,884)
(Loss) income before benefit for income taxes	(211,303)	12,228	(349,426)	(34,621)
BENEFIT FOR INCOME TAXES	(1,767)	(2,756)	(49,320)	(4,199)
NET (LOSS) INCOME	$(209,536)	$14,984	$(300,106)	$(30,422)
NET (LOSS) INCOME PER ORDINARY SHARE—Basic	$(1.29)	$0.09	$(1.85)	$(0.19)
WEIGHTED AVERAGE ORDINARY SHARES OUTSTANDING—Basic	162,931,930	160,468,146	162,486,946	160,186,270
NET (LOSS) INCOME PER ORDINARY SHARE—Diluted	$(1.29)	$0.09	$(1.85)	$(0.19)
WEIGHTED AVERAGE ORDINARY SHARES OUTSTANDING—Diluted	162,931,930	163,920,581	162,486,946	160,186,270
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX				
Foreign currency translation adjustments	626	161	954	(86)
Other comprehensive income (loss)	626	161	954	(86)
COMPREHENSIVE (LOSS) INCOME	$(208,910)	$15,145	$(299,152)	$(30,508)

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

HORIZON PHARMA PLC

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(UNAUDITED)

(In thousands)

	For the Six Months Ended June 30,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(300,106)	$(30,422)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization expense	143,014	102,525
Equity-settled share-based compensation	57,960	55,418
Royalty accretion	25,694	19,028
Royalty liability remeasurement	(2,944)	—
Acquired in-process research and development expense	148,609	—
Impairment of non-current asset	22,270	—
Loss on debt extinguishment	388	—
Payments related to term loan refinancing	(3,940)	—
Amortization of debt discount and deferred financing costs	10,629	8,932
Gain on divestiture	(2,635)	—
Deferred income taxes	(79,486)	(5,362)
Foreign exchange and other adjustments	613	159
Changes in operating assets and liabilities:		
Accounts receivable	(85,323)	(83,932)
Inventories	67,736	13,777
Prepaid expenses and other current assets	2,434	(16,626)
Accounts payable	29,823	42,278
Accrued trade discounts and rebates	116,950	35,480
Accrued expenses and accrued royalties	(98,179)	(43,527)
Deferred revenues	384	(418)
Other non-current assets and liabilities	14,755	4,174
Net cash provided by operating activities	68,646	101,484
CASH FLOWS FROM INVESTING ACTIVITIES:		
Payments for acquisitions, net of cash acquired	(167,850)	(520,405)
Proceeds from divestiture, net of cash divested	69,072	—
Change in restricted cash	(170)	(1,309)
Purchases of property and equipment	(2,628)	(12,776)
Net cash used in investing activities	(101,576)	(534,490)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from term loans	847,768	—
Repayment of term loans	(770,790)	(2,000)

Proceeds from the issuance of ordinary shares in connection with warrant exercises	11	—
Proceeds from the issuance of ordinary shares through ESPP programs	3,856	3,235
Proceeds from the issuance of ordinary shares in connection with stock option exercises	1,297	1,658
Payment of employee withholding taxes related to share-based awards	(5,202)	(4,734)
Repurchase of ordinary shares	(992)	—
Net cash provided by (used in) financing activities	75,948	(1,841)
Effect of foreign exchange rate changes on cash and cash equivalents	2,196	(244)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	45,214	(435,091)
CASH AND CASH EQUIVALENTS, beginning of the period	509,055	859,616
CASH AND CASH EQUIVALENTS, end of the period	$554,269	$424,525

Supplemental cash flow information:		
Cash paid for interest	$58,396	$29,791
Net cash payments for income taxes	1,519	18,059
Cash paid for debt extinguishment	145	—
Supplemental non-cash flow information:		
Purchases of property and equipment included in accounts payable and accrued expenses	939	2,189
Purchases of acquired in-process research and development included in accounts payable and accrued expenses	859	—

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

HORIZON PHARMA PLC

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – BASIS OF PRESENTATION AND BUSINESS OVERVIEW

Basis of Presentation

The unaudited condensed consolidated financial statements presented herein have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, the financial statements do not include all of the information and notes required by GAAP for complete financial statements. In the opinion of management, all adjustments, including normal recurring adjustments, considered necessary for a fair statement of the financial statements have been included. Operating results for the three and six months ended June 30, 2017 are not necessarily indicative of the results that may be expected for the year ending December 31, 2017. The December 31, 2016 condensed consolidated balance sheet was derived from audited financial statements, but does not include all disclosures required by GAAP.

Unless otherwise indicated or the context otherwise requires, references to the "Company", "we", "us" and "our" refer to Horizon Pharma plc and its consolidated subsidiaries. The unaudited condensed consolidated financial statements presented herein include the accounts of the Company and its wholly owned subsidiaries. All inter-company transactions and balances have been eliminated.

On January 13, 2016, the Company completed its acquisition of Crealta Holdings LLC ("Crealta") for approximately $539.7 million, including $24.9 million of cash acquired and $70.9 million paid to settle Crealta's outstanding debt. Following completion of the acquisition, Crealta became a wholly owned subsidiary of the Company and was renamed as Horizon Pharma Rheumatology LLC.

On October 25, 2016, the Company completed its acquisition of Raptor Pharmaceutical Corp. ("Raptor") in which the Company acquired all of the issued and outstanding shares of Raptor's common stock for $9.00 per share in cash. The total consideration was $860.8 million, including $24.9 million of cash acquired and $56.0 million paid to settle Raptor's outstanding debt. Following completion of the acquisition, Raptor became a wholly owned subsidiary of the Company and converted to a limited liability company, changing its name to Horizon Pharmaceutical LLC.

On May 8, 2017, the Company acquired River Vision Development Corp. ("River Vision") for upfront cash payments totaling $151.9 million, including $6.3 million of cash acquired, and subject to other customary purchase price adjustments for working capital, and potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Following completion of the acquisition, River Vision became a wholly owned subsidiary of the Company and was renamed as Horizon Pharma Tepro, Inc.

On June 23, 2017, the Company sold its European subsidiary that owned the marketing rights to PROCYSBI® (cysteamine bitartrate) delayed-release capsules and QUINSAIR™ (levofloxacin inhalation solution) in Europe, the Middle East and Africa ("EMEA") regions ("the Chiesi divestiture") to Chiesi Farmaceutici S.p.A. ("Chiesi") for an upfront payment of $72.2 million, including $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds.

On June 30, 2017, the Company completed its acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International GmbH ("Boehringer Ingelheim International") in all territories outside of the United States, Canada and Japan, as the Company previously held marketing rights to interferon gamma-1b in these territories. Boehringer Ingelheim International commercialized interferon gamma-1b under the trade names IMUKIN®, IMUKINE®, IMMUKIN® and IMMUKINE® ("IMUKIN") in an estimated thirty countries, primarily in Europe and the Middle East. In May 2016, the Company paid Boehringer Ingelheim International €5.0 million ($5.6 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1132) for such rights and upon closing in June 2017, the Company paid Boehringer Ingelheim International an additional €19.5 million ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406). The Company markets interferon gamma-1b as ACTIMMUNE® in the United States.

The unaudited condensed consolidated financial statements presented herein include the results of operations of the acquired Crealta and Raptor businesses from the applicable dates of acquisition. See Note 3 for further details of acquisitions and divestitures.

Beginning in the first quarter of 2017, the Company modified its presentation of certain operating expenses. Previously, the Company presented "general and administrative" expenses as one line item in its condensed consolidated statement of comprehensive (loss) income, and "selling and marketing" expenses as another. For current-period presentation and prior-period comparisons, the Company now combines these two line items into one line item, titled "selling, general and administrative" expenses.

Business Overview

The Company is a biopharmaceutical company focused on improving patients' lives by identifying, developing, acquiring and commercializing differentiated and accessible medicines that address unmet medical needs. The Company markets eleven medicines through its orphan, rheumatology and primary care business units.

The Company's marketed medicines are:

Orphan Business Unit
ACTIMMUNE® (interferon gamma-1b); marketed as IMUKIN® outside the United States
BUPHENYL® (sodium phenylbutyrate) Tablets and Powder; marketed as AMMONAPS® in certain European countries and Japan
PROCYSBI® (cysteamine bitartrate) delayed-release capsules
QUINSAIR™ (levofloxacin inhalation solution)
RAVICTI® (glycerol phenylbutyrate) Oral Liquid
Rheumatology Business Unit
KRYSTEXXA® (pegloticase)
RAYOS® (prednisone) delayed-release tablets; marketed as LODOTRA® outside the United States
Primary Care Business Unit
DUEXIS® (ibuprofen/famotidine)
MIGERGOT® (ergotamine tartrate & caffeine suppositories)
PENNSAID® (diclofenac sodium topical solution) 2% w/w ("PENNSAID 2%")
VIMOVO® (naproxen/esomeprazole magnesium)

Recent Accounting Pronouncements

From time to time, the Company adopts new accounting pronouncements issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies.

Effective January 1, 2017, the Company elected to early adopt ASU No. 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business ("ASU No. 2017-01"). The amendments in ASU No. 2017-01 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. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The adoption did not have a material impact on the Company's condensed consolidated financial statements and related disclosures.

Effective January 1, 2017, the Company adopted ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting ("ASU No. 2016-09"). The update requires excess tax benefits and tax deficiencies, which arise due to differences between the measure of compensation expense and the amount deductible for tax purposes, to be recorded directly through earnings as a component of income tax expense. Previously, these differences were generally recorded in additional paid-in capital and thus had no impact on net income. The change in treatment of excess tax benefits and tax deficiencies also impacts the computation of diluted earnings per share, and the cash flows associated with those items are classified as operating activities on the condensed consolidated statements of cash flows. Additionally, ASU No. 2016-09 permits entities to make an accounting policy election for the impact of forfeitures on the recognition of expense for share-based payment awards. Forfeitures can be estimated, as allowed under previous standards, or recognized when they occur. As a result of the adoption, $7.2 million of excess tax benefits that had not previously been recognized, as the related tax deduction had not reduced current taxes payable, were recorded on a modified retrospective basis through a cumulative effect adjustment to its accumulated deficit as of January 1, 2017. During the three and six months ended June 30, 2017, the Company recognized an excess tax deficiency of $0.1 million and $0.4 million, respectively. The Company elected not to change its policy on accounting for forfeitures and will continue to estimate a requisite forfeiture rate. Additional amendments to the accounting for income taxes and minimum statutory withholding requirements had no impact on the Company’s results of operations and related disclosures.

In May 2017, the FASB issued ASU No. 2017-09, Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting (“ASU No. 2017-09”). The amendment amends the scope of modification accounting for share-based payment arrangements, provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under ASC 718. The ASU is effective for annual reporting periods, including interim periods within those annual reporting periods, beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period. The Company is currently in the process of evaluating the impact of adoption of ASU No. 2017-09 on its condensed consolidated financial statements and related disclosures.

In February 2017, the FASB issued ASU No. 2017-05, ("Subtopic 610-20"), Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets ("ASU No. 2017-05") which provides clarification regarding the scope of the asset derecognition guidance and accounting for partial sales of nonfinancial assets. The update defines an in-substance nonfinancial asset and clarifies that an entity should identify each distinct nonfinancial asset or in-substance nonfinancial asset promised to a counterparty and derecognize each asset when a counterparty obtains control of it. All businesses and nonprofit activities within the scope of Subtopic 610-20 are excluded from the amendments in this update. This guidance will be effective for annual and interim periods beginning after December 15, 2017 and is required to be applied at the same time as ASU No. 2014-09 (described below) is applied. The guidance can be applied using one of two methods: retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying the guidance recognized against retained earnings as of the beginning of the fiscal year of adoption. The Company is currently evaluating the effect that this guidance may have on its condensed consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment ("ASU No. 2017-04"), to eliminate the second step of the goodwill impairment test. ASU No. 2017-04 requires an entity to measure a goodwill impairment loss as the amount by which the carrying value of a reporting unit exceeds its fair value. Additionally, an entity should include the income tax effects from any tax deductible goodwill on the carrying value of the reporting unit when measuring a goodwill impairment loss, if applicable. ASU No. 2017-04 is effective for fiscal years beginning after December 15, 2019 and interim periods within those years. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company does not expect the adoption of ASU No. 2017-04 to have a material impact on the Company's condensed consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash ("ASU No. 2016-18"), which addresses diversity in practice related to the classification and presentation of changes in restricted cash on the statement of cash flows. ASU No. 2016-18 will require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU No. 2016-18 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption is permitted. The Company does not expect the adoption of ASU No. 2016-18 to have a material impact on the Company's condensed consolidated financial statements and related disclosures.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory ("ASU No. 2016-16"). ASU No. 2016-16 was issued to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party which has resulted in diversity in practice and increased complexity within financial reporting. ASU No. 2016-16 would require an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs and does not require new disclosures. ASU No. 2016-16 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. Early adoption is permitted and the adoption of ASU No. 2016-16 should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The Company is currently in the process of evaluating the impact of adoption of ASU No. 2016-16 on its condensed consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments ("ASU No. 2016-15"). The amendments in this ASU provide guidance on the following eight specific cash flow classification issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. Current GAAP does not include specific guidance on these eight cash flow classification issues. The amendments in ASU No. 2016-15 are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. The Company does not expect the adoption of ASU No. 2016-15 to have a material impact on the Company’s condensed consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU No. 2016-02"). Under ASU No. 2016-02, an entity will be required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. ASU No. 2016-02 offers specific accounting guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. ASU No. 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, with early adoption permitted. At adoption, this update will be applied using a modified retrospective approach. The Company is currently in the process of evaluating the impact of adoption of ASU No. 2016-02 on its condensed consolidated financial statements and related disclosures.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers ("ASU No. 2014-09"). The new standard aims to achieve a consistent application of revenue recognition within the United States, resulting in a single revenue model to be applied by reporting companies under GAAP. Under the new model, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires that reporting companies disclose the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The new standard is required to be applied retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying it recognized at the date of initial application. In March 2016, April 2016 and December 2016, the FASB issued ASU No. 2016-08, Revenue From Contracts with Customers (Topic 606): Principal Versus Agent Considerations, ASU No. 2016-10, Revenue From Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing and ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue From Contracts with Customers, respectively, which further clarify the implementation guidance on principal versus agent considerations contained in ASU No. 2014-09. In May 2016, the FASB issued ASU No. 2016-12, narrow-scope improvements and practical expedients which provides clarification on assessing the collectability criterion, presentation of sales taxes, measurement date for non-cash consideration and completed contracts at transition. These standards will be effective for the Company beginning in the first quarter of 2018. The Company expects to elect the modified retrospective method and expects to identify similar performance obligations under ASU No. 2014-09 as compared with deliverables and separate units of account previously identified. As a result, the Company expects the timing of the majority of its revenue to remain the same. Certain of the Company's contracts for sales outside the United States include contingent amounts of variable consideration that the Company was precluded from recognizing because of the requirement for amounts to be "fixed or determinable". However, the Company anticipates that ASU No. 2014-09 will require it to estimate these amounts and as a result, the Company expects to recognize the majority of its revenue under such contracts earlier under ASU No. 2014-09 than it would have recognized under current guidance. The Company's total deferred revenue as of June 30, 2017 was $12.1 million. Otherwise, the adoption is not expected to have a material impact on the condensed consolidated financial statements and related disclosures.

Other recent authoritative guidance issued by the FASB (including technical corrections to the Accounting Standards Codification), the American Institute of Certified Public Accountants, and the Securities and Exchange Commission did not, or are not expected to, have a material impact on the Company's condensed consolidated financial statements and related disclosures.

NOTE 2 – NET (LOSS) INCOME PER SHARE

The following table presents basic net (loss) income per share for the three and six months ended June 30, 2017 and 2016 (in thousands, except share and per share data):

	For the Three Months Ended June 30, 2017	For the Three Months Ended June 30, 2016	For the Six Months Ended June 30, 2017	For the Six Months Ended June 30, 2016
Basic net (loss) income per share calculation:				
Net (loss) income	$ (209,536)	$ 14,984	$ (300,106)	$ (30,422)
Weighted average ordinary shares outstanding	162,931,930	160,468,146	162,486,946	160,186,270
Basic net (loss) income per share	$ (1.29)	$ 0.09	$ (1.85)	$ (0.19)

The following table presents diluted net (loss) income per share for the three and six months ended June 30, 2017 and 2016 (in thousands, except share and per share data):

	For the Three Months Ended June 30, 2017	For the Three Months Ended June 30, 2016	For the Six Months Ended June 30, 2017	For the Six Months Ended June 30, 2016
Diluted net (loss) income per share calculation:				
Net (loss) income	$ (209,536)	$ 14,984	$ (300,106)	$ (30,422)
Weighted average ordinary shares outstanding	162,931,930	163,920,581	162,486,946	160,186,270
Diluted net (loss) income per share	$ (1.29)	$ 0.09	$ (1.85)	$ (0.19)

Basic net (loss) income per share is computed by dividing net (loss) income by the weighted-average number of ordinary shares outstanding during the period. Diluted net (loss) income per share reflects the potential dilution beyond shares for basic net (loss) income per share that could occur if securities or other contracts to issue ordinary shares were exercised, converted into ordinary shares, or resulted in the issuance of ordinary shares that would have shared in the Company's earnings.

The computation of diluted net (loss) income per share excluded 21.5 million and 18.0 million equity awards and warrants for the three and six months ended June 30, 2017, respectively, and 14.0 million and 13.4 million equity awards and warrants for the three and six months ended June 30, 2016, respectively, because their inclusion would have had an anti-dilutive effect on diluted net (loss) income per share.

The potentially dilutive impact of the March 2015 private placement of $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022 (the "Exchangeable Senior Notes") by Horizon Pharma Investment Limited ("Horizon Investment"), a wholly owned subsidiary of the Company, is determined using a method similar to the treasury stock method. Under this method, no numerator or denominator adjustments arise from the principal and interest components of the Exchangeable Senior Notes because the Company has the intent and ability to settle the Exchangeable Senior Notes' principal and interest in cash. Instead, the Company is required to increase the diluted net (loss) income per share denominator by the variable number of shares that would be issued upon conversion if it settled the conversion spread obligation with shares. For diluted net (loss) income per share purposes, the conversion spread obligation is calculated based on whether the average market price of the Company's ordinary shares over the reporting period is in excess of the exchange price of the Exchangeable Senior Notes. There was no calculated spread added to the denominator for the three and six months ended June 30, 2017 and 2016.

NOTE 3 –DIVESTITURES, ACQUISITIONS AND OTHER ARRANGEMENTS

Divestiture of PROCYSBI and QUINSAIR rights in EMEA Regions

On June 23, 2017, the Company completed the Chiesi divestiture for an upfront payment of $72.2 million, including $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds.

Pursuant to ASU No. 2017-01, the Company accounted for the Chiesi divestiture as a sale of a business. The Company determined that the sale of the business and its assets in connection with the Chiesi divestiture did not constitute a strategic shift and that it did not and will not have a major effect on its operations and financial results. Accordingly, the operations associated with the Chiesi divestiture are not reported in discontinued operations.

The gain on divestiture was determined as follows (in thousands):

Cash proceeds	$ 72,163
Add reimbursement of royalties	27,101
Less net assets sold:	
Developed technology	(47,261)
Goodwill	(16,285)
Other	(24,482)

Less transaction and other costs	(5,380)
Gain on divestiture	$ 5,856

Under the terms of its agreement with Chiesi, the Company will continue to pay third parties for the royalties on sales of PROCYSBI and QUINSAIR in EMEA, and Chiesi will reimburse the Company for those royalties. The Company recorded an asset of $27.1 million to “other assets”, which represents the estimated amounts that are expected to be reimbursed from Chiesi for the PROCYSBI and QUINSAIR royalties. These estimated royalties are accrued in “other long-term liabilities”.

Transaction and other costs primarily relate to professional and license fees attributable to the divestiture.

Acquisitions

Acquisition of River Vision

On May 8, 2017, the Company acquired 100% of the equity interests in River Vision for upfront cash payments totaling $151.9 million, including $6.3 million of cash acquired, and subject to other customary purchase price adjustments for working capital, potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Pursuant to ASC 805 (as amended by ASU No. 2017-01), the Company accounted for the River Vision acquisition as the purchase of an in-process research and development (“IPR&D”) asset and, pursuant to ASC 730, recorded the purchase price as research and development expense during the three months ended June 30, 2017. Further, the Company recognized approximately $13.1 million of federal net operating losses, $2.8 million of state net operating losses and $5.8 million of federal tax credits. The acquired tax attributes were set up as deferred tax assets which were further netted within the net deferred tax liabilities of the U.S. group, offset by a deferred credit recorded in long-term liabilities.

Acquisition of Additional Rights to Interferon Gamma-1b

On June 30, 2017, the Company completed its acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International in all territories outside of the United States, Canada and Japan, as the Company previously held marketing rights to interferon gamma-1b in these territories. Boehringer Ingelheim International commercialized interferon gamma-1b as IMUKIN in an estimated thirty countries, primarily in Europe and the Middle East. In May 2016, the Company paid Boehringer Ingelheim International €5.0 million ($5.6 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1132) for such rights and upon closing in June 2017, the Company paid Boehringer Ingelheim International an additional €19.5 million ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406). The Company currently markets interferon gamma-1b as ACTIMMUNE in the United States. The €5.0 million upfront amount paid in May 2016 had initially been included in “other assets” in the Company’s condensed consolidated balance sheet. Following the discontinuation of the development of ACTIMMUNE in Friedreich’s ataxia (“FA”) in December 2016, the Company recorded an impairment charge of €5.0 million ($5.3 million when converted using a Euro-to-Dollar exchange rate at date of impairment of 1.052) to fully write off the asset in its condensed consolidated statements of comprehensive loss during the year ended December 31, 2016 as projections for future net sales of IMUKIN in these territories did not exceed the related costs. Upon closing, the Company recorded the additional €19.5 million payment ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406) as a “selling, general and administrative” expense in its condensed consolidated statement of comprehensive loss.

Raptor Acquisition

On October 25, 2016, the Company completed its acquisition of Raptor in which the Company acquired all of the issued and outstanding shares of Raptor’s common stock for $9.00 per share. The acquisition added two medicines, PROCYSBI and QUINSAIR, to the Company’s medicine portfolio. Through the acquisition, the Company expects to leverage as well as expand the existing infrastructure of its orphan disease business. Following completion of the acquisition, Raptor became a wholly owned subsidiary of the Company and converted to a limited liability company, changing its name to Horizon Pharmaceutical LLC. The Company financed the transaction through $300.0 million of aggregate principal amount of 8.75% Senior Notes due 2024 (the “2024 Senior Notes”), $375.0 million aggregate principal amount of loans pursuant to an amendment to the Company’s existing credit agreement, as described in Note 16, and cash on hand. The total consideration for the acquisition was approximately $860.8 million, including $24.9 million of cash acquired and $56.0 million paid to settle Raptor’s outstanding debt, and was composed of the following (in thousands):

Cash	$841,494
Net settlements on the exercise of stock options and restricted stock units	19,268
Total consideration	$860,762

During the three and six months ended June 30, 2017, the Company incurred $4.0 million and $11.4 million, respectively, in Raptor acquisition-related costs including advisory, legal, accounting, severance, retention bonuses and other professional and consulting fees. During the three and six months ended June 30, 2017, $3.7 million and $10.8 million, respectively, were accounted for as "selling, general and administrative" expenses, and $0.3 million and $0.6 million, respectively, were accounted for as "research and development" expenses in the condensed consolidated statements of comprehensive (loss) income.

Pursuant to ASC 805, the Company accounted for the Raptor acquisition as a business combination using the acquisition method of accounting. Identifiable assets and liabilities of Raptor, including identifiable intangible assets, were recorded based on their estimated fair values as of the date of the closing of the acquisition. The excess of the purchase price over the fair value of the net assets acquired was recorded as goodwill. Significant judgment was required in determining the estimated fair values of developed technology intangible assets, inventories and certain other assets and liabilities. Such preliminary valuation required estimates and assumptions including, but not limited to, estimating future cash flows and direct costs in addition to developing the appropriate discount rates and current market profit margins. The Company's management believes the fair values recognized for the assets acquired and the liabilities assumed are based on reasonable estimates and assumptions. Accordingly, the purchase price adjustments are preliminary and are subject to further adjustments as additional information becomes available and as additional analyses are performed, and such further adjustments may be material.

During the three months ended June 30, 2017, the Company recorded a measurement period adjustment related to accrued trade discounts and rebates as a result of new information, which resulted in a net decrease to goodwill of $1.4 million.

The following table summarizes the preliminary fair values assigned to the assets acquired and the liabilities assumed by the Company, along with the resulting goodwill before and after the measurement period adjustment (in thousands):

(Liabilities assumed) and assets acquired:	Before	Adjustment	After
Accounts payable	$(4,572)	$ —	$(4,572)
Accrued expenses	(23,773)	—	(23,773)
Accrued trade discounts and rebates	(6,377)	1,350	(5,027)
Deferred tax liabilities	(237,166)	—	(237,166)
Contingent royalty liability	(102,000)	—	(102,000)
Accrued royalties	(2,705)	—	(2,705)
Other non-current liability	(25,500)	—	(25,500)
Cash and cash equivalents	24,897	—	24,897
Restricted cash	1,350	—	1,350
Accounts receivable, net	17,767	—	17,767
Inventories	74,463	—	74,463
Prepaid expenses and other current assets	4,194	—	4,194
Property and equipment	3,373	—	3,373
Developed technology	946,000	—	946,000
Other non-current assets	1,765	—	1,765
Goodwill	189,046	(1,350)	187,696
Fair value of consideration paid	$860,762	$ —	$860,762

Inventories acquired included raw materials, work-in-process and finished goods for PROCYSBI and QUINSAIR. Inventories were recorded at their preliminary estimated fair values. The fair value of finished goods has been determined based on the estimated selling price, net of selling costs and a margin on the selling costs. The fair value of work-in-process has been determined based on estimated selling price, net of selling costs and costs to complete the manufacturing, and a margin on the selling and manufacturing costs. The fair value of raw materials was estimated to equal the replacement cost. A step-up in the value of inventory of $67.0 million was recorded in connection with the acquisition. During the three and six months ended June 30, 2017, the Company recorded inventory step-up expense of $14.5 million and $44.0 million, respectively, related to PROCYSBI and QUINSAIR, of which $3.2 million was recorded to “gain on divestiture” in the condensed consolidated statement of comprehensive loss during the three months ended June 30, 2017.

Other tangible assets and liabilities were valued at their respective carrying amounts as management believes that these amounts approximated their acquisition date fair values.

Other non-current liability of $25.5 million represents the fair value of an assumed contingent liability, arising from contingent payments associated with development, regulatory and commercial milestones following Raptor’s acquisition of QUINSAIR.

Identifiable intangible assets and liabilities acquired include developed technology and contingent royalties. The preliminary estimated fair values of the developed technology and contingent royalties represent preliminary valuations performed with the assistance of an independent appraisal firm based on management’s estimates, forecasted financial information and reasonable and supportable assumptions.

Developed technology intangible assets reflect the estimated fair value of Raptor's rights to PROCYSBI. The preliminary fair value of developed technology was determined using an income approach. The income approach explicitly recognizes that the fair value of an asset is premised upon the expected receipt of future economic benefits such as earnings and cash inflows based on current sales projections and estimated direct costs for Raptor's medicines. Indications of value were developed by discounting these benefits to their acquisition-date worth at a discount rate of 12.5%. The fair value of the PROCYSBI developed technology was capitalized as of the Raptor acquisition date and is subsequently being amortized over approximately thirteen years and nine years for the U.S. rights and ex-U.S. rights, respectively, which are the periods in which over 90% of the estimated cash flows are expected to be realized. The Company assigned no preliminary fair value to QUINSAIR developed technology as projections of future net sales do not exceed the related costs. See Note 7 for details of developed technology sold in the Chiesi divestiture.

The Company has assigned a preliminary fair value of $102.0 million to a contingent liability for royalties potentially payable under previously existing agreements related to PROCYSBI. The royalties for PROCYSBI are payable under the terms of an amended and restated license agreement with The Regents of the University of California, San Diego ("UCSD"). See Note 14 for details of the percentages of royalties payable under this agreement. The initial fair value of this liability was determined using a discounted cash flow analysis incorporating the estimated future cash flows of royalty payments resulting from future sales. The discount rate used was the same as for the fair value of the developed technology.

Deferred tax assets and liabilities arise from acquisition accounting adjustments where book values of certain assets and liabilities differ from their tax bases. Deferred tax assets and liabilities are recorded at the currently enacted rates which will be in effect at the time when the temporary differences are expected to reverse in the country where the underlying assets and liabilities are located. Raptor's developed technology as of the acquisition date was located primarily in the United States where an estimated U.S. tax rate of 36.6% is being utilized and a significant deferred tax liability is recorded. Goodwill represents the excess of the preliminary acquisition consideration over the estimated fair value of net assets acquired and was recorded in the condensed consolidated balance sheet as of the acquisition date. The Company does not expect any portion of this goodwill to be deductible for tax purposes.

Crealta Acquisition

On January 13, 2016, the Company completed its acquisition of all the membership interests of Crealta. The acquisition added two medicines, KRYSTEXXA and MIGERGOT, to the Company's medicine portfolio. The Crealta acquisition further diversified the Company's portfolio of medicines and aligned with its focus of acquiring value-enhancing, clinically differentiated, long-life medicines that treat orphan diseases. The total consideration for the acquisition was approximately $539.7 million, including $24.9 million of cash acquired and $70.9 million paid to settle Crealta's outstanding debt, and was composed of the following (in thousands):

Cash	$536,206
Net settlements on the exercise of stock options and restricted stock units	3,526
Total consideration	$539,732

During the three and six months ended June 30, 2017, the Company incurred zero and $0.5 million, respectively, in Crealta acquisition-related costs including legal, retention bonuses and other professional and consulting fees, which were accounted for as "selling, general and administrative" expenses. During the three and six months ended June 30, 2016, the Company incurred $1.6 million and $11.7 million, respectively, in Crealta acquisition-related costs including advisory, legal, accounting, valuation, severance, retention bonuses and other professional and consulting fees, of which $1.1 million and $11.0 million were accounted for as “selling, general and administrative”, respectively, $0.3 million and $0.3 million were accounted for as “research and development”, respectively, and $0.2 million and $0.4 million were accounted for as “costs of goods sold”, respectively, in the condensed consolidated statements of comprehensive income (loss).

Pursuant to ASC 805, the Company accounted for the Crealta acquisition as a business combination using the acquisition method of accounting. Identifiable assets and liabilities of Crealta, including identifiable intangible assets, were recorded based on their estimated fair values as of the date of the closing of the acquisition. The excess of the purchase price over the fair value of the net assets acquired was recorded as goodwill. Significant judgment was required in determining the estimated fair values of developed technology intangible assets, inventories and certain other assets and liabilities. Such valuation required estimates and assumptions including, but not limited to, estimating future cash flows and direct costs in addition to developing the appropriate discount rates and current market profit margins. The Company’s management believes the fair values recognized for the assets acquired and the liabilities assumed were based on reasonable estimates and assumptions.

The following table summarizes the final fair values assigned to the assets acquired and the liabilities assumed by the Company (in thousands):

(Liabilities assumed) and assets acquired:	Allocation
Accounts payable and accrued expenses	$ (4,543)
Accrued trade discounts and rebates	(1,424)
Deferred tax liabilities	(20,141)
Other non-current liabilities	(6,900)
Contingent royalty liabilities	(51,300)
Cash and cash equivalents	24,893
Accounts receivable	10,014
Inventories	149,363
Prepaid expenses and other current assets	1,382
Developed technology	428,200
Other non-current assets	275
Goodwill	9,913
Fair value of consideration paid	$ 539,732

Inventories acquired included raw materials, work-in-process and finished goods for KRYSTEXXA and MIGERGOT. Inventories were recorded at their estimated fair values. The fair value of finished goods has been determined based on the estimated selling price, net of selling costs and a margin on the selling costs. The fair value of work-in-process has been determined based on estimated selling price, net of selling costs and costs to complete the manufacturing, and a margin on the selling and manufacturing costs. The fair value of raw materials was estimated to equal the replacement cost. A step-up in the value of inventory of $144.3 million was recorded in connection with the acquisition. During the three and six months ended June 30, 2017, the Company recorded inventory step-up expense of $19.3 million and $33.7 million, respectively, related to KRYSTEXXA and MIGERGOT.

Other tangible assets and liabilities were valued at their respective carrying amounts as management believes that these amounts approximated their acquisition date fair values.

Other non-current liabilities represented an assumed $6.9 million probable contingent liability which was released to “other income (expense)” in the condensed consolidated statement of comprehensive loss during the year ended December 31, 2016.

Identifiable intangible assets and liabilities acquired include developed technology and contingent royalties. The estimated fair values of the developed technology and contingent royalties represent valuations performed with the assistance of an independent appraisal firm based on management’s estimates, forecasted financial information and reasonable and supportable assumptions.

Developed technology intangible assets reflect the estimated fair value of Crealta’s rights to KRYSTEXXA and MIGERGOT. The fair value of developed technology was determined using an income approach. The income approach explicitly recognizes that the fair value of an asset is premised upon the expected receipt of future economic benefits such as earnings and cash inflows based on current sales projections and estimated direct costs for Crealta’s medicines. Indications of value were developed by discounting these benefits to their acquisition-date worth at a discount rate of 27% for KRYSTEXXA and 23% for MIGERGOT. The fair value of the KRYSTEXXA and MIGERGOT developed technologies were capitalized as of the Crealta acquisition date and are subsequently being amortized over approximately twelve and ten years, respectively, which are the periods in which over 90% of the estimated cash flows are expected to be realized.

The Company has assigned a fair value of $51.3 million to a contingent liability for royalties potentially payable under previously existing agreements related to KRYSTEXXA and MIGERGOT. The royalties for KRYSTEXXA are payable under the terms of a license agreement with Duke University ("Duke") and Mountain View Pharmaceuticals ("MVP"). See Note 14 for details of the percentages of royalties payable under such agreements. The initial fair value of this liability was determined using a discounted cash flow analysis incorporating the estimated future cash flows of royalty payments resulting from future sales. The discount rate used was the same as for the fair value of the developed technology.

The deferred tax liability recorded represents deferred tax liabilities assumed as part of the acquisition, net of deferred tax assets, related to net operating tax loss carryforwards of Crealta.

Goodwill represents the excess of the acquisition consideration over the estimated fair value of net assets acquired and was recorded in the condensed consolidated balance sheet as of the acquisition date. The Company does not expect any portion of this goodwill to be deductible for tax purposes.

Other Arrangements

Collaboration and option agreement

On November 8, 2016, the Company entered into a collaboration and option agreement with a privately held life-science entity. Under the terms of the agreement, the privately held life-science entity will conduct certain research and pre-clinical and clinical development activities. Upon execution of the agreement, the Company paid $0.1 million for the option to acquire certain assets of the privately held life-science entity for $25.0 million, which is exercisable on specified key dates. Under the collaboration and option agreement, the Company is required to pay up to $9.8 million upon the attainment of various milestones, primarily to fund clinical development costs for the medicine. The Company paid $0.2 million in the fourth quarter of 2016 and $0.9 million in the first quarter of 2017 related to milestones. The initial upfront amount paid of $0.1 million has been included in “other assets” in the Company’s condensed consolidated balance sheet as of December 31, 2016 and June 30, 2017 and the milestone amounts of $1.1 million paid in the fourth quarter of 2016 and the first quarter of 2017 were recorded as “research and development” expenses in the condensed consolidated statement of comprehensive loss during the year ended December 31, 2016. In July 2017, the Company paid a further $1.5 million under the terms of the collaboration and option agreement. The Company has determined that the privately held life-science entity is a variable interest entity (“VIE”) as it does not have enough equity to finance its activities without additional financial support. As the Company does not have the power to direct the activities of the VIE that most significantly affect its economic performance, it is not the primary beneficiary of, and does not consolidate the results of the VIE. The Company will reassess the appropriate accounting treatment for this arrangement throughout the life of the agreement and modify these accounting conclusions accordingly.

Pro Forma Information

The table below represents the condensed consolidated financial information for the Company for the six months ended June 30, 2016 on a pro forma basis, assuming that the Crealta and Raptor acquisitions occurred as of January 1, 2016. The historical financial information has been adjusted to give effect to pro forma items that are directly attributable to the Crealta and Raptor acquisitions, and are expected to have a continuing impact on the consolidated results. These items include, among others, adjustments to record the amortization of definite-lived intangible assets, interest expense, debt discount and deferred financing costs associated with the debt in connection with the acquisitions.

Additionally, the following table sets forth unaudited financial information and has been compiled from historical financial statements and other information, but is not necessarily indicative of the results that actually would have been achieved had the transactions occurred on the dates indicated or that may be achieved in the future (in thousands):

	For the Six Months Ended June 30, 2016		
	As reported (Unaudited)	Pro forma adjustments (Unaudited)	Pro forma (Unaudited)
Net sales	$462,068	$ 61,705	$ 523,773
Net loss	(30,422)	(84,253)	(114,675)

The Company’s unaudited condensed consolidated statements of comprehensive loss for the six months ended June 30, 2016 include KRYSTEXXA and MIGERGOT net sales as a result of the acquisition of Crealta of $36.0 million and $2.0 million, respectively.

Crealta and Raptor have been integrated into the Company’s business and as a result of these integration efforts, the Company cannot distinguish between these operations and those of the Company’s legacy business.

NOTE 4 – INVENTORIES

Inventories are stated at the lower of cost or market value. Inventories consist of raw materials, work-in-process and finished goods. The Company has entered into manufacturing and supply agreements for the manufacture of finished goods or the purchase of raw materials and production supplies. The Company’s inventories include the direct purchase cost of materials and supplies and manufacturing overhead costs.

The components of inventories as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Raw materials	$14,272	$10,233
Work-in-process	44,105	85,022
Finished goods	43,867	79,533
Inventories, net	$102,244	$174,788

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on the Company's gross profit, gross margin percentage and net income (loss) for all affected periods, the Company discloses balance sheet and income statement amounts related to inventory step-up within the notes to the condensed consolidated financial statements.

Finished goods at June 30, 2017 included $31.1 million of stepped-up KRYSTEXXA inventory. Work-in-process at June 30, 2017 included $30.5 million of stepped-up KRYSTEXXA inventory. Finished goods at December 31, 2016 included $27.7 million of stepped-up KRYSTEXXA and MIGERGOT inventory. Work-in-process at December 31, 2016 included $67.6 million of stepped-up KRYSTEXXA and MIGERGOT inventory.

During the three and six months ended June 30, 2017 the Company recorded $19.3 million and $33.7 million, respectively, of KRYSTEXXA and MIGERGOT inventory step-up expense. During the three and six months ended June 30, 2016, the Company recorded $9.1 million and $16.5 million, respectively, of KRYSTEXXA and MIGERGOT inventory step-up expense.

The Company expects that the KRYSTEXXA inventory step-up will be fully expensed by the end of the first quarter of 2018. Following that period, the Company expects the costs of goods sold related to KRYSTEXXA to decrease significantly to levels consistent with the historical cost of goods sold of Crealta.

During the three and six months ended June 30, 2017, the Company recorded $14.5 million and $40.8 million, respectively, of PROCYSBI and QUINSAIR inventory step-up expense. In addition, during the three months ended June 30, 2017, the Company recorded $3.2 million of inventory step-up expense to "gain on divestiture" relating to PROCYSBI and QUINSAIR in connection with the Chiesi divestiture. Finished goods at December 31, 2016 included $38.1 million of stepped-up PROCYSBI and QUINSAIR inventory. Work-in-process at December 31, 2016 included $5.9 million of stepped-up PROCYSBI and QUINSAIR inventory.

NOTE 5 – PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Medicine samples inventory	$15,043	$ 10,192
Prepaid income taxes	10,049	9,155
Rabbi trust assets	5,045	3,073
Other prepaid expenses	15,851	19,398
Deferred charge for taxes on intra-group profit	—	7,801
Prepaid expenses and other current assets	$45,988	$ 49,619

NOTE 6 – PROPERTY AND EQUIPMENT

Property and equipment as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Software	$10,591	$10,876
Leasehold improvements	9,351	9,184
Machinery and equipment	4,931	4,566
Computer equipment	2,260	3,069
Other	2,690	2,664
	29,823	30,359
Less accumulated depreciation	(10,985)	(8,319)
Construction in process	86	17
Software implementation in process	3,733	1,427
Property and equipment, net	$22,657	$23,484

The Company capitalizes development costs associated with internal use software, including external direct costs of materials and services and payroll costs for employees devoting time to a software project. Costs incurred during the preliminary project stage, as well as costs for maintenance and training, are expensed as incurred.

Software implementation in process as of June 30, 2017 and December 31, 2016 was related to new enterprise resource planning software being implemented by the Company. The software is being implemented on a phased basis starting January 2016 and depreciation is not recorded on capitalized costs relating to a phase which has not yet entered service. Once a particular phase of the project enters service, associated capitalized costs are moved from "software implementation in process" to "software" in the table above, and depreciation commences.

Depreciation expense was $1.8 million and $1.1 million for the three months ended June 30, 2017 and 2016, respectively, and was $3.6 million and $2.1 million for the six months ended June 30, 2017 and 2016, respectively.

NOTE 7 – GOODWILL AND INTANGIBLE ASSETS

Goodwill

The gross carrying amount of goodwill as of June 30, 2017 was as follows (in thousands):

Balance at December 31, 2016	$445,579
Divestiture during the period	(16,285)
Measurement period adjustment	(1,350)
Balance at June 30, 2017	$427,944

During the three and six months ended June 30, 2017, in connection with the Chiesi divestiture, the Company recorded a reduction to goodwill of $16.3 million and a corresponding amount to "gain on divestiture" in the condensed consolidated statements of comprehensive loss. In addition, the Company recorded a measurement period adjustment to goodwill of $1.4 million related to the Raptor acquisition during the three and six months ended June 30, 2017.

During the year ended December 31, 2016, the Company recognized goodwill of $9.9 million and $189.1 million in connection with the Crealta and Raptor acquisitions, respectively, which represented the excess of the purchase prices over the fair value of the net assets acquired.

As of June 30, 2017, there were no accumulated goodwill impairment losses. See Note 3 for further details of goodwill acquired and disposed of in business acquisitions and divestitures.

Intangible Assets

As of June 30, 2017, the Company's intangible assets consisted of developed technology related to ACTIMMUNE, BUPHENYL, KRYSTEXXA, MIGERGOT, PENNSAID 2%, PROCYSBI, RAVICTI, RAYOS and VIMOVO in the United States, and AMMONAPS, BUPHENYL, LODOTRA and PROCYSBI outside the United States, as well as customer relationships for ACTIMMUNE.

During the year ended December 31, 2016, in connection with the acquisition of Crealta, the Company capitalized $402.2 million of developed technology related to KRYSTEXXA and $26.0 million of developed technology related to MIGERGOT.

During the year ended December 31, 2016, in connection with the acquisition of Raptor, the Company capitalized $946.0 million of developed technology related to PROCYSBI.

During the three and six months ended June 30, 2017, in connection with the Chiesi divestiture, the Company recorded a reduction in the net book value of developed technology related to PROCYSBI of $47.3 million and a corresponding amount to “gain on divestiture” in the condensed consolidated statements of comprehensive loss.

See Note 3 for further details of intangible assets acquired in business acquisitions and disposed of in business divestitures.

Prior to the fourth quarter of 2016, the Company had IPR&D of $66.0 million related to one research and development project to evaluate ACTIMMUNE in the treatment of FA. The fair value of the IPR&D was recorded as an indefinite-lived intangible asset and was being tested for impairment at least annually until completion or abandonment of the research and development efforts associated with the project. On December 8, 2016, the Company announced that the Phase 3 trial, STEADFAST, evaluating ACTIMMUNE for the treatment of FA did not meet its primary endpoint of a statistically significant change from baseline in the modified Friedreich's Ataxia Rating Scale at twenty-six weeks versus treatment with placebo. In addition, the secondary endpoints did not meet statistical significance. No new safety findings were identified on initial review of data other than those already noted in the ACTIMMUNE prescribing information for approved indications. The Company, in conjunction with the independent Data Safety Monitoring Board, the principal investigator and the Friedreich's Ataxia Research Alliance Collaborative Clinical Research Network in FA, determined that, based on the trial results, the STEADFAST program would be discontinued, including the twenty-six week extension study and the long-term safety study. The IPR&D had no alternative use or economic value as a result of the cancellation of the project, and the Company recorded an impairment charge of $66.0 million to "impairment of in-process research and development" in its condensed consolidated statements of comprehensive loss during the year ended December 31, 2016 to fully write off the value of the asset on its condensed consolidated balance sheet.

The Company tests its intangible assets for impairment when events or circumstances may indicate that the carrying value of these assets exceeds their fair value. The Company does not believe there have been any circumstances or events that would indicate that the carrying value of any of its intangible assets, except for IPR&D as described above, was impaired at June 30, 2017 or December 31, 2016.

Intangible assets as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017			December 31, 2016		
	Cost Basis	Accumulated Amortization	Net Book Value	Cost Basis	Accumulated Amortization	Net Book Value
Developed technology	$3,115,695	$ (534,820)	$2,580,875	$3,166,695	$ (399,511)	$2,767,184
Customer relationships	8,100	(2,254)	5,846	8,100	(1,849)	6,251
Total intangible assets	$3,123,795	$ (537,074)	$2,586,721	$3,174,795	$ (401,360)	$2,773,435

Amortization expense for the three months ended June 30, 2017 and 2016 was $69.8 million and $50.8 million, respectively, and was $139.5 million and $100.4 million for the six months ended June 2017 and 2016, respectively. As of June 30, 2017 estimated future amortization expense was as follows (in thousands):

2017 (July to December)	$137,332
2018	274,084
2019	261,092
2020	261,068
2021	253,373
Thereafter	1,399,772
Total	$2,586,721

NOTE 8 – ACCRUED TRADE DISCOUNTS AND REBATES

Accrued trade discounts and rebates as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Accrued wholesaler fees and commercial rebates	$163,597	$47,460
Accrued co-pay and other patient assistance	177,050	188,504
Accrued government rebates and chargebacks	72,554	61,592
Accrued trade discounts and rebates	413,201	297,556
Invoiced wholesaler fees and commercial rebates, co-pay and other patient assistance, and government rebates and chargebacks in accounts payable	55,313	16,830
Total customer-related accruals and allowances	$468,514	$314,386

The following table summarizes changes in the Company's customer-related accruals and allowances from December 31, 2016 to June 30, 2017 (in thousands):

	Wholesaler Fees and Commercial Rebates	Co-Pay and Other Patient Assistance	Government Rebates and Chargebacks	Total
Balance at December 31, 2016	$ 47,651	$ 205,143	$ 61,592	$314,386
Measurement period adjustment	—	—	(1,350)	(1,350)
Current provisions relating to sales during the six months ended June 30, 2017	303,360	957,477	162,588	1,423,425
Adjustments relating to prior-year sales	5,935	(59)	(4,905)	971
Payments relating to sales during the six months ended June 30, 2017	(139,830)	(730,876)	(84,748)	(955,454)
Payments relating to prior-year sales	(53,043)	(205,084)	(55,337)	(313,464)
Balance at June 30, 2017	$ 164,073	$ 226,601	$ 77,840	$468,514

NOTE 9 – ACCRUED EXPENSES

Accrued expenses as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Payroll-related expenses	$41,460	$66,417
Consulting and professional services	29,494	33,614
Accrued interest	14,746	18,938
Accrued other	26,752	31,296
Litigation settlement	—	32,500
Accrued expenses	$112,452	$182,765

Accrued payroll-related expenses at June 30, 2017 and December 31, 2016 included $5.1 million and $15.0 million, respectively, of severance and employee costs as a result of the Raptor acquisition. The Company anticipates that a significant amount of the Raptor acquisition-related cash payments will be complete by the fourth quarter of 2017.

Accrued litigation settlement at December 31, 2016 included $32.5 million in relation to a litigation settlement with Express Scripts, Inc., which was paid in two equal installments in January 2017 and April 2017.

Accrued other as of June 30, 2017 and December 31, 2016 included $6.4 million and $9.5 million, respectively, related to a loss on inventory purchase commitments. During the year ended December 31, 2016, the Company committed to purchase additional units of ACTIMMUNE from Boehringer Ingelheim RCV GmbH & Co KG ("Boehringer Ingelheim"). These additional units of ACTIMMUNE were intended to cover anticipated demand if the results of the STEADFAST study of ACTIMMUNE for the treatment of FA had been successful. Following the discontinuation of the STEADFAST program during the year ended December 31, 2016, the Company recorded a loss of $14.3 million in "cost of goods sold" in the condensed consolidated statement of comprehensive loss for firm, non-cancellable and unconditional purchase commitments for quantities in excess of the Company's current forecasts for future demand. During the three and six months ended June 30, 2017, the Company renegotiated its purchase commitments with Boehringer Ingelheim and recorded a reduction of $3.1 million to the loss on inventory purchase commitments in "cost of goods sold". "Other long-term liabilities" as of June 30, 2017 and December 31, 2016 included $3.9 million and $4.8 million, respectively, related to this loss on inventory purchase commitments. Accrued other as of June 30, 2017 and December 31, 2016 also included $2.0 million and $4.0 million, respectively, related to costs to be incurred to discontinue the clinical trial.

NOTE 10 – ACCRUED ROYALTIES

During the six months ended June 30, 2017, changes to the liability for royalties for medicines acquired through business combinations consisted of the following (in thousands):

Balance as of December 31, 2016	$334,274
Reclassification to other long-term liabilities	(5,233)
Remeasurement of royalty liabilities	(2,944)
Royalty payments	(22,360)
Accretion expense	25,694
Other royalty expense	288
Balance as of June 30, 2017	329,719
Accrued royalties - current portion as of June 30, 2017	61,575
Accrued royalties, net of current as of June 30, 2017	$268,144

The reclassification to other long-term liabilities in the table above relates to the reclassification of a contingent royalty liability for PROCYSBI to other long-term liabilities as a result of the Chiesi divestiture.

NOTE 11 – OTHER LONG-TERM LIABILITIES

Included in other long-term liabilities at June 30, 2017 and December 31, 2016, is $49.1 million and $25.5 million, respectively, representing the preliminary fair value of the contingent liability for royalties potentially payable under previously existing agreements related to PROCYSBI and QUINSAIR.

NOTE 12- SEGMENT AND OTHER INFORMATION

The following table presents the amount and percentage of gross sales from customers that represented more than 10% of the Company’s gross sales included in its single operating segment, and all other customers as a group (in thousands, except percentages):

For the Three Months Ended June 30,			
2017		2016	
Amount	% of Gross	Amount	% of Gross

		Sales			Sales	
Customer A	$337,770	32	%	$165,385	21	%
Customer B	321,639	30	%	350,102	44	%
Customer C	144,241	13	%	78,016	10	%
Other Customers	268,034	25	%	198,513	25	%
Gross Sales	$1,071,684	100	%	$792,016	100	%

	For the Six Months Ended June 30,					
	2017			2016		
	Amount	% of Gross Sales		Amount	% of Gross Sales	
Customer A	$588,859	29	%	$246,559	17	%
Customer B	627,191	31	%	701,913	47	%
Customer C	283,465	14	%	154,154	10	%
Other Customers	500,742	26	%	382,015	26	%
Gross Sales	$2,000,257	100	%	$1,484,641	100	%

NOTE 13 – FAIR VALUE MEASUREMENTS

The following tables and paragraphs set forth the Company’s financial instruments that are measured at fair value on a recurring basis within the fair value hierarchy. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company’s assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability. The following describes three levels of inputs that may be used to measure fair value:

Level 1—Observable inputs such as quoted prices in active markets for identical assets or liabilities;

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

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

The Company utilizes the market approach to measure fair value for its money market funds. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

As of June 30, 2017, the Company’s restricted cash included bank time deposits which were measured at fair value using Level 2 inputs and their carrying values were approximately equal to their fair values. Level 2 inputs, obtained from various third-party data providers, represent quoted prices for similar assets in active markets, or these inputs were derived from observable market data, or if not directly observable, were derived from or corroborated by other observable market data.

Other current assets and other long-term liabilities recorded at fair value on a recurring basis are composed of investments held in a rabbi trust and the related deferred liability for deferred compensation arrangements. Quoted prices for this investment, primarily in mutual funds, are available in active markets. Thus, the Company’s investments related to deferred compensation arrangements and the related long-term liability are classified as Level 1 measurements in the fair value hierarchy.

The Company transfers its financial assets and liabilities between the fair value hierarchies at the end of each reporting period. There were no transfers between the different levels of the fair value hierarchy during the three and six months ended June 30, 2017 and 2016.

Assets and liabilities measured at fair value on a recurring basis

The following tables set forth the Company’s financial assets and liabilities at fair value on a recurring basis as of June 30, 2017 and December 31, 2016 (in thousands):

	June 30, 2017	
	Level 1	Total

		Level 2	Level 3	
Assets:				
Bank time deposits	$—	$3,000	$ —	$3,000
Money market funds	478,000	—	—	478,000
Other current assets	5,045	—	—	5,045
Liabilities:				
Other long-term liabilities	(5,045)	—	—	(5,045)
Total assets and liabilities at fair value	$478,000	$3,000	$ —	$481,000

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets:				
Bank time deposits	$—	$3,000	$ —	$3,000
Money market funds	170,000	—	—	170,000
Other current assets	3,038	—	—	3,038
Liabilities:				
Other long-term liabilities	(3,038)	—	—	(3,038)
Total assets and liabilities at fair value	$170,000	$3,000	$ —	$173,000

NOTE 14 – COMMITMENTS AND CONTINGENCIES

Lease Obligations

The Company has the following office space lease agreements in place for real properties:

Location	Approximate Square Footage	Lease Expiry Date
Dublin, Ireland	18,900	November 3, 2029
Lake Forest, Illinois (1)	160,000	March 31, 2024
Novato, California (2)	61,000	August 31, 2021
Deerfield, Illinois (3)	32,300	June 30, 2018
Brisbane, California	20,100	November 30, 2019
Mannheim, Germany	14,300	December 31, 2018
Chicago, Illinois	6,500	December 31, 2018
Reinach, Switzerland	3,500	May 31, 2020

(1) In connection with the Lake Forest, Illinois lease, the Company has provided a $2.0 million letter of credit to the landlord, through a commercial bank.
(2) During March 2017, the Company vacated an area of the office space in Novato, California. During April 2017, the Company entered into a sublease arrangement for a portion of this space with a third party.
(3) During January 2016, the Company vacated the premises in Deerfield, Illinois and began occupying the premises in Lake Forest, Illinois. During April 2017, the Company entered into a sublease arrangement for a portion of this space with a third party. During June 2017, the Company terminated a portion of the lease, resulting in 32,300 square footage remaining.

Following the Chiesi divestiture in June 2017, the Company ceased to hold a lease obligation in Utrecht in the Netherlands.

Purchase Commitments

In August 2007, the Company entered into a manufacturing and supply agreement with Jagotec AG ("Jagotec"), which was amended in March 2011 and in January 2017. Under the agreement, Jagotec or its affiliates are required to manufacture and supply RAYOS/LODOTRA exclusively to the Company in bulk. The earliest the agreement can expire is December 31, 2023, and the minimum purchase commitment is in force until December 2023. At June 30, 2017, the minimum purchase commitment based on tablet pricing in effect under the agreement was $7.0 million through December 2023. Additionally, purchase orders relating to the manufacture of RAYOS/LODOTRA of $0.3 million were outstanding at June 30, 2017.

In May 2011, the Company entered into a manufacturing and supply agreement with Sanofi-Aventis U.S. LLC ("Sanofi-Aventis U.S."), and amended the agreement effective as of September 25, 2013. Pursuant to the agreement, as amended, Sanofi-Aventis U.S. is obligated to manufacture and supply DUEXIS to the Company in final, packaged form, and the Company is obligated to purchase DUEXIS exclusively from Sanofi-Aventis U.S. for the commercial requirements of DUEXIS in North America, South America and certain countries and territories in Europe, including the European Union ("EU") member states and Scandinavia. The agreement term extends until May 2019, and automatically renews for successive two-year terms unless terminated by either party upon two years prior written notice. At June 30, 2017, the Company had a binding purchase commitment to Sanofi-Aventis U.S. for DUEXIS of $5.5 million, which is to be delivered through December 2017.

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In July 2013, Vidara Therapeutics International Public Limited Company ("Vidara") and Boehringer Ingelheim entered into an exclusive supply agreement, which the Company assumed in September 2014 and amended effective as of September 5, 2014 and June 1, 2015. That supply agreement was replaced with an exclusive global supply agreement between the Company and Boehringer Ingelheim Biopharmaceuticals GmbH ("Boehringer Ingelheim Biopharmaceuticals") effective June 30, 2017. Under the agreement, Boehringer Ingelheim Biopharmaceuticals is required to manufacture and supply ACTIMMUNE and IMUKIN to the Company. The Company is required to purchase minimum quantities of finished medicine per annum through July 2024. During the year ended December 31, 2016, the Company committed to purchase additional amounts of ACTIMMUNE from Boehringer Ingelheim. These additional amounts were intended to cover anticipated demand if the results of the STEADFAST study of ACTIMMUNE for the treatment of FA had been successful. As of June 30, 2017, the minimum binding purchase commitment to Boehringer Ingelheim Biopharmaceuticals was $24.8 million (converted using a Dollar-to-Euro exchange rate of 1.1427) through July 2024. Following the discontinuation of the STEADFAST program, the Company recorded a loss of $14.3 million in "cost of goods sold" in the condensed consolidated statement of comprehensive loss during the year ended December 31, 2016 for a portion of this commitment which represented firm, non-cancellable and unconditional purchase commitments for quantities in excess of the Company's current forecasts for future demand. During the six months ended June 30, 2017 the Company renegotiated the purchase commitment due to Boehringer Ingelheim and recorded $3.1 million as a reduction to "cost of goods sold". During the year ended December 31, 2016, the Company also committed to incur an additional $14.9 million for the harmonization of the drug substance manufacturing process with Boehringer Ingelheim. These additional costs will be incurred during the years 2017 through 2021. During the six months ended June 30, 2017 the Company recorded $6.5 million in its condensed consolidated statement of comprehensive loss related to the harmonization of the drug substance manufacturing process.

In November 2013, the Company entered into a long-term master manufacturing services and product agreement with Patheon Pharmaceuticals Inc. ("Patheon") pursuant to which Patheon is obligated to manufacture VIMOVO for the Company through December 31, 2019. The Company agreed to purchase a specified percentage of VIMOVO requirements for the United States from Patheon. The Company must pay an agreed price for final, packaged VIMOVO supplied by Patheon as set forth in the Patheon manufacturing agreement, subject to adjustments, including certain unilateral adjustments by Patheon, such as annual adjustments for inflation and adjustments to account for certain increases in the cost of components of VIMOVO other than active materials. The Company issues twelve-month forecasts of the volume of VIMOVO that the Company expects to order. The first six months of the forecast are considered binding firm orders. At June 30, 2017, the Company had a binding purchase commitment with Patheon for VIMOVO of $0.6 million which is to be delivered through September 2017.

In October 2014, in connection with the acquisition of the U.S. rights to PENNSAID 2% from Nuvo Research Inc., ("Nuvo"), the Company and Nuvo entered into an exclusive supply agreement. Under the supply agreement, which was amended in February 2016, Nuvo is obligated to manufacture and supply PENNSAID 2% to the Company. The term of the supply agreement is through December 31, 2029, but the agreement may be terminated earlier by either party for any uncured material breach by the other party of its obligations under the supply agreement or upon the bankruptcy or similar proceeding of the other party. At least ninety days prior to the first day of each calendar month during the term of the supply agreement, the Company submits a binding written purchase order to Nuvo for PENNSAID 2% in minimum batch quantities. At June 30, 2017, the Company had a binding purchase commitment with Nuvo for PENNSAID 2% of $2.4 million through September 2017.

In November 2010, Raptor and Patheon entered into a manufacturing services agreement, which the Company assumed as a result of its acquisition of Raptor. Under the agreement, which was amended in April 2012 and June 2013, Patheon is obligated to manufacture PROCYSBI for the Company through December 31, 2019. The Company must provide Patheon with rolling, non-binding forecasts of PROCYSBI, with a portion of the forecast being a firm written order. In November 2010, Raptor and Cambrex Profarmaco Milano ("Cambrex") entered into an active pharmaceutical ingredient (“API”) supply agreement, which the Company assumed as a result of its acquisition of Raptor. Under the agreement, which was amended in April 2013 and August 2016, Cambrex is obligated to manufacture PROCYSBI API for the Company through November 30, 2020. The Company must provide Cambrex with rolling, non-binding forecasts, with a portion of the forecast being the minimum floor of the firm order that must be placed. At June 30, 2017, the Company had a binding purchase commitment with Patheon for PROCYSBI of $1.6 million through September 2017 and with Cambrex for PROCYSBI API of $3.1 million through December 2020.

In March 2007, Savient Pharmaceuticals, Inc. (as predecessor in interest to Crealta), entered into a commercial supply agreement with Bio-Technology General (Israel) Ltd ("BTG Israel") for the production of the bulk KRYSTEXXA medicine ("bulk product"). The Company assumed this agreement as part of the Crealta acquisition and amended the agreement in September 2016. Under this agreement, the Company has agreed to purchase certain minimum annual order quantities and is obligated to purchase at least eighty percent of its annual world-wide bulk product requirements from BTG Israel. The term of the agreement runs until December 31, 2030, and will automatically renew for successive three year periods unless earlier terminated by either party upon three years prior written notice. The agreement may be terminated earlier by either party in the event of a force majeure, liquidation, dissolution, bankruptcy or insolvency of the other party, uncured material breach by the other party or after January 1, 2024, upon three years prior written notice. Under the agreement if the manufacture of the bulk product is moved out of Israel, the Company may be required to obtain the approval of the Israeli Office of the Chief Scientist ("OCS") because certain KRYSTEXXA intellectual property was initially developed with a grant funded by the OCS. The Company issues eighteen-month forecasts of the volume of KRYSTEXXA that the Company expects to order. The first six months of the forecast are considered binding firm orders. At June 30, 2017, the Company had a binding purchase commitment with BTG Israel for KRYSTEXXA of $53.0 million through December 31, 2026. Additionally, other binding commitments relating to the manufacture of KRYSTEXXA of $1.8 million were outstanding at June 30, 2017.

Excluding the above, additional purchase orders relating to the manufacture of BUPHENYL, MIGERGOT, QUINSAIR and RAVICTI of $8.5 million were outstanding at June 30, 2017.

Royalty Agreements

RAYOS/LODOTRA

In connection with an August 2004 development and license agreement with SkyePharma AG, who subsequently entered into a business combination with Vectura Group plc ("Vectura"), and Jagotec, a wholly owned subsidiary of Vectura, regarding certain proprietary technology and know-how owned by Vectura, Jagotec is entitled to receive a single digit percentage royalty on net sales of RAYOS/LODOTRA and on any sub-licensing income, which includes any payments not calculated based on the net sales of RAYOS/LODOTRA, such as license fees, lump sums and milestone payments.

VIMOVO

The Company entered into a license agreement with Pozen Inc. who subsequently entered into a business combination with Tribute Pharmaceuticals Canada Inc. to become known as Aralez Pharmaceuticals Inc. ("Aralez"). Under this agreement, the Company is required to pay Aralez a flat 10% royalty on net sales of VIMOVO and other medicines sold by the Company, its affiliates or sublicensees during the royalty term that contain gastroprotective agents in a single fixed combination oral solid dosage form with nonsteroidal anti-inflammatory drugs, subject to minimum annual royalty obligations of $7.5 million. These minimum royalty obligations will continue for each year during which one of Aralez's patents covers such medicines in the United States and there are no competing medicines in the United States. The royalty rate may be reduced to a mid-single digit royalty rate as a result of loss of market share to competing medicines. The Company's obligation to pay royalties to Aralez will expire upon the later of (a) expiration of the last-to-expire of certain patents covering such medicines in the United States, and (b) ten years after the first commercial sale of such medicines in the United States.

In November 2013, the Company, AstraZeneca AB ("AstraZeneca") and Aralez entered into a letter agreement. Under the letter agreement, the Company and AstraZeneca agreed to pay Aralez milestone payments upon the achievement by the Company and AstraZeneca, collectively, of certain annual aggregate global net sales thresholds ranging from $550.0 million to $1.25 billion with respect to VIMOVO. The aggregate milestone payment amount that may be owed by AstraZeneca and the Company, collectively, under the letter agreement is $260.0 million, with the amount payable by each of the Company and AstraZeneca with respect to each milestone to be based upon the proportional sales achieved by each of the Company and AstraZeneca, respectively, in the applicable year.

ACTIMMUNE

Under a license agreement, as amended, with Genentech Inc. (“Genentech”), who was the original developer of ACTIMMUNE, the Company is or was obligated to pay royalties to Genentech on its net sales of ACTIMMUNE as follows:

- For the period from November 26, 2014 through May 5, 2018, a royalty in the 20% to 30% range for the first $3.7 million in net sales achieved in any calendar year and in the 1% to 9% range for all additional net sales in any year; and
- From May 6, 2018 and for so long as the Company continues to commercially sell ACTIMMUNE, an annual royalty in the low single digits as a percentage of annual net sales.

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

RAVICTI

Under the terms of an asset purchase agreement with Ucyclyd Pharma, Inc. ("Ucyclyd"), the Company is obligated to pay to Ucyclyd tiered mid to high single-digit royalties on its global net sales of RAVICTI. Under the terms of a license agreement with Brusilow, the Company is obligated to pay low single-digit royalties to Brusilow on net sales of RAVICTI that are covered by a valid claim of a licensed patent.

BUPHENYL

Under the terms of an amended and restated collaboration agreement with Ucyclyd, the Company is obligated to pay to Ucyclyd tiered mid to high single-digit royalties on its net sales in the United States of BUPHENYL to urea cycle disorder patients outside of the U.S. Food and Drug Administration ("FDA") approved labeled age range for RAVICTI.

KRYSTEXXA

Under the terms of a license agreement with Duke and MVP, the Company is obligated to pay Duke a mid single-digit royalty on its global net sales of KRYSTEXXA and a royalty of between 5% and 15% on any global sublicense revenue. The Company is also obligated to pay MVP a mid single-digit royalty on its net sales of KRYSTEXXA outside of the United States and a royalty of between 5% and 15% on any sublicense revenue outside of the United States.

PROCYSBI

Under the terms of an amended and restated license agreement with UCSD, the Company is obligated to pay to UCSD tiered low to mid single-digit royalties on its net sales of PROCYSBI.

The royalty obligations described above are included in accrued royalties on the Company's condensed consolidated balance sheets.

For all of the royalty agreements entered into by the Company, a total expense of $15.1 million and $27.1 million was recorded in cost of goods sold for the three and six months ended June 30, 2017, respectively, and $10.9 million and $21.4 million was recorded in cost of goods sold for the three and six months ended June 30, 2016, respectively.

Other Agreements

On November 8, 2016, the Company entered into a collaboration and option agreement with a privately held life-science entity. Under the terms of the agreement, the privately held life-science entity will conduct certain research and pre-clinical and clinical development activities. Upon execution of the agreement, the Company paid $0.1 million for the option to acquire certain of the privately held life-science entity's assets for $25.0 million, which is exercisable on specified key dates. Under the collaboration and option agreement, the Company is required to pay up to $9.8 million upon the attainment of various milestones, primarily to fund clinical development costs for the medicine. The Company paid $0.2 million in the fourth quarter of 2016 and $0.9 million during the three and six months ended June 30, 2017. During July 2017, the Company paid a further $1.5 million under the terms of the collaboration and option agreement.

On May 8, 2017, the Company acquired River Vision for upfront cash payments totaling $151.9 million, including $6.3 million of cash acquired, and subject to other customary purchase price adjustments for working capital, and potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Under the agreement, the Company is required to pay up to $325.0 million upon the attainment of various milestones related to FDA approval and net sales thresholds. The agreement also includes a royalty payment of three percent of the portion of annual worldwide net sales exceeding $300.0 million (if any).

Contingencies

The Company is subject to claims and assessments from time to time in the ordinary course of business. The Company's management does not believe that any such matters, individually or in the aggregate, will have a material adverse effect on the Company's business, financial condition, results of operations or cash flows. In addition, the Company from time to time has billing disputes with vendors in which amounts invoiced are not in accordance with the terms of their contracts.

In November 2015, the Company received a subpoena from the U.S. Attorney’s Office for the Southern District of New York requesting documents and information related to its patient access programs and other aspects of its marketing and commercialization activities. The Company is unable to predict how long this investigation will continue or its outcome, but it anticipates that it will continue to incur significant costs in connection with the investigation, regardless of the outcome. The Company may also become subject to similar investigations by other governmental agencies. The investigation by the U.S. Attorney’s Office and any additional investigations of the Company’s patient access programs and sales and marketing activities may result in damages, fines, penalties or other administrative sanctions against the Company.

Indemnification

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company’s exposure under these agreements is unknown because it involves claims that may be made against the Company in the future, but have not yet been made. In connection with the federal securities class action litigation (described in Note 15 below), the Company has received notice from the Underwriter Defendants (as defined below) of their intention to seek indemnification and has received, but not yet paid, several invoices from the Underwriter Defendants. The Company may record charges in the future as a result of these indemnification obligations.

In accordance with its memorandum and articles of association, the Company has indemnification obligations to its officers and directors for certain events or occurrences, subject to certain limits, while they are serving at the Company’s request in such capacity. Additionally, the Company has entered into, and intends to continue to enter into, separate indemnification agreements with its directors and executive officers. These agreements, among other things, require the Company to indemnify its directors and executive officers for certain expenses, including attorneys’ fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of the Company’s directors or executive officers, or any of the Company’s subsidiaries or any other company or enterprise to which the person provides services at the Company’s request. In connection with the federal securities class action litigation (described in Note 15 below), the Company has paid legal fees and costs on behalf of itself and the current and former officers and directors of the Company who are named as defendants in that litigation. The Company also has a director and officer insurance policy that enables it to recover a portion of any amounts paid for future potential claims. Certain of the Company’s officers and directors have also entered into separate indemnification agreements with Horizon Pharma, Inc. (“HPI”) prior to the Company’s merger transaction with Vidara (the “Vidara Merger”).

NOTE 15 - LEGAL PROCEEDINGS

RAYOS

On July 15, 2013, the Company received a Paragraph IV Patent Certification from Watson Laboratories, Inc.—Florida, known as Actavis Laboratories FL, Inc. (“Actavis FL”), advising that Actavis FL had filed an Abbreviated New Drug Application (“ANDA”) with the FDA for a generic version of RAYOS, containing up to 5 mg of prednisone. On August 26, 2013, the Company, together with Jagotec, filed suit in the United States District Court for the District of New Jersey against Actavis FL, Actavis Pharma, Inc., Andrx Corp., and Actavis, Inc. seeking an injunction to prevent the approval of the ANDA.

On October 1, 2015, the Company's subsidiary Horizon Pharma Switzerland GmbH, as well as Jagotec, entered into a license and settlement agreement (the "Actavis settlement agreement") with Actavis FL relating to the Company's and Jagotec's patent infringement litigation against Actavis FL. The court entered the stipulation of dismissal and closed the case on December 4, 2015. The Actavis settlement agreement provides for a full settlement and release by each party of all claims that relate to the litigation or under the patents with respect to Actavis FL's generic version of RAYOS tablets.

Under the Actavis settlement agreement, the Company and Jagotec granted Actavis FL a non-exclusive license to manufacture and commercialize Actavis FL's generic version of RAYOS tablets in the United States after the generic entry date (as defined below) and to take steps necessary to develop inventory of, and prepare to commercialize, Actavis FL's generic version of RAYOS tablets during certain limited periods prior to the generic entry date. The Company and Jagotec also agreed that during the 180 days after the generic entry date, the license granted to Actavis FL would be exclusive with respect to any third-party generic version of RAYOS tablets.

Under the Actavis settlement agreement, the generic entry date is December 23, 2022; however, Actavis FL may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party RAYOS patent litigation, the entry of other generic versions of RAYOS tablets or certain substantial reductions in RAYOS prescriptions over specified periods of time.

PENNSAID 2%

On November 13, 2014, the Company received a Paragraph IV Patent Certification from Watson Laboratories, Inc. ("Watson Laboratories") advising that Watson Laboratories had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On December 23, 2014, the Company filed suit in the United States District Court for the District of New Jersey against Actavis Laboratories UT, Inc., and Actavis plc (collectively "Actavis") seeking an injunction to prevent the approval of the ANDA. Since then, Watson Laboratories, Inc. changed its name to Actavis Laboratories UT, Inc., and is the current owner of the ANDA. The lawsuit alleged that Actavis has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, and 8,871,809 by filing an ANDA seeking approval from the FDA to market a generic version of PENNSAID 2% prior to the expiration of certain of the Company's patents listed in the FDA's Orange Book ("Orange Book").

On June 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patent 9,066,913. On August 11, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patent 9,101,591. On September 17, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patent 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591 and 9,132,110 are listed in the Orange Book and have claims that cover PENNSAID 2%. These three cases were consolidated with the case filed against Actavis on December 23, 2014.

On August 17, 2016, the district court issued a Markman opinion holding certain of the asserted claims of U.S. Patents 8,252,838, 8,563,613, 9,066,913 and 9,101,591 invalid as indefinite. On March 16, 2017, the court granted Actavis' motion for summary judgment of non-infringement of the asserted claims of U.S. Patents 8,546,450, 8,217,078 and 9,132,110. In view of the Markman and summary judgment decisions, a bench trial was held on March 21-30, 2017, regarding claim 12 of U.S. Patent 9,066,913. On May 14, 2017, the court issued its opinion upholding the validity of claim 12 of the '913 patent, which Actavis had previously admitted its proposed generic diclofenac sodium topical solution product would infringe. Actavis filed its Notice of Appeal on June 16, 2017. The Company filed its Notice of Appeal of the district court's rulings on certain claims of the '450, '078, '838, '613, '591, '304, '784, '913, and '110 patents on June 9, 2017.

On October 27, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patent No. 9,220,784. All three patents, U.S. Patent Nos. 9,168,304, 9,168,305, and 9,220,784, are listed in the Orange Book and have claims that cover PENNSAID 2%. All claims from U.S. Patents 9,168,304, 9,168,305 and 9,220,784 asserted against Actavis were held invalid as indefinite by way of the court's August 17, 2016, Markman opinion. The court's rulings are currently on appeal to the Federal Circuit.

On August 18, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patents 9,339,551, 9,339,552, 9,370,501 and 9,375,412. All four patents, U.S. Patents 9,339,551, 9,339,552, 9,370,501 and 9,375,412, are listed in the Orange Book and have claims that cover PENNSAID 2%.

The Company received from Actavis a Paragraph IV Patent Certification Notice Letter dated September 27, 2016, against Orange Book listed U.S. Patent Nos. 9,415,029, advising that Actavis had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

On December 2, 2014, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents. 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,741,956 from Paddock Laboratories, LLC

(“Paddock”) advising that Paddock had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On January 9, 2015, the Company received from Paddock another Paragraph IV Patent Certification against newly Orange Book listed U.S. Patent No. 8,871,809. On January 13, 2015 and January 14, 2015, the Company filed suits in the United States District Court for the District of New Jersey and the United States District Court for the District of Delaware, respectively, against Paddock seeking an injunction to prevent the approval of the ANDA. The lawsuits alleged that Paddock has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.

On May 6, 2015, the Company entered into a settlement and license agreement (the “Perrigo settlement agreement”) with Perrigo Company plc and its subsidiary Paddock (collectively, “Perrigo”), relating to the Company’s patent infringement litigation against Perrigo. The Perrigo settlement agreement provides for a full settlement and release by both the Company and Perrigo of all claims that were or could have been asserted in the litigation and that arise out of the issues that were the subject of the litigation or Perrigo’s generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on May 13, 2015.

Under the Perrigo settlement agreement, the license effective date is January 10, 2029; however, Perrigo may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company’s PENNSAID 2% shipments over specified periods of time.

Under the Perrigo settlement agreement, the Company also agreed not to sue or assert any claim against Perrigo for infringement of any patent or patent application owned or controlled by the Company during the term of the license granted in the Perrigo settlement agreement based on the manufacture, use, sale, offer for sale, or importation of Perrigo's generic version of PENNSAID 2% in the United States.

In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Perrigo PENNSAID 2% as its authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Perrigo.

On February 2, 2015, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 from Taro Pharmaceuticals USA, Inc. and Taro Pharmaceutical Industries, Ltd. (collectively, "Taro") advising that Taro had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On March 13, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Taro seeking an injunction to prevent the approval of the ANDA.

On September 9, 2015, certain subsidiaries of the Company (the "Horizon Subsidiaries") entered into a settlement and license agreement with Taro (the "Taro settlement agreement") relating to the Horizon Subsidiaries' patent infringement litigation against Taro. The Taro settlement agreement provides for a full settlement and release by the Horizon Subsidiaries and Taro of all claims that were or could have been asserted in the litigation and that arise out of the issues that were subject of the litigation or Taro's generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on November 3, 2015.

Under the Taro settlement agreement, the Horizon Subsidiaries granted Taro a non-exclusive license to manufacture and commercialize Taro's generic version of PENNSAID 2% in the United States after the license effective date (as defined below) and to take steps necessary to develop inventory of, and prepare to commercialize, Taro's generic version of PENNSAID 2% during certain limited periods prior to the license effective date.

Under the Taro settlement agreement, the license effective date is January 10, 2029; however, Taro may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company's PENNSAID 2% shipments over specified periods of time.

On March 18, 2015, the Company received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 from Lupin Limited advising that Lupin Limited had filed an ANDA with the FDA for generic version of PENNSAID 2%. On April 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin Limited and Lupin Pharmaceuticals Inc. (collectively, "Lupin"), seeking an injunction to prevent the approval of the ANDA. The lawsuit alleges that Lupin has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company's patents listed in the Orange Book. The commencement of the patent infringement lawsuit stays, or bars, FDA approval of Lupin's ANDA for 30 months or until an earlier district court decision which finds that the subject patents are not infringed or are invalid.

On June 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent No. 9,066,913. On August 11, 2015, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Lupin that added U.S. Patent No. 9,101,591 to the litigation concerning U.S. Patent 9,066,913. On September 17, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591 and 9,132,110, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On October 27, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent No. 9,220,784. On August 18, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patents 9,339,551, 9,339,552, 9,370,501 and 9,375,412. All seven patents, U.S. Patents 9,168,304, 9,168,305, 9,220,784, 9,339,551, 9,339,552, 9,370,501 and 9,375,412, are listed in the Orange Book and have claims that cover PENNSAID 2%. All of the infringement actions brought against Lupin remain pending, with certain claims of the ’809, ’913, ’450, ’110, ’551, ’552, ’412 and ’501 patents being asserted. The decisions reached by the court in the related Actavis actions regarding the ‘809, ‘913, ‘450, ‘110, ‘551, ‘552, ‘412 and ‘501 patents as described above, are expected to apply to the same claims asserted against Lupin in these actions. The court has not yet set a trial date for the Lupin actions.

The Company received from Teligent, Inc., formerly known as IGI Laboratories, Inc. (“Teligent”), a Paragraph IV Patent Certification dated March 24, 2015 against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 advising that Teligent had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On May 21, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent seeking an injunction to prevent the approval of the ANDA. The lawsuit alleged that Teligent has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.

On June 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent for patent infringement of U.S. Patent 9,066,913. On August 11, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent for patent infringement of U.S. Patent 9,101,591. On September 17, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent for patent infringement of U.S. Patent No. 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591 and 9,132,110 are listed in the Orange Book and have claims that cover PENNSAID 2%.

On October 27, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Teligent for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Teligent for patent infringement of U.S. Patent 9,220,784. All three patents, U.S. Patents 9,168,304, 9,168,305 and 9,220,784 are listed in the Orange Book and have claims that cover PENNSAID 2%.

The Company entered into a settlement and license agreement with Teligent (the “Teligent settlement agreement”), effective May 9, 2016, relating to the patent infringement litigation against Teligent. The Teligent settlement agreement provides for a full settlement and release by both the Company and Teligent of all claims that were or could have been asserted in the litigation and that arise out of the issues that were subject of the litigation or Teligent’s generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court on May 2, 2016.

Under the Teligent settlement agreement, the Company granted Teligent a non-exclusive license to manufacture and commercialize Teligent’s generic version of PENNSAID 2% in the United States after the license effective date (as defined below) and to take steps necessary to develop inventory of, and prepare to commercialize, Teligent’s generic version of PENNSAID 2% during certain limited periods prior to the license effective date.

Under the Teligent settlement agreement, the license effective date is January 10, 2029; however, Teligent may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation, the entry of other third-party generic versions of PENNSAID 2% or certain substantial reductions in the Company’s PENNSAID 2% shipments over specified periods of time. In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Teligent PENNSAID 2% as an authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Teligent.

The Company received from Amneal Pharmaceuticals LLC (“Amneal”) a Paragraph IV Patent Certification dated April 2, 2015 against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956 and 8,871,809 advising that Amneal had filed an ANDA with the FDA for a generic version of PENNSAID 2%. On May 15, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal seeking an injunction to prevent the approval of the ANDA. The lawsuit alleged that Amneal has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164 and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of the Company’s patents listed in the Orange Book.

On June 30, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,066,913. On August 11, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,101,591. On September 17, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591 and 9,132,110, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On October 27, 2015, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, the Company filed suit in the United States District Court for the District of New Jersey against Amneal for patent infringement of U.S. Patent 9,220,784. All three patents, U.S. Patents 9,168,304, 9,168,305, and 9,220,784, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On April 18, 2016, the Company entered into a settlement and license agreement (the "Amneal settlement agreement") with Amneal relating to the Company's patent infringement litigation against Amneal. The Amneal settlement agreement provides for a full settlement and release by both the Company and Amneal of all claims that were or could have been asserted in the litigation and that arise out of the issues that were the subject of the litigation or Amneal's generic version of PENNSAID 2%. A stipulation of dismissal was entered by the district court.

Under the Amneal settlement agreement, the Company granted Amneal a non-exclusive license to manufacture and commercialize Amneal's generic version of PENNSAID 2% in the United States after the license effective date (as defined below) and to take steps necessary to develop inventory of, and prepare to commercialize, Amneal's generic version of PENNSAID 2% during certain limited periods prior to the license effective date.

Under the Amneal settlement agreement, the license effective date is January 10, 2029; however, Amneal may be able to enter the market earlier under certain circumstances. Such events relate to the resolution of any other third-party PENNSAID 2% patent litigation or the entry of other third-party generic versions of PENNSAID 2%.

In certain circumstances following the entry of other third-party generic versions of PENNSAID 2%, the Company may be required to supply Amneal with PENNSAID 2% as a non-exclusive, authorized distributor of generic PENNSAID 2%, with the Company receiving specified percentages of any net sales by Amneal.

The Company received from Apotex Inc. ("Apotex") a Paragraph IV Patent Certification Notice Letter dated April 1, 2016, against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, 8,871,809, 9,066,913, 9,101,591, 9,132,110, 9,168,304, 9,168,305 and 9,220,784 advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex a second Paragraph IV Patent Certification Notice Letter dated June 30, 2016, against Orange Book listed U.S. Patents 9,339,551 and 9,339,552, advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex a third Paragraph IV Patent Certification Notice Letter dated September 21, 2016, against Orange Book listed U.S. Patent 9,415,029, advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%. The Company also received from Apotex additional Paragraph IV Patent Certification Notice Letters dated April 20, 2017 and April 27, 2017 against Orange Book listed U.S. Patent 9,539,335 and 9,370,501.

VIMOVO

Currently, patent litigation is pending in the United States District Court for the District of New Jersey against three generic companies intending to market VIMOVO prior to the expiration of certain of the Company's patents listed in the Orange Book. These cases are in the United States District Court for the District of New Jersey. They are collectively known as the VIMOVO cases, and involve the following sets of defendants: (i) Dr. Reddy's Laboratories Inc. and Dr. Reddy's Laboratories Ltd. (collectively, "Dr. Reddy's"); (ii) Lupin Ltd. and Lupin Pharmaceuticals Inc. (collectively, "Lupin"); and (iii) Mylan Pharmaceuticals Inc., Mylan Laboratories Limited, and Mylan Inc. (collectively, "Mylan"). Patent litigation in the United States District Court for the District of New Jersey against a fourth generic company, Actavis Laboratories FL., Inc. and Actavis Pharma, Inc. (collectively, "Actavis Pharma"), was dismissed on January 10, 2017 after the court granted Actavis' motion to compel enforcement of a settlement agreement. On February 3, 2017, the Company appealed this dismissal decision to the Court of Appeals for the Federal Circuit. Patent litigation in the United States District Court for the District of New Jersey against a fifth generic company, Anchen Pharmaceuticals Inc. ("Anchen"), was dismissed on June 9, 2014 after Anchen recertified under Paragraph III. The Company understands that Dr. Reddy's has entered into a settlement with AstraZeneca with respect to patent rights directed to Nexium for the commercialization of VIMOVO. The settlement agreement, however, has no effect on the Aralez VIMOVO patents, which are still the subject of patent litigations. As part of the Company's acquisition of the U.S. rights to VIMOVO, the Company has taken over and is responsible for the patent litigations that include the Aralez patents licensed to the Company under the amended and restated collaboration and license agreement for the United States with Aralez.

The VIMOVO cases were filed on April 21, 2011, July 25, 2011, October 28, 2011, January 4, 2013, May 10, 2013, June 28, 2013, October 23, 2013, May 13, 2015 and November 24, 2015 and collectively include allegations of infringement of U.S. Patent Nos. 6,926,907, 8,557,285, 8,852,636, and 8,858,996 (the "'996 patent"). On June 18, 2015, the Company amended the complaints to add a charge of infringement of U.S. Patent No. 8,865,190 (the "'190 patent"). On January 7, 2016, Actavis Pharma asserted a counterclaim for declaratory judgment of invalidity and non-infringement of U.S. Patent No. 8,945,621 (the "'621 patent"). On January 25, 2016, the Company filed a new case against Actavis Pharma including allegations of infringement of U.S. Patent Nos. 9,161,920 and 9,198,888. This case was subsequently consolidated with the Actavis Pharma case involving the '996 patent, the '190 patent and U.S. Patent No. 8,852,636. On February 10, 2016, the Company amended the complaints against Dr. Reddy's, Lupin, and Mylan to add charges of infringement of U.S. Patent Nos. 9,161,920 and 9,198,888. On February 19, 2016, Mylan asserted a counterclaim for declaratory judgment of invalidity and non-infringement of U.S. Patent No. 9,220,698. On August 11, 2016, the Company filed new complaints asserting the '621 patent and U.S. Patent Nos. 9,220,698, and 9,345,695 against the defendants. On December 6, 2016, the Company asserted U.S. Patent No. 9,393,208 (the "'208 patent") against Lupin, Mylan, and Actavis in amended complaints, and against Dr. Reddy's in a new complaint.

"Case I" consists of the cases asserting U.S. Patent Nos. 8,557,285 and 6,926,907. "Case II" consists of the cases asserting the '996 patent, the '190 patent and U.S. Patent Nos. 8,852,636, 9,161,920, and 9,198,888. "Case III" consists of the cases asserting U.S. Patent Nos. 8,945,621, 9,220,698, 9,345,695, and the '208 patent against Lupin and Mylan, and the case asserting U.S. Patent Nos. 8,945,621, 9,220,698, and 9,345,695 against Dr. Reddy's. "Case IV" consisted of the case asserting the '208 patent against Dr. Reddy's, but has been consolidated with Case III.

The Case I cases were consolidated for discovery. The court issued a claim construction order for Case I and conducted trial beginning on January 12, 2017. On May 12, 2016, the court granted Dr. Reddy's motion for summary judgment of non-infringement of U.S. Patent No. 6,926,907 with respect to one of Dr. Reddy's two ANDAs.

On December 19, 2016, defendant Actavis filed a motion to compel enforcement of settlement agreement related to Cases I, II, and III. On December 22, 2016, Magistrate Judge Arpert entered a report and recommendation that Actavis' motion to compel the enforcement of settlement be granted. On December 30, 2016, the Honorable Judge Mary Cooper ordered the adoption of the report and recommendation. On January 10, 2017, an order of dismissal was entered for all claims in Cases I, II and III. The Company appealed the district court's order enforcing the settlement with Actavis to the Federal Circuit. Briefing before the Federal Circuit is ongoing.

On January 12, 2017, a six-day bench trial commenced against defendants Dr. Reddy's and Mylan before Honorable Judge Mary Cooper in the District of New Jersey for Case I. The patents at issue in this trial included two Orange Book listed patents: U.S. Patent Nos. 6,926,907 and 8,557,285. Defendant Lupin formerly entered into a stay pending the entry of judgment in Case I. On June 26, 2017, the court issued its opinion upholding the validity of the '285 and '907 patents and finding that Dr. Reddy's, Mylan's, and Lupin's proposed generic naproxen/esomeprazole magnesium products would all infringe at least one of the two patents. The court entered the final judgment on July 21, 2017. Any notice of appeal is due by August 21, 2017.

The Case II and Case III cases have been consolidated for discovery. On January 19, 2017, the court entered a scheduling order for Case II and Case III, which was subsequently updated. The court's scheduling order requires, inter alia, filing and serving of the opening claim construction submissions by May 26, 2017. The court has not issued a claim construction order in Case II. A trial date for Cases II and III has not yet been set. On December 20, 2016, Mylan filed a motion to dismiss the Company's first amended complaint for patent infringement in Case III. On April 28, 2017, Dr. Reddy's filed a motion to dismiss for lack of jurisdiction in Case III, and the Company is awaiting final ruling.

The Company understands the cases arise from Paragraph IV Patent Certification notice letters providing notice of the filing of ANDAs with the FDA seeking regulatory approval to market generic versions of VIMOVO before the expiration of the patents-in-suit. The Company understands the Dr. Reddy's notice letters were dated March 11, 2011, November 20, 2012 and April 20, 2015; the Lupin notice letters were dated June 10, 2011, March 12, 2014 and July 26, 2016; the Mylan notice letters were dated May 16, 2013, February 9, 2015, January 26, 2016, February 26, 2016, July 19, 2016 and September 22, 2016; the Actavis Pharma notice letters were dated March 29, 2013, November 5, 2013, May 29, 2015, October 9, 2015, December 10, 2015, March 1, 2016, April 6, 2016, July 22, 2016 and September 8, 2016; and the Anchen notice letter was dated September 16, 2011.

On February 24, 2015, Dr. Reddy's filed a Petition for inter partes review ("IPR") of U.S. Patent No. 8,557,285, one of the patents in litigation in the above referenced VIMOVO cases. On October 9, 2015, the United States Patent and Trademark Office (the "U.S. PTO") denied such Petition for IPR.

On May 21, 2015, the Coalition for Affordable Drugs VII LLC ("Coalition for Affordable Drugs") filed a Petition for IPR of U.S. Patent No. 6,926,907, one of the patents in litigation in the above referenced VIMOVO cases. On December 8, 2015, the U.S. PTO denied such Petition for IPR.

On June 5, 2015, the Coalition for Affordable Drugs filed another Petition for IPR of the ’996 patent, one of the patents in litigation in the above referenced VIMOVO cases. On December 17, 2015, the U.S. PTO denied such Petition for IPR.

On August 7, 2015, the Coalition for Affordable Drugs filed another Petition for IPR of U.S. Patent No. 8,852,636, one of the patents in litigation in the above referenced VIMOVO cases. On February 11, 2016, the U.S. PTO denied such Petition for IPR.

On August 12, 2015, the Coalition for Affordable Drugs filed another Petition for IPR of the ’621 patent, one of the patents in litigation in the above referenced VIMOVO cases. On February 22, 2016, the Patent Trial and Appeal Board (the “PTAB”) issued a decision to institute the IPR. The PTAB hearing for the ‘621 patent was held on November 16, 2016. The PTAB issued a final written decision finding the ’621 patent valid on February 21, 2017.

On August 19, 2015, Lupin filed Petitions for IPR of the ’996 patent, the ’190 patent and U.S. Patent No. 8,852,636, all patents in litigation in the above referenced VIMOVO cases. On March 1, 2016, the PTAB issued decisions to institute the IPRs for the ’996 patent” and the ’190 patent. On March 1, 2016, the PTAB denied the Petition for IPR for U.S. Patent No. 8,852,636. The PTAB hearings for the ‘996 patent and ‘190 patent were both held on November 29, 2016. On February 28, 2017, the Patent Trial and Appeal Board issued final written decisions on the IPRs of the ‘996 and ‘190 patents, upholding the validity of both patents.

RAVICTI

On March 17, 2014, Hyperion Therapeutics, Inc. (“Hyperion”) received notice from Par Pharmaceutical, Inc. (“Par Pharmaceutical”) that it had filed an ANDA with the FDA seeking approval for a generic version of the Company’s medicine RAVICTI. The ANDA contained a Paragraph IV Patent Certification alleging that two of the patents covering RAVICTI, U.S. Patent No. 8,404,215, titled “Methods of therapeutic monitoring of nitrogen scavenging drugs,” which expires in March 2032 (the “’215 patent”), and U.S. Patent No. 8,642,012, titled “Methods of treatment using ammonia scavenging drugs,” which expires in September 2030 (the “’012 patent”), are invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. Par Pharmaceutical did not challenge the validity, enforceability, or infringement of the Company’s primary composition of matter patent for RAVICTI, U.S. Patent No. 5,968,979 titled “Triglycerides and ethyl esters of phenylalkanoic acid and phenylalkanoic acid useful in treatment of various disorders,” which would have expired on February 7, 2015, but as to which Hyperion was granted an interim term of extension until February 7, 2016 and to which the U.S. PTO has granted a final term extension of 1,267 days, which extends the expiration date to July 28, 2018. Hyperion filed suit in the United States District Court for the Eastern District of Texas, Marshall Division, against Par Pharmaceutical on April 23, 2014 seeking an injunction to prevent the approval of Par Pharmaceutical’s ANDA and/or to prevent Par Pharmaceutical from selling a generic version of RAVICTI, and the Company has taken over and is responsible for this patent litigation. On September 15, 2015, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,095,559 (the “’559 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. On March 14, 2016, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,254,278 (the “’278 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. On June 3, 2016, the Company received notice from Par Pharmaceutical that it had filed a Paragraph IV Patent Certification alleging that U.S. Patent No. 9,326,966 (the “’966 patent”) is invalid and/or will not be infringed by Par Pharmaceutical’s manufacture, use or sale of the medicine for which the ANDA was submitted. The Company filed suit in the United States District Court for the District of New Jersey against Par Pharmaceutical on June 30, 2016 (“the Par New Jersey action”), seeking an injunction to prevent the approval of Par Pharmaceutical’s ANDA and/or to prevent Par Pharmaceutical from selling a generic version of RAVICTI. The lawsuit alleges that Par Pharmaceutical has infringed the ’559 patent, the ’278 patent and the ’966 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. The Par New Jersey action has been stayed pending the resolution of the PTAB’s IPR of the ’559 patent.

On April 29, 2015, Par Pharmaceutical filed Petitions for IPR of the ’215 patent and the ’012 patent. The PTAB issued decisions instituting such IPRs on November 4, 2015. On December 14, 2015, the District Court Judge Roy Payne issued a stay pending a final written decision from the PTAB with respect to the IPRs of the ’215 patent and the ’012 patent. On September 29, 2016, the PTAB issued a final written decision holding all the claims of the ’215 patent unpatentable. The Company did not appeal the PTAB’s decision concerning the ’215 patent to the Federal Circuit. On November 3, 2016, the PTAB issued a final written decision holding all of the claims of the ‘012 patent patentable. On December 29, 2016, Par filed a notice of appeal with the Federal Circuit to appeal the final written decision of the PTAB concerning the patentability of the ’012 patent. Par’s opening brief is due on October 16, 2017.

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On September 4, 2015, the Company received notice from Lupin of Lupin's Paragraph IV Patent Certification against the '215 patent and the '012 patent, advising that Lupin had filed an ANDA with the FDA for a generic version of RAVICTI. On November 6, 2015, the Company also received Notice of Lupin's Paragraph IV Patent Certification against the '559 patent. Lupin has not advised the Company as to the timing or status of the FDA's review of its filing. On October 19, 2015 the Company filed suit in the United States District Court for the District of New Jersey against Lupin seeking an injunction to prevent the approval of the ANDA. The lawsuit alleges that Lupin has infringed the '215 patent, the '012 patent and the '559 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. On April 6, 2016, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Lupin alleging that Lupin has infringed the '559 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to expiration of the '559 patent. The commencement of the patent infringement lawsuit stays, or bars, FDA approval of Lupin's ANDA for 30 months or until an earlier district court decision that the subject patents are not infringed or are invalid. On April 18, 2016, the Company received notice from Lupin of Lupin's Paragraph IV Patent Certification against the '278 patent. On July 6, 2016, the Company received notice from Lupin of Lupin's Paragraph IV Patent Certification against the '966 patent. The Company filed suit in the United States District Court for the District of New Jersey against Lupin on July 21, 2016, seeking an injunction to prevent the approval of Lupin's ANDA and/or to prevent Lupin from selling a generic version of RAVICTI. The lawsuit alleges that Lupin has infringed the '278 patent and the '966 patent by filing an ANDA seeking approval from the FDA to market generic versions of RAVICTI prior to the expiration of the patents. The subject patents are listed in the Orange Book. The Lupin New Jersey actions have been stayed pending the resolution of the PTAB's IPR of the '559 patent.

On April 1, 2016, Lupin filed a Petition to request an IPR of the '559 patent. On September 30, 2016, the PTAB issued a decision to institute the IPR for the '559 patent. The PTAB must issue a final written decision on the IPR of the '559 patent no later than September 30, 2017. On March 27, 2017, Lupin filed a Petition to request an IPR of the '278 patent and a Petition to request an IPR of the '966 patent. The Company filed its response on the '966 patent on July 6, 2017. The Company's preliminary patent owner response for the '278 patent was filed on July 24, 2017.

Other

Beginning on March 8, 2016, two federal securities class action lawsuits (captioned Schaffer v. Horizon Pharma plc, et al., Case No. 16-cv-01763-JMF and Banie v. Horizon Pharma plc, et al., Case No. 16-cv-01789-JMF) were filed in the United States District Court for the Southern District of New York against the Company and certain of the Company's current and former officers (the "Officer Defendants"). On March 24, 2016, the court consolidated the two actions under Schaffer v. Horizon Pharma plc, et al. On June 3, 2016, the court appointed Locals 302 and 612 of the International Union of Operating Engineers-Employers Construction Industry Retirement Trust and the Carpenters Pension Trust Fund for Northern California as lead plaintiffs and Labaton Sucharow LLP as lead counsel. On July 25, 2016, lead plaintiffs and additional named plaintiff Automotive Industries Pension Trust Fund filed their consolidated complaint, which they subsequently amended on October 7, 2016, including additional current and former officers, the Company's Board of Directors (the "Director Defendants"), and underwriters involved with the Company's April 2015 public offering (the "Underwriter Defendants") as defendants. The plaintiffs allege that certain of the Company and the Officer Defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, by making false and/or misleading statements about, among other things: (a) the Company's financial performance, (b) the Company's business prospects and drug-pricing practices, (c) the Company's sales and promotional practices, and (d) the Company's design, implementation, performance, and risks associated with the Company's Prescriptions-Made-Easy program. The plaintiffs allege that certain of the Company, the Director Defendants and the Underwriter Defendants violated sections 11, 12(a)(2) and 15 of the Securities Act of 1933, as amended, (the "Securities Act") in connection with the Company's April 2015 public offering. The plaintiffs seek, among other things, an award of damages allegedly sustained by plaintiffs and the putative class, including a reasonable allowance for costs and attorneys' fees. On November 14, 2016, all defendants moved to dismiss the plaintiffs' amended complaint. Plaintiffs' filed their opposition to the motion to dismiss on December 21, 2016. Briefing on the motion to dismiss was completed on January 27, 2017 and the parties await the court's ruling.

NOTE 16 – DEBT AGREEMENTS

The Company's outstanding debt balances as of June 30, 2017 and December 31, 2016 consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
2017 Term Loan Facility	$847,875	$ —
2015 Term Loan Facility	—	394,000
2016 Incremental Loan Facility	—	375,000
2023 Senior Notes	475,000	475,000
2024 Senior Notes	300,000	300,000
Exchangeable Senior Notes	400,000	400,000
Total face value	2,022,875	1,944,000
Debt discount	(118,351)	(126,352)
Deferred financing fees	(12,180)	(10,155)
Total long-term debt	1,892,344	1,807,493
Less: current maturities	8,500	7,750
Long-term debt, net of current maturities	$1,883,844	$ 1,799,743

2017 Term Loan Facility

On March 29, 2017, HPI and Horizon Pharma USA, Inc. ("HPUSA" and, together with HPI, in such capacity, the "Borrowers"), wholly-owned subsidiaries of the Company, borrowed $850.0 million aggregate principal amount of loans (the "Refinancing Loans") pursuant to an amendment (the "Refinancing Amendment") to the Credit Agreement, dated as of May 7, 2015 (as amended by the 2016 Amendment described below, the "Existing Credit Agreement" and, the Existing Credit Agreement as amended by the Refinancing Amendment, the "Credit Agreement"), by and among the Borrowers, the Company and certain of its subsidiaries as guarantors, the lenders party thereto from time to time and Citibank, N.A., as administrative agent and collateral agent (the "2017 Term Loan Facility"). The Credit Agreement provides for (i) the Refinancing Loans, (ii) one or more uncommitted additional incremental loan facilities subject to the satisfaction of certain financial and other conditions, and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The Credit Agreement allows for the Company and certain of its subsidiaries to become borrowers under incremental or refinancing facilities.

The Refinancing Loans were incurred as a separate new class of term loans under the Credit Agreement with substantially the same terms as the previously outstanding senior secured term loans incurred on May 7, 2015 (the "2015 Loans") and the outstanding senior secured term loans incurred on October 25, 2016 (the "2016 Loans" and, together with the 2015 Loans, the "Refinanced Loans"), except as described below. The Refinancing Loans bear interest, at the Borrowers' option, at a rate equal to either the London Inter-Bank Offer Rate ("LIBOR"), plus an applicable margin of 3.75% per year (subject to a LIBOR floor of 1.00%), or the adjusted base rate plus 2.75%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1.00%, (b) prime rate, (c) fed funds plus ½ of 1.00%, and (d) 2.00%. The Borrowers used a portion of the proceeds of the Refinancing Loans to repay the Refinanced Loans, which totaled $769.0 million.

The Company elected to exercise its reinvestment rights under the mandatory prepayment provisions of the Credit Agreement with respect to the net proceeds from the Chiesi divestiture. To the extent the Company does not apply such net proceeds to permitted acquisitions (including the acquisition of rights to products and products lines) and/or the acquisition of capital assets within 365 days of the receipt thereof (or commit to so apply and then apply within 180 days after the end of such 365-day period), the Borrowers under the Credit Agreement would be required to make a mandatory prepayment under the Credit Agreement in an amount equal to the unapplied net proceeds. Until such time, the net proceeds are not legally restricted for use. As of June 30, 2017, the Company had applied a portion of such net proceeds to the acquisition of additional rights to interferon gamma-1b. See Note 3 for further details of this acquisition.

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

Borrowers under the Credit Agreement are permitted to make voluntary prepayments of the loans under the Credit Agreement at any time without payment of a premium, except that with respect to the Refinancing Loans, a 1.00% premium will apply to a repayment of the Refinancing Loans in connection with a repricing of, or any amendment to the Credit Agreement in a repricing of, such loans effected on or prior to the date that is six months following March 29, 2017. The Borrowers are required to make mandatory prepayments of loans under the Credit Agreement (without payment of a premium) with (a) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (b) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions), (c) net cash proceeds from issuances of debt (other than certain permitted debt), and (d) 50% of the Company's excess cash flow (subject to decrease to 25% or 0% if the Company's first lien leverage ratio is less than 2.25:1 or 1.75:1, respectively). The Refinancing Loans will amortize in equal quarterly installments beginning on June 30, 2017 in an aggregate annual amount equal to 1.00% of the original principal amount thereof, with any remaining balance payable on March 29, 2024, the final maturity date of the Refinancing Loans.

The Credit Agreement contains customary representations and warranties and customary affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness and dividends and other distributions.

Events of default under the Credit Agreement include: (i) the failure by any Borrower to timely make payments due under the Credit Agreement; (ii) material misrepresentations or misstatements in any representation or warranty by any Loan Party when made; (iii) failure by any Loan Party to comply with the covenants under the Credit Agreement and other related agreements; (iv) certain defaults under a specified amount of other indebtedness of the Company or its subsidiaries; (v) insolvency or bankruptcy-related events with respect to the Company or any of its material subsidiaries; (vi) certain undischarged judgments against the Company or any of its restricted subsidiaries; (vii) certain ERISA-related events reasonably expected to have a material adverse effect on the Company and its restricted subsidiaries taken as a whole; (viii) certain security interests or liens under the loan documents ceasing to be, or being asserted by the Company or its restricted subsidiaries not to be, in full force and effect; (ix) any loan document or material provision thereof ceasing to be, or any challenge or assertion by any Loan Party that such loan document or material provision is not, in full force and effect; and (x) the occurrence of a change of control. If one or more events of default occurs and continues beyond any applicable cure period, the administrative agent may, with the consent of the lenders holding a majority of the loans and commitments under the facilities, or will, at the request of such lenders, terminate the commitments of the lenders to make further loans and declare all of the obligations of the Loan Parties under the Credit Agreement to be immediately due and payable.

The Company was, as of June 30, 2017, and is currently in compliance with the Credit Agreement.

As of June 30, 2017, the fair value of the 2017 Term Loan Facility was approximately $852.1 million, categorized as a Level 2 instrument, as defined in Note 13.

2016 Incremental Loan Facility and 2015 Term Loan Facility

On May 7, 2015, HPI, as borrower, and the Company and certain of its subsidiaries, as guarantors, entered into a credit agreement (the “2015 Credit Agreement”) with Citibank, N.A., as administrative and collateral agent, and the lenders from time to time party thereto providing for (i) a six-year $400.0 million term loan facility (the “2015 Term Loan Facility”); (ii) an uncommitted accordion facility subject to the satisfaction of certain financial and other conditions; and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The 2015 Loans under the 2015 Term Loan Facility bore interest, at each borrower’s option, at a rate equal to either the LIBOR, plus an applicable margin of 3.50% per year (subject to a 1.00% LIBOR floor), or the adjusted base rate plus 2.50%. The adjusted base rate was defined as the greater of (a) LIBOR (using one-month interest period) plus 1.00%, (b) prime rate, (c) fed funds plus ½ of 1.00%, and (d) 2.00%. HPI borrowed the full $400.0 million available on the 2015 Term Loan Facility on May 7, 2015 as a LIBOR-based borrowing.

On October 25, 2016 and in connection with the financing for the acquisition of Raptor, HPI and HPUSA (together, in such capacity, the "Incremental Borrowers") entered into an amendment to the 2015 Credit Agreement (the "2016 Amendment") with Citibank, N.A., as administrative and collateral agent, and Bank of America, N.A., as the incremental B-1 lender thereunder, pursuant to which the Incremental Borrowers borrowed $375.0 million aggregate principal amount of loans (the "2016 Incremental Loan Facility"). The 2016 Incremental Loan Facility was incurred as a separate class of term loans under the 2015 Credit Agreement with the same terms as the loans under the 2015 Term Loan Facility, except as described below.

The 2016 Loans under the 2016 Incremental Loan Facility bore interest, at the Incremental Borrowers' option, at a rate equal to either LIBOR plus an applicable margin of 4.50% per year (subject to a LIBOR floor of 1.00%), or the adjusted base rate plus 3.50%. The terms of the 2015 Loans provided for an amendment such that the effective yield of the 2015 Loans would not be less than the effective yield of the 2016 Loans minus 0.50%. Consequently, the issuance of the 2016 Loans resulted in an increase of the interest rate applicable to the 2015 Loans, as of October 25, 2016, to LIBOR plus 4.00%, subject to a LIBOR floor of 1.00% (an initial interest rate of 5.00%).

On March 29, 2017, the Borrowers used the proceeds of the Refinancing Loans under the 2017 Term Loan Facility to repay the 2015 Loans and 2016 Loans, which collectively totaled $769.0 million.

The 2015 Loans and the 2016 Loans were repaid, and a portion of the repayment was accounted for as a debt modification and a portion was accounted for as a debt extinguishment. Under debt extinguishment accounting, the Company recorded a charge of $0.5 million to "loss on debt extinguishment" in the condensed consolidated statements of comprehensive loss, which reflected the write-off of the unamortized portion of debt discount and deferred financing costs previously incurred and a one percent prepayment penalty fee. Under debt modification accounting, the Company capitalized an incremental $5.8 million of debt discount and deferred financing fees.

2024 Senior Notes

On October 25, 2016, HPI and HPUSA (together, in such capacity, the "2024 Issuers"), completed a private placement of $300.0 million aggregate principal amount of the 2024 Senior Notes to certain investment banks acting as initial purchasers who subsequently resold the 2024 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act. The net proceeds from the offering of the 2024 Senior Notes were approximately $291.9 million, after deducting the initial purchasers' discount and offering expenses payable by the 2024 Issuers.

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

The Company used the net proceeds from the offering of the 2024 Senior Notes as well as $375.0 million principal amount of 2016 Loans under the 2016 Incremental Loan Facility to fund a portion of the acquisition of Raptor, repay Raptor's outstanding debt, and pay any prepayment premiums, fees and expenses in connection with the foregoing.

The 2024 Senior Notes accrue interest at an annual rate of 8.750% payable semiannually in arrears on May 1 and November 1 of each year, beginning on May 1, 2017. The 2024 Senior Notes will mature on November 1, 2024, unless earlier repurchased or redeemed.

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

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

The indenture governing the 2024 Senior Notes contains covenants that limit the ability of the Company and its restricted subsidiaries to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales, merge, consolidate with or merge or sell all or substantially all of their assets, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries, and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to the Company. Certain of the covenants will be suspended during any period in which the notes receive investment grade ratings. The indenture also includes customary events of default.

The Company was, as of June 30, 2017, and is currently in compliance with the indenture governing the 2024 Senior Notes.

As of June 30, 2017, the fair value of the 2024 Senior Notes was approximately $303.0 million, categorized as a Level 2 instrument, as defined in Note 13.

2023 Senior Notes

On April 29, 2015, Horizon Pharma Financing Inc. (“Horizon Financing”), a wholly owned subsidiary of the Company, completed a private placement of $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023 (the “2023 Senior Notes”) to certain investment banks acting as initial purchasers who subsequently resold the 2023 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act, and in offshore transactions to non-U.S. persons in reliance on Regulation S under the Securities Act. The net proceeds from the offering of the 2023 Senior Notes were approximately $462.3 million, after deducting the initial purchasers’ discount and offering expenses payable by Horizon Financing.

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

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

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

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

The indenture governing the 2023 Senior Notes contains covenants that limit the ability of the Company and its restricted subsidiaries to, among other things, pay dividends or distributions, repurchase equity, prepay junior debt and make certain investments, incur additional debt and issue certain preferred stock, incur liens on assets, engage in certain asset sales, merge, consolidate with or merge or sell all or substantially all of their assets, enter into transactions with affiliates, designate subsidiaries as unrestricted subsidiaries, and allow to exist certain restrictions on the ability of restricted subsidiaries to pay dividends or make other payments to the Company. Certain of the covenants will be suspended during any period in which the notes receive investment grade ratings. The indenture governing the 2023 Senior Notes also includes customary events of default.

The Company was, as of June 30, 2017, and is currently in compliance with the indenture governing the 2023 Senior Notes.

As of June 30, 2017, the fair value of the 2023 Senior Notes was approximately $446.5 million, categorized as a Level 2 instrument, as defined in Note 13.

Exchangeable Senior Notes

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

The Exchangeable Senior Notes are fully and unconditionally guaranteed, on a senior unsecured basis, by the Company (the "Guarantee"). The Exchangeable Senior Notes and the Guarantee are Horizon Investment's and the Company's senior unsecured obligations. The Exchangeable Senior Notes accrue interest at an annual rate of 2.50% payable semiannually in arrears on March 15 and September 15 of each year, beginning on September 15, 2015. The Exchangeable Senior Notes will mature on March 15, 2022, unless earlier exchanged, repurchased or redeemed. The initial exchange rate is 34.8979 ordinary shares of the Company per $1,000 principal amount of the Exchangeable Senior Notes (equivalent to an initial exchange price of approximately $28.66 per ordinary share). The exchange rate will be subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest. In addition, following certain corporate events that occur prior to the maturity date or upon a tax redemption, Horizon Investment will increase the exchange rate for a holder who elects to exchange its Exchangeable Senior Notes in connection with such a corporate event or a tax redemption in certain circumstances.

Other than as described below, the Exchangeable Senior Notes may not be redeemed by the Company.

Issuer Redemptions:

Optional Redemption for Changes in the Tax Laws of a Relevant Taxing Jurisdiction: Horizon Investment may redeem the Exchangeable Senior Notes at its option, prior to March 15, 2022, in whole but not in part, in connection with certain tax-related events.

Provisional Redemption on or After March 20, 2019: On or after March 20, 2019, Horizon Investment may redeem for cash all or a portion of the Exchangeable Senior Notes if the last reported sale price of ordinary shares of the Company has been at least 130% of the exchange price then in effect for at least twenty trading days whether or not consecutive) during any thirty consecutive trading day period ending on, and including, the trading day immediately preceding the date on which Horizon Investment provide written notice of redemption. The redemption price will be equal to 100% of the principal amount of the Exchangeable Senior Notes to be redeemed, plus accrued and unpaid interest to, but not including, the redemption date; provided that if the redemption date occurs after a regular record date and on or prior to the corresponding interest payment date, Horizon Investment will pay the full amount of accrued and unpaid interest due on such interest payment date to the record holder of the Exchangeable Senior Notes on the regular record date corresponding to such interest payment date, and the redemption price payable to the holder who presents an Exchangeable Senior Note for redemption will be equal to 100% of the principal amount of such Exchangeable Senior Note.

Holder Exchange Rights:

Holders may exchange all or any portion of their Exchangeable Senior Notes at their option at any time prior to the close of business on the business day immediately preceding December 15, 2021 only upon satisfaction of one or more of the following conditions:

1. Exchange upon Satisfaction of Sale Price Condition – During any calendar quarter commencing after the calendar quarter ending on June 30, 2015 (and only during such calendar quarter), if the last reported sale price of ordinary

shares of the Company for at least twenty trading days (whether or not consecutive) during the period of thirty consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable exchange price on each applicable trading day.

2. Exchange upon Satisfaction of Trading Price Condition – During the five business day period after any ten consecutive trading day period in which the trading price per $1,000 principal amount of Exchangeable Senior Notes for each trading day of such period was less than 98% of the product of the last reported sale price of ordinary shares of the Company and the applicable exchange rate on such trading day.
3. Exchange upon Notice of Redemption – Prior to the close of business on the business day immediately preceding December 15, 2021, if Horizon Investment provides a notice of redemption, at any time prior to the close of business on the second scheduled trading day immediately preceding the redemption date.

As of June 30, 2017, none of the above conditions had been satisfied and no exchange of Exchangeable Senior Notes had been triggered.

On or after December 15, 2021, a holder may exchange all or any portion of its Exchangeable Senior Notes at any time prior to the close of business on the second scheduled trading day immediately preceding the maturity date regardless of the foregoing conditions.

Upon exchange, Horizon Investment will settle exchanges of the Exchangeable Senior Notes by paying or causing to be delivered, as the case may be, cash, ordinary shares or a combination of cash and ordinary shares, at its election.

The Company recorded the Exchangeable Senior Notes under the guidance in Topic ASC 470-20, Debt with Conversion and Other Options, and separated them into a liability component and equity component. The carrying amount of the liability component of $268.9 million was determined by measuring the fair value of a similar liability that does not have an associated equity component. The carrying amount of the equity component of $119.1 million represented by the embedded conversion option was determined by deducting the fair value of the liability component of $268.9 million from the initial proceeds of $387.2 million ascribed to the convertible debt instrument as a whole. The initial debt discount of $131.1 million is being charged to interest expense over the life of the Exchangeable Senior Notes using the effective interest rate method.

As of June 30, 2017, the fair value of the Exchangeable Senior Notes was approximately $344.8 million, categorized as a Level 2 instrument, as defined in Note 13.

NOTE 17 – SHAREHOLDERS' EQUITY

During the six months ended June 30, 2017, the Company issued an aggregate of:

- 206,090 ordinary shares in connection with the exercise of stock options and received $1.3 million in proceeds; and
- 597,292 ordinary shares in net settlement of vested restricted stock units.

During the six months ended June 30, 2017, warrants to purchase an aggregate of 2,500 ordinary shares of the Company were exercised and proceeds of $11,425 were received. In addition, warrants to purchase an aggregate of 704,185 ordinary shares of the Company were exercised in cashless exercises, resulting in the issuance of 523,459 ordinary shares. As of June 30, 2017, there were outstanding warrants to purchase 665,975 ordinary shares of the Company.

During the six months ended June 30, 2017, the Company made payments of $5.2 million for employee withholding taxes relating to share-based awards.

On January 1, 2017, the Company adopted ASU No. 2016-09. As a result of the adoption, $7.2 million of excess tax benefits that had not previously been recognized, as the related tax deduction had not reduced current taxes payable, were recorded on a modified retrospective basis through a cumulative effect adjustment to its accumulated deficit as of January 1, 2017.

In May 2016, the Company's board of directors authorized a share repurchase program pursuant to which the Company may repurchase up to 5,000,000 of its ordinary shares. In May 2017, the Company's board of directors reauthorized a share repurchase program pursuant to which the Company may repurchase up to 16,000,000 of its ordinary shares. As of June 30, 2017, the Company had repurchased 100,000 of its ordinary shares under this repurchase program, for a total consideration of $1.0 million. The timing and amount of future repurchases, if any, will depend on a variety of factors, including the price of the Company's ordinary shares, alternative investment opportunities, the Company's cash resources, restrictions under the Credit Agreement and market conditions.

NOTE 18 – SHARE-BASED INCENTIVE PLANS

Employee Stock Purchase Plan

2014 Employee Stock Purchase Plan. On May 17, 2014, HPI's board of directors adopted the 2014 Employee Stock Purchase Plan (the "2014 ESPP"). On September 18, 2014, at a special meeting of the stockholders of HPI (the "Special Meeting"), HPI's stockholders approved the 2014 ESPP. Upon consummation of the Vidara Merger, the Company assumed the 2014 ESPP. As described below, effective as of May 3, 2016, the number of ordinary shares authorized for issuance under the 2014 ESPP was reduced by 5,000,000 shares.

As of June 30, 2017, an aggregate of 3,361,928 ordinary shares were authorized and available for future issuance under the 2014 ESPP.

Share-Based Compensation Plans

2005 Stock Plan. In October 2005, HPI adopted the 2005 Stock Plan (the “2005 Plan”). Upon the signing of the underwriting agreement related to HPI’s initial public offering, on July 28, 2011, no further option grants were made under the 2005 Plan. All stock awards granted under the 2005 Plan prior to July 28, 2011 continue to be governed by the terms of the 2005 Plan. Upon consummation of the Vidara Merger, the Company assumed the 2005 Plan.

2011 Equity Incentive Plan. In July 2010, HPI’s board of directors adopted the 2011 Equity Incentive Plan (the “2011 EIP”). In June 2011, HPI’s stockholders approved the 2011 EIP, and it became effective upon the signing of the underwriting agreement related to HPI’s initial public offering on July 28, 2011. Upon consummation of the Vidara Merger, the Company assumed the 2011 EIP, and upon the effectiveness of the Horizon Pharma Public Limited Company 2014 Equity Incentive Plan (the “2014 EIP”), no additional stock awards were or will be made under the 2011 Plan, although all outstanding stock awards granted under the 2011 Plan continue to be governed by the terms of the 2011 Plan.

2014 Equity Incentive Plan and 2014 Non-Employee Equity Plan. On May 17, 2014, HPI’s board of directors adopted the 2014 EIP and the Horizon Pharma Public Limited Company 2014 Non-Employee Equity Plan (the “2014 Non-Employee Equity Plan”). At the Special Meeting, HPI’s stockholders approved the 2014 EIP and 2014 Non-Employee Equity Plan. Upon consummation of the Vidara Merger, the Company assumed the 2014 EIP and 2014 Non-Employee Equity Plan, which serve as successors to the 2011 EIP.

The 2014 EIP provides for the grant of incentive and nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other stock awards that may be settled in cash, shares or other property to the employees of the Company (or a subsidiary company). The number of ordinary shares of the Company that were initially authorized for issuance under the 2014 EIP was no more than 22,052,130, which number consisted of (i) 15,500,000 ordinary shares of the Company; plus (ii) the number of shares available for issuance pursuant to the grant of future awards under the 2011 EIP; plus (iii) any shares subject to outstanding stock awards granted under the 2011 EIP and the 2005 Plan that expire or terminate for any reason prior to exercise or settlement or are forfeited, redeemed or repurchased because of the failure to meet a contingency or condition required to vest such shares; less (iv) 10,000,000 shares, which is the additional number of shares which were previously approved as an increase to the share reserve of the 2011 EIP. On March 23, 2015, the compensation committee of the Company’s board of directors approved amending the 2014 EIP subject to shareholder approval to, among other things, increase the aggregate number of shares authorized for issuance under the 2014 EIP by an additional 14,000,000 shares. On May 6, 2015, the shareholders of the Company approved such amendment to the 2014 EIP. On February 25, 2016, the compensation committee of the Company’s board of directors approved, subject to shareholder approval, amending the 2014 EIP to, among other things, increase the aggregate number of shares authorized for issuance under the 2014 EIP beyond those remaining available for future grant under the 2014 EIP by an additional 6,000,000 shares and also approved a reduction in the number of shares authorized under our 2014 Non-Employee Equity Plan and 2014 ESPP by 1,000,000 shares and 5,000,000 shares, respectively, contingent on shareholder approval of the amendment to the 2014 EIP. On May 3, 2016, the shareholders of the Company approved the amendment to the 2014 EIP. The Company’s board of directors has authority to suspend or terminate the 2014 EIP at any time.

The 2014 Non-Employee Equity Plan provides for the grant of nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and other forms of stock awards that may be settled in cash, shares or other property to the non-employee directors and consultants of the Company (or a subsidiary company). The total number of ordinary shares of the Company that were initially authorized for issuance under the 2014 Non-Employee Equity Plan is 2,500,000. As described above, effective as of May 3, 2016, the number of ordinary shares authorized for issuance under the 2014 Non-Employee Equity Plan was reduced by 1,000,000 shares. The

Company's board of directors has authority to suspend or terminate the 2014 Non-Employee Equity Plan at any time.

As of June 30, 2017, an aggregate of 4,013,780 and 667,871 ordinary shares were authorized and available for future grants under the 2014 EIP and 2014 Non-Employee Equity Plan, respectively.

Stock Options

The following table summarizes stock option activity during the six months ended June 30, 2017:

	Options	Weighted Average Exercise Price	Weighted Average Contractual Term Remaining (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2016	13,627,519	$ 18.17	7.60	$ 35,157
Granted	1,746,384	16.96		
Exercised	(206,090)	6.10		
Forfeited	(403,133)	18.62		
Expired	(106,577)	19.66		
Outstanding as of June 30, 2017	14,658,103	18.17	7.31	16,285
Exercisable as of June 30, 2017	8,414,791	$ 16.60	6.49	$ 15,486

Stock options typically have a contractual term of ten years from grant date.

The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of each stock option is affected by the Company’s share price on the date of grant, as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the Company’s expected share price volatility over the expected life of the awards and actual and projected stock option exercise behavior. The weighted average fair value per share of stock option awards granted during the six months ended June 30, 2017 and 2016, and assumptions used to value stock options, are as follows:

	For the Six Months Ended June 30, 2017	2016
Dividend yield	—	—
Risk-free interest rate	1.9%-2.0%	1.3% - 1.8%
Weighted average expected volatility	49.1 %	73.8%
Expected life (in years)	6.0	6.0
Weighted average grant-date fair value per share of options granted	$ 8.24	$ 11.78

Dividend yield

The Company has never paid dividends and does not anticipate paying any dividends in the near future. Additionally, the Credit Agreement, as well as the indentures governing the 2024 Senior Notes and the 2023 Senior Notes (each as described in Note 16 above), contain covenants that restrict the Company from issuing dividends.

Risk-Free Interest Rate

The Company determined the risk-free interest rate by using a weighted average assumption equivalent to the expected term based on the U.S. Treasury constant maturity rate as of the date of grant.

Volatility

The Company used an average historical share price volatility of comparable companies to be representative of future share price volatility.

Expected Term

Given the Company’s limited historical exercise behavior, the expected term of options granted was determined using the “simplified” method since the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. Under this approach, the expected term is presumed to be the average of the vesting term and the contractual life of the option.

Forfeitures

As share-based compensation expense recognized in the condensed consolidated statements of comprehensive loss is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures based on actual forfeiture experience, analysis of employee turnover and other factors. The Company adopted ASU No. 2016-09 on January 1, 2017 and has elected to retain a forfeiture rate after adoption.

Restricted Stock Units

The following table summarizes restricted stock unit activity for the six months ended June 30, 2017:

	Number of Units	Weighted Average Grant-Date Fair Value Per Unit
Outstanding as of December 31, 2016	3,367,871	$ 18.45
Granted	2,048,187	12.16
Vested	(943,070)	16.38
Forfeited	(343,528)	18.15
Outstanding as of June 30, 2017	4,129,460	$ 15.83

The grant-date fair value of restricted stock units is the closing price of the Company’s shares on the date of grant.

Performance Stock Units

The following table summarizes performance stock unit awards (“PSUs”) activity for the six months ended June 30, 2017:

	Number of Units	Weighted Average Grant-Date Fair Value Per Unit	Average Illiquidity Discount	Recorded Weighted Average Fair Value Per Unit
Outstanding as of December 31, 2016	12,045,656			
Forfeited	(158,336)	$ 12.81	7.3 %	$ 11.87
Outstanding as of June 30, 2017	11,887,320			

In 2014, the Company granted 25,000 PSUs. All other outstanding PSUs were granted in 2015 and 2016 and may vest if the Company's total compounded annual shareholder rate of return ("TSR") over three performance measurement periods summarized below equals or exceeds a minimum of 15%.

Vesting Tranche	Percent of Total PSU Award	Beginning of Performance Measurement Period	End of Performance Measurement Period	Length of Performance Measurement Period (Years)
Tranche One	33.3 %	March 23, 2015	December 22, 2017	2.75
Tranche Two	33.3 %	March 23, 2015	March 22, 2018	3.00
Tranche Three	33.3 %	March 23, 2015	June 22, 2018	3.25

These outstanding PSUs granted in 2015 and 2016 will vest in amounts ranging from 25% to 100% based on the achievement of the following TSR over the three performance periods:

TSR Achieved	Vesting Amount
15%	25 %
30%	50 %
45%	75 %
60%	100 %

The TSR will be based on the volume weighted average trading price ("VWAP") of the Company's ordinary shares over the 20 trading days ending on the last day of each of the three performance measurement periods versus the VWAP of the Company's ordinary shares over the twenty trading days ended March 23, 2015 of $21.50. These PSUs are subject to a post vesting holding period of one year for 50% of the PSUs and two years for 50% of the PSUs for those who were members of the executive committee at the date of grant, and one year for 50% of the PSUs for all others who were not executive committee members at the date of grant.

The Company accounts for the PSUs as equity-settled awards in accordance with ASC 718. Because the value of the outstanding PSUs granted in 2015 and 2016 is dependent upon the attainment of a level of TSR, it requires the impact of the market condition to be considered when estimating the fair value of the PSUs. As a result, the Monte Carlo model is applied and the most significant valuation assumptions used include:

	For the Six Months Ended June 30,	
	2017	2016
Valuation date stock price	N/A	$17.72 - 21.07
Expected volatility	N/A	76.8% - 77.6%
Risk free rate	N/A	1.0% - 1.2%

The average estimated fair value of each outstanding PSU granted under the 2014 EIP is as follows (allocated between groupings based on grant-date classification):

	Number of Units	Weighted Average Fair Value Per Unit	Average Illiquidity Discount	Recorded Weighted Average Fair Value Per Unit
Executive committee members	8,889,656	$ 15.15	18.9 %	$ 12.29
Non-executive committee members	2,972,664	13.59	7.3 %	12.60
	11,862,320	$ 14.76	16.2 %	$ 12.37

During the six months ended June 30, 2017 and 2016, the Company recorded an expense of $23.9 million and $24.3 million, respectively, related to PSUs.

Cash Long-Term Incentive Program

On November 5, 2014, the compensation committee of the Company’s board of directors approved a performance cash long-term incentive program for the members of the Company’s executive committee and executive leadership team, including its executive officers (the “Cash Bonus Program”). Participants in the Cash Bonus Program will be eligible for a specified cash bonus. The Cash Bonus Program pool funding of approximately $15.8 million was determined based on the Company’s actual TSR over the period from November 5, 2014 to May 6, 2015, and the bonus will be earned and payable only if the TSR for the period from November 5, 2014 to November 4, 2017 is greater than 15%. The portion of the total bonus pool payable to individual participants is based on allocations established by the Company’s compensation committee. Participants must remain employed by the Company through November 4, 2017 unless a participant’s earlier departure from employment is due to death, disability, termination without cause or a change in control transaction. Bonus payments under the Cash Bonus Program, if any, will be made after November 4, 2017.

The Company accounts for the Cash Bonus Program under the liability method in accordance with ASC 718. Because vesting of the bonus pool is dependent upon the attainment of a VWAP of $18.37 or higher over the twenty trading days ending November 4, 2017, the Cash Bonus Program will be considered to be subject to a "market condition" for the purposes of ASC 718. ASC 718 requires the impact of the market condition to be considered when estimating the fair value of the bonus pool. As a result, the Monte Carlo simulation model is applied and the fair value is revalued at each reporting period. As of June 30, 2017 and December 31, 2016, the estimated fair value was $2.0 million and $4.8 million, respectively. For the six months ended June 30, 2017, the Company recorded a reduction in the expense of $1.7 million to the unaudited condensed consolidated statement of comprehensive loss as a result of the valuation of the Cash Bonus Program. The most significant valuation assumptions used as of June 30, 2017 include:

- Valuation Date Stock Price - $11.87
- Expected Volatility - The expected volatility assumption of 82.27% is based on the Company's historical volatility over the 0.35 year period ending June 30, 2017, based upon daily stock price observations.
- Risk Free Rate - 1.07%, which is based upon the yield on U.S. Treasury Separate Trading of Registered Interest and Principal Securities with a remaining term of 0.35 years as of June 30, 2017.

Share-Based Compensation Expense

The following table summarizes share-based compensation expense included in the Company's condensed consolidated statements of operations for the six months ended June 30, 2017 and 2016 (in thousands):

	For the Six Months Ended June 30,	
	2017	2016
Cost of goods sold	$ 1,001	$ —
Research and development	4,362	4,363
Selling, general and administrative	50,874	51,246
Total share-based compensation expense	$ 56,237	$ 55,609

No material income tax benefit has been recognized relating to share-based compensation expense and no tax benefits have been realized from exercised stock options, due to the Company's net loss position. As of June 30, 2017, the Company estimates that pre-tax unrecognized compensation expense of $171.1 million for all unvested share-based awards, including stock options, restricted stock units and PSUs, will be recognized through the second quarter of 2021. The Company expects to satisfy the exercise of stock options and future distribution of shares for restricted stock units and PSUs by issuing new ordinary shares which have been reserved under the 2014 EIP.

NOTE 19 – INCOME TAXES

The Company accounts for income taxes based upon an asset and liability approach. Deferred tax assets and liabilities represent the future tax consequences of the differences between the financial statement carrying amounts of assets and liabilities versus the tax basis of assets and liabilities. Under this method, deferred tax assets are recognized for deductible temporary differences, and operating loss and tax credit carryforwards. Deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by valuation allowances when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The impact of tax rate changes on deferred tax assets and liabilities is recognized in the period in which the change is enacted.

The following table presents the benefit for income taxes for the three and six months ended June 30, 2017 and 2016 (in thousands):

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
(Loss) income before benefit for income taxes	$ (211,303)	$ 12,228	$ (349,426)	$ (34,621)
Benefit for income taxes	(1,767)	(2,756)	(49,320)	(4,199)
Net (loss) income	$ (209,536)	$ 14,984	$ (300,106)	$ (30,422)

During the three and six months ended June 30, 2017, the Company recorded a benefit for income taxes of $1.8 million and $49.3 million, respectively, compared to $2.8 million and $4.2 million during the three and six months ended June 30, 2016, respectively. The increase in benefit for income taxes for the six months ended June 30, 2017 compared to the six months ended June 30, 2016 resulted from an increase in pre-tax losses incurred in higher tax rate jurisdictions.

Deferred tax assets and liabilities arise from acquisition accounting adjustments where book values of certain assets and liabilities differ from their tax bases. Deferred tax assets and liabilities are recorded at the currently enacted rates which will be in effect at the time when the temporary differences are expected to reverse in the country where the underlying assets and liabilities are located.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the related notes that appear elsewhere in this report. This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties which are subject to safe harbors under the Securities Act of 1933, as amended, or the Securities Act, and the Securities Exchange Act of 1934, as amended, or the Exchange Act. These forward-looking statements include, but are not limited to, statements concerning our strategy and other aspects of our future operations, future financial position, future revenues, projected costs, expectations regarding demand and acceptance for our medicines, growth opportunities and trends in the market in which we operate, prospects and plans and objectives of management. The words "anticipates", "believes", "estimates", "expects", "intends", "may", "plans", "projects", "will", "would" and similar expressions are intended to identify forward-look statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those in the forward-looking statements, including, without limitation, the risks set forth in Part II, Item 1A, "Risk Factors" in this report and in our other filings with the Securities and Exchange Commission, or SEC. We do not assume any obligation to update any forward-looking statements.

OVERVIEW

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

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

OUR BUSINESS

We are a biopharmaceutical company focused on improving patients' lives by identifying, developing, acquiring and commercializing differentiated and accessible medicines that address unmet medical needs. We market eleven medicines through our orphan, rheumatology and primary care business units.

Our marketed medicines are:

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

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

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

On January 13, 2016, we completed our acquisition of Crealta Holdings LLC, or Crealta, for approximately $539.7 million, including $24.9 million of cash acquired and $70.9 million paid to settle Crealta's outstanding debt. Following completion of the acquisition, Crealta became our wholly owned subsidiary and was renamed as Horizon Pharma Rheumatology LLC.

On October 25, 2016, we completed our acquisition of Raptor Pharmaceutical Corp., or Raptor, in which we acquired all of the issued and outstanding shares of Raptor's common stock for $9.00 per share in cash. The total consideration was $860.8 million, including $24.9 million of cash acquired and $56.0 million paid to settle Raptor's outstanding debt. Following completion of the acquisition, Raptor became our wholly owned subsidiary and converted to a limited liability company, changing its name to Horizon Pharmaceutical LLC.

On May 8, 2017, we acquired River Vision Development Corp., or River Vision, for upfront cash payments totaling $151.9 million, including $6.3 million of cash acquired, and subject to other customary purchase price adjustments for working capital, and potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Following completion of the acquisition, River Vision became our wholly owned subsidiary and was renamed as Horizon Pharma Tepro, Inc.

On June 23, 2017, we sold our European subsidiary which owned the marketing rights to PROCYSBI and QUINSAIR in Europe, the Middle East and Africa regions, or the Chiesi divestiture, to Chiesi Farmaceutici S.p.A., or Chiesi, for an upfront payment of $72.2 million, including $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds.

On June 30, 2017, we completed the acquisition of certain rights to interferon gamma-1b from Boehringer Ingelheim International GmbH, or Boehringer Ingelheim International, in all territories outside of the United States, Canada and Japan, as we previously held marketing rights to interferon gamma-1b in these territories. Boehringer Ingelheim International commercialized interferon gamma-1b under the trade names IMUKIN®, IMUKINE®, IMMUKIN® and IMMUKINE®, or IMUKIN, in an estimated thirty countries, primarily in Europe and the Middle East. In May 2016, we paid Boehringer Ingelheim International €5.0 million ($5.6 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1132) for such rights and upon closing in June 2017, we paid Boehringer Ingelheim International an additional €19.5 million ($22.3 million when converted using a Euro-to-Dollar exchange rate at date of payment of 1.1406). We market interferon gamma-1b as ACTIMMUNE® in the United States.

On December 8, 2016, we announced that the Phase 3 trial, Safety, Tolerability and Efficacy of ACTIMMUNE Dose Escalation in Friedreich's Ataxia study, or STEADFAST, evaluating ACTIMMUNE for the treatment of Friedreich's ataxia, or FA, did not meet its primary endpoint of a statistically significant change from baseline in the modified Friedreich's Ataxia Rating Scale at twenty-six weeks versus treatment with placebo and that the secondary endpoints did not meet statistical significance, or the FA announcement. No new safety findings were identified on initial review of data other than those already noted in the ACTIMMUNE prescribing information for approved indications. We, in conjunction with the independent Data Safety Monitoring Board, the principal investigator and the Friedreich's Ataxia Research Alliance Collaborative Clinical Research Network in FA, determined that, based on the trial results, the STEADFAST program would be discontinued, including the twenty-six week extension study and the long-term safety study.

Following the FA announcement, we recorded certain amounts in our condensed consolidated statement of comprehensive loss during the year ended December 31, 2016. Refer to Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 for details. We recorded $14.3 million in our condensed consolidated statement of comprehensive loss during the year ended December 31, 2016 for firm, non-cancellable and unconditional purchase commitments for quantities of ACTIMMUNE in excess of our current forecasts for future demand. During the three months ended June 30, 2017, we renegotiated the amounts due to Boehringer Ingelheim RCV GmbH & Co KG, or Boehringer Ingelheim, and recorded a reduction to "cost of goods sold" of $3.1 million. During the year ended December 31, 2016, we also committed to incur an additional $14.9 million for the harmonization of the drug substance manufacturing process with Boehringer Ingelheim, of which $0.7 million and $6.5 million was recorded in our condensed consolidated statements of comprehensive loss during the three and six months ended June 30, 2017, respectively.

Strategy

Our strategy is to continue the transformation of Horizon Pharma plc into a balanced, diversified, sustainable-growth biopharmaceutical company predominantly focused on rare disease medicines. We are executing on our strategy by accelerating the growth of our rare disease medicine portfolio through differentiated commercial strategies, business development efforts, and the expansion of our pipeline with post-marketing and development-stage programs. We are strongly committed to helping ensure patient access to their medicines and support services, and by investing in the further development of medicines for patients with rare or underserved diseases.

Orphan Business Unit

Our marketed rare disease medicines in our orphan business unit are ACTIMMUNE, BUPHENYL, PROCYSBI, QUINSAIR and RAVICTI. Our strategy for RAVICTI is to drive growth through increased awareness and diagnosis of urea cycle disorders and to drive conversion from older-generation nitrogen scavengers to RAVICTI, based on the medicine's differential benefits. With respect to PROCYSBI, our strategy is to drive conversion of patients from older-generation immediate-release capsules of cysteamine bitartrate, increase the uptake of diagnosed but untreated patients and to identify previously undiagnosed patients who are suitable for treatment. Although we no longer have EMEA marketing rights to PROCYSBI and QUINSAIR after the Chiesi divestiture, we retain marketing rights for both medicines in the United States, Canada, Latin America and Asia. Our strategy with respect to ACTIMMUNE includes driving growth by increasing awareness and diagnosis of chronic granulomatous disease, increasing the length of treatment, establishing ACTIMMUNE as a cornerstone for treatment for a broader range of patients and evaluating opportunities for combination therapy with PD-1 and PD-L1 inhibitors in treatment of certain cancers through investigator-initiated studies.

With our May 2017 acquisition of River Vision, we added the late-stage rare disease biologic medicine teprotumumab to our pipeline. Teprotumumab, which recently successfully completed its Phase 2 clinical trial, targets the treatment of moderate-to-severe thyroid eye disease, a debilitating autoimmune condition that presents in patients with Graves' disease. Our strategy for teprotumumab is to support its continued clinical development and pursue regulatory approval. The River Vision acquisition further demonstrates our commitment to rare disease medicines and expands and diversifies our rare disease medicine pipeline to support sustainable longer-term growth.

Rheumatology Business Unit

Our marketed rare disease rheumatology medicine is KRYSTEXXA. We are focused on optimizing and maximizing KRYSTEXXA's peak sales potential by expanding our commercialization efforts, as well as investing in education, patient and physician outreach, and investigation programs that demonstrate KRYSTEXXA as an effective treatment of refractory chronic gout. In May 2017, we announced increased investment in KRYSTEXXA as part of the program to optimize its sales potential, with the goal of nearly doubling the commercial organization by the end of 2017. We believe that KRYSTEXXA represents a significant opportunity and potential growth driver for our rheumatology business unit. The rheumatology business unit also includes RAYOS.

Primary Care Business Unit

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

We market our medicines in the United States through our field sales force, which numbered approximately 385 representatives across our three business units as of June 30, 2017 compared to approximately 460 representatives as of March 31, 2017. During the second quarter of 2017, we effected a workforce reduction in the primary care business unit. Additionally, we revised our methodology of classifying the sales force to more closely align with those who participate in our sales incentive compensation program.

RESULTS OF OPERATIONS

Comparison of Three Months Ended June 30, 2017 and 2016

The table below should be referenced in connection with a review of the following discussion of our results of operations for the three months ended June 30, 2017, compared to the three months ended June 30, 2016.

	For the Three Months Ended		
	June 30, 2017	2016	Increase / (Decrease)
	(in thousands)		
Net sales	$289,507	$257,378	$32,129
Cost of goods sold	130,150	81,126	49,024
Gross profit	159,357	176,252	(16,895)
Operating expenses:			
Research and development	163,101	11,210	151,891
Selling, general and administrative	181,923	133,575	48,348
Total operating expenses	345,024	144,785	200,239
Operating (loss) income	(185,667)	31,467	(217,134)
Other expense, net:			
Interest expense, net	(31,608)	(19,228)	(12,380)
Foreign exchange gain	151	15	136
Gain on divestiture	5,856	—	5,856
Other expense, net	(35)	(26)	(9)
Total other expense, net	(25,636)	(19,239)	(6,397)
(Loss) income before benefit for income taxes	(211,303)	12,228	(223,531)
Benefit for income taxes	(1,767)	(2,756)	989
Net (loss) income	$(209,536)	$14,984	$(224,520)

Net sales. Net sales increased $32.1 million, or 12%, to $289.5 million during the three months ended June 30, 2017, from $257.4 million during the three months ended June 30, 2016.

The following table presents a summary of net sales attributed to geographic sources for the three months ended June 30, 2017 and 2016 (in thousands):

	Three Months Ended June 30, 2017		Three Months Ended June 30, 2016	
	Amount	% of Total Net Sales	Amount	% of Total Net Sales
United States	$ 279,012	96 %	$ 254,656	99 %
Rest of world	10,495	4 %	2,722	1 %
Net sales	$ 289,507		$ 257,378	

The following table reflects net sales by medicine for the three months ended June 30, 2017 and 2016:

	Three Months Ended			
	June 30,		Change	Change
	2017	2016	$	%
	(in thousands)			
PENNSAID 2%	$51,221	$72,665	$(21,444)	(30%)
RAVICTI	47,239	39,353	7,886	20%
DUEXIS	43,603	45,517	(1,914)	(4%)
KRYSTEXXA	38,301	19,872	18,429	93%
PROCYSBI	36,679	—	36,679	*
ACTIMMUNE	28,819	30,038	(1,219)	(4%)
VIMOVO	21,130	31,420	(10,290)	(33%)
RAYOS	11,643	12,134	(491)	(4%)
BUPHENYL	6,231	4,049	2,182	54%
LODOTRA	1,804	1,195	609	51%
MIGERGOT	1,430	1,135	295	26%
QUINSAIR	1,407	—	1,407	*
Net sales	$289,507	$257,378	$32,129	12%

*Percentage change is not meaningful.

The increase in net sales during the three months ended June 30, 2017 was primarily due to the recognition of PROCYSBI sales following the acquisition of Raptor in October 2016 and higher net sales of KRYSTEXXA and RAVICTI, offset by lower net sales of PENNSAID 2% and VIMOVO.

PENNSAID 2%. Net sales decreased $21.4 million, or 30%, to $51.2 million during the three months ended June 30, 2017, from $72.7 million during the three months ended June 30, 2016. Net sales decreased by approximately $21.3 million due to lower net pricing and approximately $0.1 million resulting from lower prescription volume.

RAVICTI. Net sales increased $7.9 million, or 20%, to $47.2 million during the three months ended June 30, 2017, from $39.3 million during the three months ended June 30, 2016. Net sales increased by approximately $7.0 million resulting from prescription volume growth and approximately $0.9 million due to higher net pricing.

DUEXIS. Net sales decreased $1.9 million, or 4%, to $43.6 million during the three months ended June 30, 2017, from $45.5 million during the three months ended June 30, 2016. Net sales decreased by approximately $3.3 million due to lower net pricing, offset by an increase of approximately $1.4 million resulting from prescription volume growth.

KRYSTEXXA. Net sales increased $18.4 million, or 93%, to $38.3 million during the three months ended June 30, 2017, from $19.9 million during the three months ended June 30, 2016. Net sales increased by approximately $9.5 million resulting from higher net pricing and approximately $8.9 million resulting from prescription volume growth.

PROCYSBI. Net sales were $36.7 million during the three months ended June 30, 2017. We began recognizing PROCYSBI sales following our acquisition of Raptor in October 2016.

ACTIMMUNE. Net sales decreased $1.2 million, or 4%, to $28.8 million during the three months ended June 30, 2017, from $30.0 million during the three months ended June 30, 2016. Net sales decreased by approximately $3.5 million resulting from lower prescription volume, offset by an increase of approximately $2.3 million due to higher net pricing.

VIMOVO. Net sales decreased $10.3 million, or 33%, to $21.1 million during the three months ended June 30, 2017, from $31.4 million during the three months ended June 30, 2016. Net sales decreased by approximately $7.5 million due to lower net pricing and approximately $2.8 million resulting from lower prescription volume.

RAYOS. Net sales decreased $0.5 million, or 4%, to $11.6 million during the three months ended June 30, 2017, from $12.1 million during the three months ended June 30, 2016. Net sales decreased by approximately $5.8 million due to lower net pricing, partially offset by an increase of approximately $5.3 million resulting from prescription volume growth.

BUPHENYL. Net sales increased $2.2 million, or 54%, to $6.2 million during the three months ended June 30, 2017, from $4.0 million during the three months ended June 30, 2016. Net sales increased by approximately $1.1 million resulting from prescription volume growth and $1.1 million due to higher net pricing.

LODOTRA. Net sales increased $0.6 million, or 51%, to $1.8 million during the three months ended June 30, 2017, from $1.2 million during the three months ended June 30, 2016. The increase was the result of increased medicine shipments to our European distribution partner, Mundipharma International Corporation Limited, or Mundipharma. LODOTRA shipments to Mundipharma are not linear or directly tied to Mundipharma’s in-market sales and can therefore fluctuate significantly from quarter to quarter.

MIGERGOT. Net sales increased $0.3 million, or 26%, to $1.4 million during the three months ended June 30, 2017, from $1.1 million during the three months ended June 30, 2016. Net sales increased by approximately $0.5 million resulting from higher net pricing, partially offset by approximately $0.2 million resulting from lower prescription volume.

QUINSAIR. Net sales were $1.4 million during the three months ended June 30, 2017. We began recognizing QUINSAIR sales following our acquisition of Raptor in October 2016.

The table below reconciles our gross to net sales for the three months ended June 30, 2017 and 2016 (in millions):

	Three Months Ended June 30, 2017		Three Months Ended June 30, 2016	
	Amount	% of Gross Sales	Amount	% of Gross Sales
Gross sales	$ 1,071.7	100.0 %	$ 792.0	100.0 %
Adjustments to gross sales:				
Prompt pay discounts	(21.3)	(2.0)%	(16.3)	(2.1)%
Medicine returns	(15.0)	(1.4)%	(1.1)	(0.1)%
Co-pay and other patient assistance	(497.0)	(46.4)%	(428.2)	(54.1)%
Wholesaler fees and commercial rebates	(168.3)	(15.7)%	(26.5)	(3.3)%
Government rebates and chargebacks	(80.6)	(7.5)%	(62.5)	(7.9)%
Total adjustments	(782.2)	(73.0)%	(534.6)	(67.5)%
Net sales	$ 289.5	27.0 %	$ 257.4	32.5 %

During the three months ended June 30, 2017, wholesaler fees and commercial rebates, as a percentage of gross sales, increased to 15.7% from 3.3% during the three months ended June 30, 2016, and co-pay and other patient assistance, as a percentage of gross sales, decreased to 46.4% from 54.1% during the three months ended June 30, 2016. During the second half of 2016, we entered into business arrangements with PBMs and other payers in an effort to secure formulary status and reimbursement of our medicines, such as our arrangements with Express Scripts, CVS Caremark and Prime Therapeutics LLC, which resulted in lower co-pay and other patient assistance costs as a percentage of gross sales during the three months ended June 30, 2017. The mix of PBM healthcare plans that adopted our primary care medicines onto their formulary during 2017 was more heavily weighted towards those plans for which we pay a higher commercial rebate. In addition, we also recorded a higher rate of managed care control in our non-contracted business, which resulted in significantly lower net pricing during the three months ended June 30, 2017 when compared to the three months ended June 30, 2016.

Cost of Goods Sold. Cost of goods sold increased $49.0 million to $130.2 million during the three months ended June 30, 2017, from $81.2 million during the three months ended June 30, 2016. As a percentage of net sales, cost of goods sold was 45.0% during the three months ended June 30, 2017, compared to 31.5% during the three months ended June 30, 2016. The increase in cost of goods sold was primarily attributable to a $24.8 million increase in inventory step-up expense, a $19.0 million increase in intangible amortization expense, a $3.1 million increase in royalty accretion, a $2.3 million increase in salary and wages, partially offset by a reduction of $3.1 million in cost of goods sold following a reduction in our excess inventory purchase commitments with Boehringer Ingelheim.

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on our gross profit, gross margin percentage and net income (loss) for all affected periods, we disclose balance sheet and income statement amounts related to inventory step-up within the notes to the condensed consolidated financial statements. The increase in inventory step-up expense of $24.8 million recorded to cost of goods sold during the three months ended June 30, 2017 compared to the prior year period was due to KRYSTEXXA and MIGERGOT inventory step-up expense of $19.3 million (acquired in January 2016) and PROCYSBI and QUINSAIR inventory step-up expense of $14.5 million (acquired in October 2016) recorded during the three months ended June 30, 2017, compared to KRYSTEXXA and MIGERGOT inventory step-up expense of $9.0 million recorded during the three months ended June 30, 2016.

The increase in intangible amortization of $19.0 million during the three months ended June 30, 2017 compared to the prior year period was primarily due to the amortization of developed technology of $18.8 million related to

PROCYSBI, which was acquired in October 2016.

Research and Development Expenses. Research and development expenses increased $151.9 million to $163.1 million during the three months ended June 30, 2017, from $11.2 million during the three months ended June 30, 2016. The increase was primarily attributable to $147.7 million related to the acquisition of River Vision during the three months ended June 30, 2017. Pursuant to ASC 805 (as amended by ASU No. 2017-01), we accounted for the River Vision acquisition as the purchase of an in-process research and development, or IPR&D, asset and, pursuant to ASC 730, recorded the purchase price as a research and development expense during the three months ended June 30, 2017.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased $48.3 million to $181.9 million during the three months ended June 30, 2017, from $133.6 million during the three months ended June 30, 2016. The increase was primarily attributable to $22.3 million paid to Boehringer Ingelheim International upon closing of the acquisition of certain rights to interferon gamma-1b during the three months ended June 30, 2017, a $7.2 million increase in consulting expense, a $9.3 million increase in employee costs and a $9.1 million increase in marketing programs.

Interest Expense, Net. Interest expense, net, increased $12.4 million to $31.6 million during the three months ended June 30, 2017, from $19.2 million during the three months ended June 30, 2016. The increase was primarily due to higher borrowings in connection with the acquisition of Raptor, including our $300.0 million aggregate principal amount of 8.75% Senior Notes due 2024, or the 2024 Senior Notes, and our $850.0 million principal amount of secured loans under our 2017 term loan facility, compared to the $397.0 million principal amount of secured loans from previous borrowings under our senior secured loan facility.

Gain on divestiture. During the three months ended June 30, 2017, we completed the Chiesi divestiture for an upfront payment of $72.2 million, including $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds and we recorded a gain of $5.9 million on the divestiture.

Benefit for Income Taxes. During the three months ended June 30, 2017, we recorded a benefit for income taxes of $1.8 million compared to $2.8 million during the three months ended June 30, 2016. The decrease in benefit for income taxes during the three months ended June 30, 2017, compared to the three months ended June 30, 2016, resulted from a greater tax benefit limitation driven by an increase in the proportion of losses incurred for the three months ended June 30, 2017 compared to the proportion of losses incurred for the three months ended June 30, 2016.

Comparison of Six Months Ended June 30, 2017 and 2016

The table below should be referenced in connection with a review of the following discussion of our results of operations for the six months ended June 30, 2017, compared to the six months ended June 30, 2016.

	For the Six Months Ended June 30, 2017	2016	Increase / (Decrease)
	(in thousands)		
Net sales	$510,366	$462,068	$48,298
Cost of goods sold	269,266	158,359	110,907
Gross profit	241,100	303,709	(62,609)
Operating expenses:			
Research and development	176,162	23,932	152,230
Sales, general and administrative	355,988	275,514	80,474
Total operating expenses	532,150	299,446	232,704
Operating (loss) income	(291,050)	4,263	(295,313)
Other expense, net:			
Interest expense, net	(63,591)	(38,686)	(24,905)
Foreign exchange gain (loss)	(108)	(158)	50
Gain on divestiture	5,856	—	5,856
Loss on debt extinguishment	(533)	—	(533)
Other expense, net	—	(40)	40
Total other expense, net	(58,376)	(38,884)	(19,492)
Loss before benefit for income taxes	(349,426)	(34,621)	(314,805)
Benefit for income taxes	(49,320)	(4,199)	(45,121)
Net loss	$(300,106)	$(30,422)	$(269,684)

Net sales. Net sales increased $48.3 million, or 11%, to $510.4 million during the six months ended June 30, 2017, from $462.1 million during the six months ended June 30, 2016.

The following table presents a summary of net sales attributed to geographic sources for six months ended June 30, 2017 and 2016 (in thousands):

	Six Months Ended June 30, 2017		Six Months Ended June 30, 2016	
	Amount	% of Total Net Sales	Amount	% of Total Net Sales
United States	$ 489,897	96 %	$456,306	99 %
Rest of world	20,469	4 %	5,762	1 %
Total Net Sales	$ 510,366		$462,068	

The following table reflects the components of net sales for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30, 2017	2016	Change $	Change %
	(in thousands)			
PENNSAID 2%	$92,831	$127,658	$(34,827)	(27%)
RAVICTI	91,114	76,423	14,691	19%
PROCYSBI	70,959	—	70,959	*
KRYSTEXXA	69,915	36,028	33,887	94%
DUEXIS	61,332	75,165	(13,833)	(18%)
ACTIMMUNE	55,021	55,550	(529)	(1%)
VIMOVO	26,012	56,871	(30,859)	(54%)
RAYOS	21,901	22,643	(742)	(3%)
BUPHENYL	12,555	7,793	4,762	61%
QUINSAIR	3,200	—	3,200	*
MIGERGOT	2,854	2,042	812	40%
LODOTRA	2,672	1,895	777	41%
Total Net Sales	$510,366	$462,068	$48,298	10%

The increase in net sales during the six months ended June 30, 2017 was primarily due to the recognition of PROCYSBI sales following the acquisition of Raptor in October 2016 and higher net sales of KRYSTEXXA and RAVICTI, offset by lower net sales of PENNSAID 2%, VIMOVO and DUEXIS.

PENNSAID 2%. Net sales decreased $34.8 million, or 27%, to $92.8 million during the six months ended June 30, 2017, from $127.6 million during the six months ended June 30, 2016. Net sales decreased by approximately $26.8 million due to lower net pricing and $8.0 million due to prescription volume decreases.

RAVICTI. Net sales increased $14.7 million, or 19%, to $91.1 million during the six months ended June 30, 2017, from $76.4 million during the six months ended June 30, 2016. Net sales increased by approximately $14.8 million resulting from prescription volume growth, offset by a decrease of approximately $0.1 million due to lower net pricing.

PROCYSBI. Net sales were $71.0 million during the six months ended June 30, 2017. We began recognizing PROCYSBI sales following our acquisition of Raptor in October 2016.

KRYSTEXXA. Net sales increased $33.9 million, or 94%, to $69.9 million during the six months ended June 30, 2017, from $36.0 million during the six months ended June 30, 2016. Net sales increased by approximately $17.2 million due to higher net pricing and approximately $16.7 million resulting from prescription volume growth.

DUEXIS. Net sales decreased $13.8 million, or 18%, to $61.3 million during the six months ended June 30, 2017, from $75.1 million during the six months ended June 30, 2016. Net sales decreased by approximately $14.3 million due to lower net pricing, offset by approximately $0.5 million resulting from prescription volume growth.

ACTIMMUNE. Net sales decreased $0.5 million, or 1%, to $55.0 million during the six months ended June 30, 2017, from $55.5 million during the six months ended June 30, 2016. Net sales decreased by approximately $4.9 resulting from prescription volume decreases, offset by an increase of $4.5 million due to higher net pricing.

VIMOVO. Net sales decreased $30.9 million, or 54%, to $26.0 million during the six months ended June 30, 2017, from $56.9 million during the six months ended June 30, 2016. Net sales decreased by approximately $20.6 million due to lower net pricing and approximately $10.3 million resulting from prescription volume decreases.

RAYOS. Net sales decreased $0.7 million, or 3%, to $21.9 million during the six months ended June 30, 2017, from $22.6 million during the six months ended June 30, 2016. Net sales decreased by approximately $8.7 million due to lower net pricing, offset by an increase of $8.0 million resulting from prescription volume growth.

BUPHENYL. Net sales increased $4.8 million, or 61%, to $12.6 million during the six months ended June 30, 2017, from $7.8 million during the six months ended June 30, 2016. Net sales increased by approximately $5.0 million due to higher net pricing, offset by a decrease of approximately $0.2 million resulting from prescription volume decreases.

QUINSAIR. Net sales were $3.2 million during the six months ended June 30, 2017. We began recognizing QUINSAIR sales following our acquisition of Raptor in October 2016.

MIGERGOT. Net sales increased $0.8 million, or 40%, to $2.9 million during the six months ended June 30, 2017, from $2.1 million during the six months ended June 30, 2016. Net sales increased by approximately $0.9 million due to higher net pricing, offset by a decrease of approximately $0.1 million resulting from prescription volume decreases.

LODOTRA. Net sales increased $0.8 million, or 41%, to $2.7 million during the six months ended June 30, 2017, from $1.9 million during the six months ended June 30, 2016. The increase was the result of increased medicine shipments to our European distribution partner, Mundipharma. LODOTRA shipments to Mundipharma are not linear or directly tied to Mundipharma's in-market sales and can therefore fluctuate significantly from quarter to quarter.

The table below reconciles our gross to net sales for the six months ended June 30, 2017 and 2016 (in millions):

	Six Months Ended June 30, 2017		Six Months Ended June 30, 2016	
	Amount	% of Gross Sales	Amount	% of Gross Sales
Gross sales	$2,000.3	100.0 %	$1,484.6	100.0 %
Adjustments to gross sales:				
Prompt pay discounts	(39.7)	(2.0)%	(30.1)	(2.0)%
Medicine returns	(25.8)	(1.3)%	(0.2)	(0.0)%
Co-pay and other patient assistance	(957.4)	(47.9)%	(816.8)	(55.1)%
Wholesaler fees and commercial rebates	(309.3)	(15.4)%	(54.8)	(3.7)%
Government rebates and chargebacks	(157.7)	(7.9)%	(120.6)	(8.1)%
Total adjustments	(1,489.9)	(74.5)%	(1,022.5)	(68.9)%
Net sales	$510.4	25.5 %	$462.1	31.1 %

During the six months ended June 30, 2017, wholesaler fees and commercial rebates, as a percentage of gross sales, increased to 15.4% from 3.7% during the six months ended June 30, 2016, and co-pay and other patient assistance, as a percentage of gross sales, decreased to 47.9% from 55.1% during the six months ended June 30, 2016. During the second half of 2016, we entered into business arrangements with PBMs and other payers in an effort to secure formulary status and reimbursement of our medicines, such as our arrangements with Express Scripts, CVS Caremark and Prime Therapeutics LLC, which resulted in lower co-pay and other patient assistance costs as a percentage of gross sales during the six months ended June 30, 2017. The mix of PBM healthcare plans that adopted our primary care medicines onto their formulary during 2017 was more heavily weighted towards those plans for which we pay a higher commercial rebate. In addition, we also recorded a higher rate of managed care control in our non-contracted business, which resulted in significantly lower net pricing during the six months ended June 30, 2017 when compared to the six months ended June 30, 2016.

Cost of Goods Sold. Cost of goods sold increased $110.9 million to $269.3 million during the six months ended June 30, 2017, from $158.4 million during the six months ended June 30, 2016. As a percentage of net sales, cost of goods sold was 52.8% during the six months ended June 30, 2017 compared to 34.3% during the six months ended June 30, 2016. The increase in cost of goods sold was primarily attributable to a $57.9 million increase in inventory step-up expense, an increase in intangible amortization expense of $39.0 million, higher royalty accretion expense of $6.7 million, $6.5 million in drug substance harmonization costs and a $4.5 million increase in employee costs, partially offset by a reduction of $3.1 million in cost of goods sold following a reduction in our excess inventory purchase commitments with Boehringer Ingelheim.

Because inventory step-up expense is acquisition-related, will not continue indefinitely and has a significant effect on our gross profit, gross margin percentage and net income (loss) for all affected periods, we disclose balance sheet and income statement amounts related to inventory step-up within the notes to the condensed consolidated financial statements. The increase in inventory step-up expense of $57.9 million recorded to cost of goods sold during the six months ended June 30, 2017 compared to the prior year period was due to KRYSTEXXA and MIGERGOT inventory step-up expense of $33.7 million (acquired in January 2016) and PROCYSBI and QUINSAIR inventory step-up expense of $40.8 million (acquired in October 2016) recorded during the six months ended June 30, 2017 compared to KRYSTEXXA and MIGERGOT inventory step-up expense of $16.6 million recorded during the six months ended June 30, 2016.

The increase in intangible amortization of $39.0 million during the six months ended June 30, 2017 compared to the prior year period was primarily due to the amortization of developed technology of $37.6 million related to PROCYSBI, which was acquired in October 2016.

Research and Development Expenses. Research and development expenses increased $152.2 million to $176.2 million during the six months ended June 30, 2017, from $24.0 million during the six months ended June 30, 2016. The increase was primarily attributable to $147.7 million related to the acquisition of River Vision during the six months ended June 30, 2017. Pursuant to ASC 805 (as amended by ASU No. 2017-01), we accounted for the River Vision acquisition as the purchase of an IPR&D asset and, pursuant to ASC 730, recorded the purchase price as a research and development expense during the six months ended June 30, 2017.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased $80.5 million to $356.0 million during the six months ended June 30, 2017, from $275.5 million during the six months ended June 30, 2016. The increase was primarily attributable to $22.3 million paid to Boehringer Ingelheim International upon closing of the acquisition of certain rights to interferon gamma-1b during the six months ended June 30, 2017, an increase of $15.4 million in employee costs as a result of an increased workforce, an increase of $12.7 million in consulting costs and an increase of $18.6 million in marketing programs.

Interest Expense, Net. Interest expense, net, increased $24.9 million to $63.6 million during the six months ended June 30, 2017, from $38.7 million during the six months ended June 30, 2016. The increase was primarily due to higher borrowings in connection with the acquisition of Raptor, including our $300.0 million aggregate principal amount of our 2024 Senior Notes and our $850.0 million principal amount of secured loans under our 2017 term loan facility, compared to the $397.0 million principal amount of secured loans from previous borrowings under our senior secured loan facility.

Gain on divestiture. During the six months ended June 30, 2017, we completed the Chiesi divestiture for an upfront payment of $72.2 million, including $3.1 million of cash divested, with additional potential milestone payments based on sales thresholds and we recorded a gain of $5.9 million on the divestiture.

Loss on Induced Conversion and Debt Extinguishment. During the six months ended June 30, 2017, we entered into a refinancing amendment for our term loans. We accounted for a portion of the repayment as a debt extinguishment and recorded a loss on debt extinguishment of $0.5 million in the condensed consolidated statements of comprehensive loss, which reflected the write-off of the unamortized portion of debt discount and deferred financing costs previously incurred and a one percent prepayment penalty fee.

Benefit for Income Taxes. During the six months ended June 30, 2017, we recorded a benefit for income taxes of $49.3 million compared to $4.2 million during the six months ended June 30, 2016. The increase in benefit for income taxes during the six months ended June 30, 2017, compared to the six months ended June 30, 2016, resulted from an increase in pre-tax losses incurred in higher tax rate jurisdictions.

NON-GAAP FINANCIAL MEASURES

EBITDA, or earnings before interest, taxes, depreciation and amortization, adjusted EBITDA, non-GAAP net income and non-GAAP earnings per share are used and provided by us as non-GAAP financial measures. Adjusted EBITDA and non-GAAP net income are intended to provide additional information on our performance, operations and profitability. Adjustments to our GAAP figures as well as EBITDA exclude acquisition-related costs, an upfront fee for a license of a patent, drug substance harmonization costs, fees related to term loan refinancing and Primary Care business unit realignment costs, as well as non-cash items such as share-based compensation, inventory step-up expense, depreciation and amortization, remeasurement of royalties for medicines acquired through business combinations, royalty accretion, non-cash interest expense, non-current asset impairment charges, gain on divestiture and other non-cash adjustments. Certain other special items or substantive events may also be included in the non-GAAP adjustments periodically when their magnitude is significant within the periods incurred. We maintain an established non-GAAP cost policy that guides the determination of what costs will be excluded in non-GAAP measures. We believe that these non-GAAP financial measures, when considered together with the GAAP figures, can enhance an overall understanding of our financial and operating performance. The non-GAAP financial measures are included with the intent of providing investors with a more complete understanding of our historical and expected 2017 financial results and trends and to facilitate comparisons between periods and with respect to projected information. In addition, these non-GAAP financial measures are among the indicators our management uses for planning and forecasting purposes and measuring our performance. For example, adjusted EBITDA is used by us as one measure of management performance under certain incentive compensation arrangements. These non-GAAP financial measures should be considered in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The non-GAAP financial measures used by us may be calculated differently from, and therefore may not be comparable to, non-GAAP financial measures used by other companies.

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

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
GAAP Net (Loss) Income	$ (209,536)	$ 14,984	$ (300,106)	$ (30,422)
Depreciation	1,755	1,091	3,561	2,083
Amortization, accretion and step-up:				
Intangible amortization expense	69,776	50,792	139,453	100,442
Accretion of royalty liabilities	12,735	9,669	25,694	19,028
Amortization of deferred revenue	(207)	(213)	(411)	(419)
Inventory step-up expense	33,895	9,102	74,490	16,548
Interest expense, net (including amortization of debt discount and deferred financing costs)	31,608	19,228	63,591	38,686
Benefit for income taxes	(1,767)	(2,756)	(49,320)	(4,199)
EBITDA	(61,741)	101,897	(43,048)	141,747
Non-GAAP adjustments:				
Remeasurement of royalties for medicines acquired through	—	—	(2,944)	—

business combinations				
Acquisition-related costs	153,385	281	163,424	11,297
Upfront fee for license of global patent	—	—	—	2,000
Primary Care business unit realignment costs	5,193	—	5,193	—
Gain on divestiture	(5,856)	—	(5,856)	—
Loss on debt extinguishment	—	—	533	—
Fees related to term loan refinancing	(45)	—	4,098	—
Share-based compensation	27,768	27,997	56,237	55,609
Charges relating to discontinuation of Friedreich's ataxia program (1)	19,167	—	19,167	—
Drug substance harmonization costs (2)	745	—	5,044	—
Royalties for medicines acquired through business combinations	(11,622)	(9,095)	(22,939)	(17,595)
Total of non-GAAP adjustments	188,735	19,183	221,957	51,311
Adjusted EBITDA	$ 126,994	$ 121,080	$ 178,909	$ 193,058

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	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
GAAP Net (Loss) Income	$ (209,536)	$ 14,984	$ (300,106)	$ (30,422)
Non-GAAP Adjustments:				
Remeasurement of royalties for medicines acquired through business combinations	—	—	(2,944)	—
Acquisition-related costs	153,385	281	163,424	11,297
Upfront fee for license of global patent	—	—	—	2,000
Fees related to term loan refinancing	(45)	—	4,098	—
Primary Care business unit realignment costs	5,193	—	5,193	—
Gain on divestiture	(5,856)	—	(5,856)	—
Loss on debt extinguishment	—	—	533	—
Amortization, accretion and step-up:				
Intangible amortization expense	69,776	50,792	139,453	100,442
Amortization of debt discount and deferred financing costs	5,206	4,507	10,629	8,932
Accretion of royalty liabilities	12,735	9,669	25,694	19,028
Inventory step-up expense	33,895	9,102	74,490	16,548
Share-based compensation	27,768	27,997	56,237	55,609
Depreciation expense	1,755	1,091	3,561	2,083
Charges relating to discontinuation of Friedreich's ataxia program (1)	19,167	—	19,167	—
Drug substance harmonization costs (2)	745	—	5,044	—
Royalties for medicines acquired through business combinations	(11,622)	(9,095)	(22,939)	(17,595)
Total pre-tax non-GAAP adjustments	312,102	94,344	475,784	198,344
Income tax effect of pre-tax non-GAAP adjustments (3)	(34,272)	(18,064)	(72,375)	(35,338)
Total non-GAAP adjustments	277,830	76,280	403,409	163,006
Non-GAAP Net Income	$ 68,294	$ 91,264	$ 103,303	$ 132,584
Non-GAAP Earnings Per Share:				
Weighted average ordinary shares – Basic	162,931,930	160,468,146	162,486,946	160,186,270
Non-GAAP Earnings Per Share – Basic				
GAAP (loss) earnings per share – Basic	$ (1.29)	$ 0.09	$ (1.85)	$ (0.19)
Non-GAAP adjustments	1.71	0.48	2.49	1.02
Non-GAAP earnings per share – Basic	$ 0.42	$ 0.57	$ 0.64	$ 0.83
Weighted average ordinary shares – Diluted				
Weighted average ordinary shares – Basic	162,931,930	160,468,146	162,486,946	160,186,270
Ordinary share equivalents	2,033,141	3,452,435	2,499,409	3,630,429
Weighted average ordinary shares – Diluted	164,965,071	163,920,581	164,986,355	163,816,699
Non-GAAP Earnings Per Share – Diluted				

GAAP (loss) earnings per share – Diluted	$ (1.29)	$ 0.09	$ (1.85)	$ (0.19)
Non-GAAP adjustments	1.71	0.47	2.49	1.02
Diluted earnings per share effect of ordinary share equivalents	(0.01)	—	(0.01)	(0.02)
Non-GAAP earnings per share – Diluted	$ 0.41	$ 0.56	$ 0.63	$ 0.81

(1) Charges relating to discontinuation of Friedreich's ataxia program include $22.3 million relating to the impairment of a non-current asset recorded following payment to Boehringer Ingelheim International for the acquisition of certain rights to interferon gamma-1b, and a $3.1 million reduction in "cost of goods sold", relating to the renegotiation of a contract with Boehringer Ingelheim related to the purchase of additional units of ACTIMMUNE.

(2) During the year ended December 31, 2016, we committed to spend $14.9 million related to the harmonization of the manufacturing processes for ACTIMMUNE and IMUKIN drug substance. During the three and six months ended June 30, 2017, we incurred $0.7 million and $6.5 million, respectively, of this spend, including costs of $0.7 million and $5.0 million, respectively, that qualify for exclusion in our non-GAAP financial measures under our non-GAAP cost policy.

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

LIQUIDITY, FINANCIAL POSITION AND CAPITAL RESOURCES

We have incurred losses since our inception in June 2005 and, as of June 30, 2017, we had an accumulated deficit of $1,141.9 million. We do not expect our current operations to achieve operating profitability in 2017 and expect to fund our operations for the remainder of 2017 primarily through net sales and available cash resources.

We have financed our operations to date through equity financings, debt financings and the issuance of convertible notes, along with cash flows from operations during the last several quarters. As of June 30, 2017, we had $554.3 million in cash and cash equivalents and total debt with a book value of $1,892.3 million and face value of $2,022.9 million. Cash at June 30, 2017 reflects our use of cash on hand of approximately $145.6 million, net of $6.3 million of cash acquired, to fund our acquisition of River Vision on May 8, 2017 and $32.5 million paid during the six months ended June 30, 2017 in relation to the litigation settlement with Express Scripts, and includes $69.1 million received following the Chiesi divestiture in June 2017, net of cash divested. We believe our existing cash and cash equivalents and our expected cash flows from our operations will be sufficient to fund our business needs for at least the next twelve months from the issuance of these financial statements. Part of our strategy is to expand and leverage our commercial capabilities by identifying, developing, acquiring and commercializing differentiated and accessible medicines that address unmet medical needs. To the extent we enter into transactions to acquire medicines or businesses in the future, we will most likely need to finance a significant portion of those acquisitions through additional debt, equity or convertible debt financings.

On March 29, 2017, Horizon Pharma, Inc., or HPI, our wholly owned subsidiary, and Horizon Pharma USA, Inc., our wholly owned subsidiary, or HPUSA and together with HPI in such capacity, the Borrowers, borrowed $850.0 million aggregate principal amount of loans, or the Refinancing Loans, pursuant to an amendment, or the Refinancing Amendment, to the Credit Agreement, dated as of May 7, 2015 (as amended by Amendment No. 1, dated as of October 25, 2016, or the 2016 Amendment), by and among the Borrowers, us and certain of our subsidiaries as guarantors, the lenders party thereto from time to time and Citibank, N.A., as administrative agent and collateral agent. As used herein, all references to the “2015 Credit Agreement” are references to the Credit Agreement, dated as of May 7, 2015, by and among HPI, us and certain of our subsidiaries as guarantors, the lenders party thereto from time to time and Citibank, N.A., as administrative agent and collateral agent, all references to the “Existing Credit Agreement” are references to the 2015 Credit Agreement, as amended by the 2016 Amendment, and all references to the “Credit Agreement” are references to Existing Credit Agreement, as amended by the Refinancing Amendment.

The Refinancing Loans were incurred as a separate new class of term loans under the Credit Agreement with substantially the same terms as the previously outstanding senior secured term loans incurred on May 7, 2015 under the 2015 Credit Agreement, or the 2015 Loans, and the outstanding senior secured term loans incurred on October 25, 2016 under the Existing Credit Agreement, or the 2016 Loans and, together with the 2015 Loans, the Refinanced Loans, except as described below. The Refinancing Loans bear interest, at the Borrowers’ option, at a rate equal to either the London Inter-Bank Offer Rate, or LIBOR, plus an applicable margin of 3.75% per year (subject to a LIBOR floor of 1.0%), or the adjusted base rate plus 2.75%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1%, (b) prime rate, (c) fed funds plus ½ of 1%, and (d) 2%. The Borrowers used the proceeds of the Refinancing Loans to repay the Refinanced Loans, which totaled $769 million. The Credit Agreement provides for (i) the Refinancing Loans, (ii) one or more uncommitted additional incremental loan facilities subject to the satisfaction of certain financial and other conditions, and (iii) one or more uncommitted refinancing loan facilities with respect to loans thereunder. The Credit Agreement allows for us and certain of our subsidiaries to become borrowers under incremental or refinancing facilities.

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

Borrowers under the Credit Agreement are permitted to make voluntary prepayments of the loans under the Credit Agreement at any time without payment of a premium, except that with respect to the Refinancing Loans, a 1% premium will apply to a repayment of the Refinancing Loans in connection with a repricing of, or any amendment to the Credit Agreement in a repricing of, such loans effected on or prior to the date that is six months following March 29, 2017. The Borrowers are required to make mandatory prepayments of loans under the Credit Agreement (without payment of a premium) with (a) net cash proceeds from certain non-ordinary course asset sales (subject to reinvestment rights and other exceptions), (b) casualty proceeds and condemnation awards (subject to reinvestment rights and other exceptions), (c) net cash proceeds from issuances of debt (other than certain permitted debt), and (d) 50% of our excess cash flow (subject to decrease to 25% or 0% if our first lien leverage ratio is less than 2.25:1 or 1.75:1, respectively). The Refinancing Loans will amortize in equal quarterly installments beginning on June 30, 2017 in an aggregate annual amount equal to 1% of the original principal amount thereof, with any remaining balance payable on March 29, 2024, the final maturity date of the Refinancing Loans.

We elected to exercise our reinvestment rights under the mandatory prepayment provisions of the Credit Agreement with respect to the net proceeds from the Chiesi divestiture. To the extent we do not apply such net proceeds to permitted acquisitions (including the acquisition of rights to products and products lines) and/or the acquisition of capital assets within 365 days of the receipt thereof (or commit to so apply and then apply within 180 days after the end of such 365-day period), we would be required to make a mandatory prepayment under the Credit Agreement in an amount equal to the unapplied net proceeds. Until such time, the net proceeds are not legally restricted for use. As of June 30, 2017, we had applied a portion of such net proceeds to the acquisition of additional rights to interferon gamma-1b.

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

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

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

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

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

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

On April 29, 2015, Horizon Pharma Financing Inc., our wholly owned subsidiary, or Horizon Financing, completed a private placement of $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023, or the 2023 Senior Notes, to certain investment banks acting as initial purchasers who subsequently resold the 2023 Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act, and in offshore transactions to non-U.S. persons in reliance on Regulation S under the Securities Act.

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

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

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

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

On March 13, 2015, Horizon Pharma Investment Limited, our wholly owned subsidiary, or Horizon Investment, completed a private placement of $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022, or the Exchangeable Senior Notes, to several investment banks acting as initial purchasers who subsequently resold the Exchangeable Senior Notes to qualified institutional buyers as defined in Rule 144A under the Securities Act. The net proceeds from the offering of the Exchangeable Senior Notes were approximately $387.2 million, after deducting the initial purchasers’ discount and offering expenses payable by Horizon Investment.

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

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

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

During the six months ended June 30, 2017, we issued an aggregate of:

- 206,090 ordinary shares in connection with the exercise of stock options and received $1.3 million in proceeds; and
- 597,292 ordinary shares in net settlement of vested restricted stock units.

During the six months ended June 30, 2017, warrants to purchase an aggregate of 2,500 shares of the Company were exercised and proceeds of $11,425 were received. In addition, warrants to purchase an aggregate of 704,185 ordinary shares were exercised in cashless exercises, resulting in the issuance of 523,459 ordinary shares. As of June 30, 2017, there were outstanding warrants to purchase 665,975 ordinary shares.

During the six months ended June 30, 2017, we made payments of $5.2 million for employee withholding taxes relating to share-based awards.

In May 2016, our board of directors authorized a share repurchase program pursuant to which we may repurchase up to 5,000,000 of our ordinary shares. In May 2017, our board of directors reauthorized a share repurchase program pursuant to which we may repurchase up to 16,000,000 of our ordinary shares. As of June 30, 2017, we have purchased 100,000 of our ordinary shares under this repurchase program, for a total consideration of $1.0 million. The timing and amount of future repurchases, if any, will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, our cash resources, restrictions under the Credit Agreement and market conditions.

Sources and Uses of Cash

The following table provides a summary of our cash position and cash flows as of and for the six months ended June 30, 2017 and 2016 (in thousands):

	2017	2016
Cash and cash equivalents	$554,269	$424,525
Cash provided by (used in):		
Operating activities	68,646	101,484
Investing activities	(101,576)	(534,490)
Financing activities	75,948	(1,841)

Operating Cash Flows

During the six months ended June 30, 2017, net cash provided by operating activities was $68.6 million compared to $101.5 million during the six months ended June 30, 2016. The decrease in net cash provided by operating activities was primarily attributable to cash payments of $58.4 million for interest during the six months ended June 30, 2017 compared to $29.8 million during the six months ended June 30, 2016, and $32.5 million paid during the six months ended June 30, 2017 in relation to the litigation settlement with Express Scripts.

Investing Cash Flows

During the six months ended June 30, 2017, net cash used in investing activities was $101.6 million compared to $534.5 million during the six months ended June 30, 2016. The net cash used in investing activities during the six months ended June 30, 2017 was primarily associated with $145.6 million of payments for the acquisition of River Vision, net of cash acquired, and $22.3 million relating to the payment for certain rights for interferon gamma-1b. This was partially offset by $69.1 million proceeds received from the Chiesi divestiture, net of cash divested.

Net cash used in investing activities during the six months ended June 30, 2016 was primarily associated with $514.8 million of payments for the acquisition of Crealta, net of cash acquired, a $5.6 million (€5.0 million) initial payment for rights to interferon gamma-1b and $12.8 million of payments for purchases of property and equipment.

Financing Cash Flows

During the six months ended June 30, 2017, net cash provided by financing activities was $75.9 million compared to net cash used in financing activities of $1.8 million during the six months ended June 30, 2016. Net cash provided by financing activities during the six months ended June 30, 2017 was primarily attributable to the net proceeds of $847.8 million from term loans, offset in part by repayment of term loans of $770.8 million.

Financial Condition as of June 30, 2017 Compared to December 31, 2016

Accounts receivable, net. Accounts receivable, net, increased $85.1 million, from $305.7 million as of December 31, 2016 to $390.8 million as of June 30, 2017. The increase was due to growth in gross sales of our medicines and increases due to the timing of cash receipts.

Inventories, net. Inventories, net, decreased $72.6 million, from $174.8 million as of December 31, 2016 to $102.2 million as of June 30, 2017. The decrease was primarily due to $74.5 million of inventory step-up expense recorded during the six months ended June 30, 2017 ($33.7 million related to KRYSTEXXA and MIGERGOT and $40.8 million related to PROCYSBI and QUINSAIR). Additionally, during the six months ended June 30, 2017, we recorded $3.2 million of inventory step-up expense to “gain on divestiture” following the sale of inventory to Chiesi in connection with the Chiesi divestiture.

Developed technology, net. Developed technology, net, decreased $186.3 million, from $2,767.2 million as of December 31, 2016 to $2,580.9 million as of June 30, 2017. The decrease was due to the amortization of $139.0 million of developed technology during the six months ended June 30, 2017 and developed technology with a net book value of $47.3 million disposed of in the Chiesi divestiture.

Goodwill. Goodwill decreased $17.7 million from $445.6 million as of December 31, 2016 to $427.9 million as of June 30, 2017. The decrease was due to $16.3 million written off in connection with the Chiesi divestiture and a $1.4 million measurement period adjustment related to the Raptor acquisition, which was recorded during the six months ended June 30, 2017.

Other assets. Other assets increased $27.5 million from $2.4 million as of December 31, 2016 to $29.9 million as of June 30, 2017. The increase was primarily due to an indemnification asset recorded in connection with the Chiesi divestiture during the six months ended June 30, 2017, which represents the future estimated amount receivable from Chiesi in respect of PROCYSBI and QUINSAIR contingent royalty liabilities.

Accounts payable. Accounts payable increased $29.4 million, from $52.5 million as of December 31, 2016 to $81.9 million as of June 30, 2017. This increase was primarily due to $55.3 million of trade discount and rebate invoices included in accounts payable at June 30, 2017, compared to $16.8 million at December 31, 2016.

Accrued expenses. Accrued expenses decreased $70.3 million, from $182.8 million as of December 31, 2016 to $112.5 million as of June 30, 2017. This was primarily due to the payment of $32.5 million during the six months ended June 30, 2017 pursuant to our settlement agreement with Express Scripts, a decrease of $19.3 million in accrued incentive compensation following payments made during the six months ended June 30, 2017, a decrease of $4.2 million in accrued interest and a decrease of $3.1 million in relation to excess purchase commitment liabilities.

Accrued trade discounts and rebates. Accrued trade discounts and rebates increased $115.7 million, from $297.5 million as of December 31, 2016 to $413.2 million as of June 30, 2017. This was primarily due to a $116.1 million increase in accrued wholesaler fees and commercial rebates and an $11.0 million increase in accrued government rebates and chargebacks, partially offset by an $11.4 million decrease in co-pay and other patient assistance costs.

Deferred tax liabilities, net. Deferred tax liabilities, net, decreased $85.8 million, from $296.6 million as of December 31, 2016 to $210.8 million as of June 30, 2017. This was primarily due to the benefit for income taxes of $49.3 million recorded during the six months ended June 30, 2017 and deferred tax assets of $21.6 million acquired in the River Vision acquisition. Additionally, we prospectively adopted ASU No. 2016-09 on January 1, 2017 and recorded a decrease of $7.2 million in deferred tax liabilities and a corresponding increase in accumulated deficit during the six months ended June 30, 2017.

Other long-term liabilities. Other long-term liabilities increased $42.5 million, from $46.1 million as of December 31, 2016 to $88.6 million as of June 30, 2017. This was primarily due to $23.7 million recorded in connection with the Chiesi divestiture during the six months ended June 30, 2017, which represents the preliminary fair value of the contingent liability for PROCYSBI and QUINSAIR royalties potentially payable on EMEA sales, and $21.6 million recorded during the six months ended June 30, 2017, which represents long-term liabilities offsetting the deferred tax assets recorded following the River Vision acquisition.

Long-term debt, net, net of current. Long-term debt, net, net of current increased $76.1 million from $1,501.7 million as of December 31, 2016 to $1,577.8 million as of June 30, 2017. The increase was primarily related to the $850.0 million Refinancing Loans, which replaced the $394.0 million 2015 Term Loan Facility and the $375.0 million 2016 Incremental Loan Facility, resulting in an increase of $81.0 million of principal amount of our outstanding debt. This increase was offset in part by certain charges related to the Refinancing Loans and amortization of debt discount and deferred financing fees and a repayment of $2.1 million during the six months ended June 30, 2017.

Contractual Obligations

During the three months ended June 30, 2017, there were no material changes outside of the ordinary course of business to our contractual obligations as previously disclosed in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, except as disclosed below.

On May 8, 2017, we acquired River Vision for upfront cash payments totaling $151.9 million, including $6.3 million of cash acquired, and subject to other customary purchase price adjustments for working capital, and potential future milestone and royalty payments contingent on the satisfaction of certain regulatory milestones and sales thresholds. Under the agreement, we are required to pay up to $325.0 million upon the attainment of various milestones related to FDA approval and net sales thresholds. The agreement also includes a royalty payment of three percent of the portion of annual worldwide net sales exceeding $300.0 million (if any).

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in accordance with U.S. GAAP principles requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of revenue and expenses. Certain of these policies are considered critical as these most significantly impact a company's financial condition and results of operations and require the most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Actual results may vary from these estimates. A summary of our significant accounting policies is included in Note 2 to our Annual Report on Form 10-K for the year ended December 31, 2016. There have been no significant changes in our application of our critical accounting policies during the six months ended June 30, 2017.

OFF-BALANCE SHEET ARRANGEMENTS

Since our inception, we have not engaged in any off-balance sheet arrangements, including the use of structured finance, special purpose entities or variable interest entities, other than the indemnification agreements discussed in Note 14, "Commitments and Contingencies" in the notes to our condensed consolidated financial statements included in this report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Interest Rate Risk. We are subject to interest rate fluctuation exposure through our borrowings under the Credit Agreement and our investment in money market accounts which bear a variable interest rate. Loans under the Credit Agreement bear interest, at our option, at a rate equal to either the LIBOR rate, plus an applicable margin of 3.75% per annum (subject to a 1.00% LIBOR floor), or the adjusted base rate plus 2.75%. The adjusted base rate is defined as the greater of (a) LIBOR (using one-month interest period) plus 1%, (b) prime rate, (c) fed funds plus ½ of 1% and (d) 2%. Our $850.0 million of Refinancing Loans are based on LIBOR. The current LIBOR rate is 1.25%, and as a result, the interest rate on our borrowings are currently 5.00% per annum.

An increase in the LIBOR of 100 basis points above the current LIBOR rate would increase our interest expense related to the Credit Agreement by $8.5 million per year.

The goals of our investment policy are associated with the preservation of capital, fulfillment of liquidity needs and fiduciary control of cash. To achieve our goal of maximizing income without assuming significant market risk, we maintain our excess cash and cash equivalents in money market funds. Because of the short-term maturities of our cash equivalents, we do not believe that a decrease in interest rates would have any material negative impact on the fair value of our cash equivalents.

Foreign Currency Risk. Our purchase cost of ACTIMMUNE under our contract with Boehringer Ingelheim Biopharmaceuticals GmbH and our sales contracts relating to LODOTRA are principally denominated in Euros and are subject to foreign currency risk. We also incur certain operating expenses in currencies other than the U.S. dollar in relation to our Irish operations and foreign subsidiaries, including Horizon Pharma Switzerland GmbH; therefore, we are subject to volatility in cash flows due to fluctuations in foreign currency exchange rates, particularly changes in the Euro.

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

Credit Risk. Historically, our accounts receivable balances have been highly concentrated with a select number of customers consisting primarily of large wholesale pharmaceutical distributors who, in turn, sell the medicines to pharmacies, hospitals and other customers. As of June 30, 2017 and December 31, 2016, our top three customers accounted for approximately 82% and 78%, respectively, of our total outstanding accounts receivable balances.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures. As required by paragraph (b) of Rules 13a-15 and 15d-15 promulgated under the Exchange Act, our management, including our Chief Executive Officer and Chief Financial Officer, conducted an evaluation as of the end of the period covered by this report of the effectiveness of our disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of June 30, 2017, the end of the period covered by this report.

Changes in Internal Control Over Financial Reporting. During the quarter ended June 30, 2017, there have been no material changes to our internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f), that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a description of our legal proceedings, see Note 15, Legal Proceedings, of the Notes to Condensed Consolidated Financial Statements, included in Item 1 of this Quarterly Report on Form 10-Q.

ITEM 1A: RISK FACTORS

You should consider carefully the risks described below, together with all of the other information included in this report, and in our other filings with the Securities and Exchange Commission, or SEC, before deciding whether to invest in or continue to hold our ordinary shares. The risks described below are all material risks currently known, expected or reasonably foreseeable by us. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our ordinary shares to decline, resulting in a loss of all or part of your investment.

The risk factors set forth below with an asterisk (*) next to the title are new risk factors or risk factors containing changes, including any material changes, from the risk factors previously disclosed in Item 1A of our annual report on Form 10-K for the year ended December 31, 2016, as filed with the SEC.

Risks Related to Our Business and Industry

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

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

- timing of market introduction of our medicines as well as competitive medicines;
- efficacy and safety of our medicines;
- continued projected growth of the markets in which our medicines compete;
- prevalence and severity of any side effects;
- if and when we are able to obtain regulatory approvals for additional indications for our medicines;
- acceptance by patients, primary care physicians and key specialists;
- availability of coverage and adequate reimbursement and pricing from government and other third-party payers;

- potential or perceived advantages or disadvantages of our medicines over alternative treatments, including cost of treatment and relative convenience and ease of administration;
- strength of sales, marketing and distribution support;
- the price of our medicines, both in absolute terms and relative to alternative treatments;
- impact of past and limitation of future medicine price increases;
- our ability to maintain a continuous supply of medicine for commercial sale;
- the effect of current and future healthcare laws;
- the performance of third-party distribution partners, over which we have limited control;
- and medicine labeling or medicine insert requirements of the U.S. Food and Drug Administration, or FDA, or other regulatory authorities.

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

Our future prospects are highly dependent on our ability to successfully formulate and execute commercialization strategies for each of our medicines. Failure to do so would adversely impact our financial condition and prospects.*

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

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

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

Our strategy for RAYOS in the United States is to focus on the rheumatology indications approved for RAYOS, including our collaboration with the Alliance for Lupus Research, or ALR, to study the effect of RAYOS on the fatigue experienced by systemic lupus erythematosus, or SLE, patients.

Our overall commercialization strategy also includes plans to expand sales in Europe and other countries outside the United States directly or through distributors for certain of our orphan and rheumatology medicines. In November 2015, we received approval of the Committee for Medicinal Products for Human Use of the European Medicines Agency, or EMA, for RAVICTI for use as an adjunctive therapy for chronic management of adult and pediatric UCD patients greater than two months of age. This authorizes us to market RAVICTI in all 28 Member States of the European Union, or EU, and will form the basis for recognition by the Member States of the European Economic Area, or EEA, namely Norway, Iceland and Liechtenstein, for the medicine to be placed on the market. In June 2016, we partnered with Clinigen Group plc's Idis managed access division to initiate a managed access program in selected European countries, which agreement terminated on April 10, 2017 and after which we partnered with Swedish Orphan Biovitrum AB, or SOBI, to continue our managed access program in selected European countries. While we expect to commercially launch RAVICTI in Europe in 2017 through an exclusive distribution agreement with SOBI, we cannot guarantee we will be able to successfully implement our commercial plans for RAVICTI in Europe. Although LODOTRA is approved for marketing in countries outside the United States, to date it has only been marketed in a limited number of countries.

If any of our commercial strategies are unsuccessful or we fail to successfully modify our strategies over time due to changing market conditions, our ability to increase market share for our medicines, grow revenues and sustain profitability will be harmed.

In order to increase adoption and sales of our medicines, we will need to continue developing our commercial organization as well as recruit and retain qualified sales representatives.*

Part of our strategy is to continue to build a biopharmaceutical company to successfully execute the commercialization of our medicines in the U.S. market, and in selected markets outside the United States where we have commercial rights. We may not be able to successfully commercialize our medicines in the United States or in any other territories where we have commercial rights. In order to commercialize any approved medicines, we must continue to build our sales, marketing, distribution, managerial and other non-technical capabilities. During the second quarter of 2017, we effected a workforce reduction in the primary care business unit. We also revised our methodology of classifying the sales force to more closely align with those who participate in our sales incentive compensation program. Based on the workforce reduction and new methodology, as of June 30, 2017, we had approximately 385 sales representatives in the field, consisting of approximately 25 orphan disease sales representatives, 100 rheumatology sales specialists and 260 primary care sales representatives, compared to approximately 460 sales representatives as of March 31, 2017, consisting of approximately 25 orphan disease sales representatives, 95 rheumatology sales specialists and 340 primary care sales representatives. We cannot be certain that we will be able to adequately market our primary care medicines following the reduction in our sales force or that we will be able to continue retaining the current members of our primary care sales force. We currently have limited resources compared to some of our competitors, and the continued development of our own commercial organization to market our medicines and any additional medicines we may acquire will be expensive and time-consuming. We also cannot be certain that we will be able to continue to successfully develop this capability.

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

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

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

If we cannot successfully implement our patient access programs or increase formulary access and reimbursement for our medicines in the face of increasing pressure to reduce the price of medications, the adoption of our medicines by physicians, patients and payers may decline.*

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

Part of our commercial strategy to increase adoption and access to our medicines in the face of these incentives to use generic alternatives is to offer physicians the opportunity to have patients fill prescriptions through independent pharmacies participating in our HorizonCares patient access program. Through HorizonCares, financial assistance may be available to reduce eligible patients' out-of-pocket costs for prescriptions filled. Because of this assistance, eligible patients' out-of-pocket cost for our medicines when dispensed through HorizonCares may be significantly lower than such costs when our medicines are dispensed outside of the HorizonCares program. However, to the extent physicians do not direct prescriptions currently filled through traditional pharmacies, including those associated with or controlled by PBMs, to pharmacies participating in our HorizonCares program, we may experience a significant decline in DUEXIS, VIMOVO and PENNSAID 2% prescriptions as a result of formulary exclusions, co-payment requirements or other incentives to use lower-priced alternatives to our medicines. Our ability to increase utilization of our patient access programs will depend on physician and patient awareness and comfort with the programs, and we have limited ability to influence whether physicians use our patient access programs to prescribe our medicines or whether patients will agree to receive our medicines through our HorizonCares program. In addition, the HorizonCares program is not available to federal health care program (such as Medicare and Medicaid) beneficiaries. We have also contracted with certain PBMs and other payers to secure formulary status and reimbursement for certain of our primary care medicines, which generally require us to pay administrative fees and rebates to the PBMs and other payers for qualifying prescriptions. While we recently announced business relationships with two of the largest PBMs, Express Scripts and CVS Caremark, that have resulted in DUEXIS and VIMOVO being removed from the Express Scripts and CVS Caremark 2017 exclusion lists, as well as a rebate agreement with another PBM, Prime Therapeutics LLC, and we believe these agreements will secure formulary status for certain of our medicines, we cannot guarantee that we will be able to agree to terms with other PBMs and other payers, or that such terms will be commercially reasonable to us. Despite our agreements with PBMs, the extent of formulary status and reimbursement will ultimately depend to a large extent upon individual healthcare plan formulary decisions. If healthcare plans that contract with PBMs with which we have agreements do not adopt formulary changes recommended by the PBMs with respect to our medicines, we may not realize the expected access and reimbursement benefits from these agreements. In addition, we generally pay higher rebates for prescriptions covered under plans that adopt a PBM-chosen formulary than for plans that adopt custom formularies. Consequently, the success of our PBM contracting strategy will depend not only on our ability to expand formulary adoption among healthcare plans, but also upon the relative mix of healthcare plans that have PBM-chosen formularies versus custom formularies. For example, during the first half of 2017, the adoption rates of our primary care medicines onto certain healthcare plan formularies during the period were lower than we had anticipated and as a result, we incurred higher patient assistance costs than we expected, and the mix of healthcare plans adopting our primary care medicines onto their formularies was more heavily weighted towards plans that use PBM-chosen formularies, which resulted in higher rebate costs than we expected. If we are unable to realize the expected benefits of our contractual arrangements with the PBMs we may continue to experience reductions in net sales from our primary care business unit. If we are unable to increase adoption of HorizonCares for filling prescriptions of our medicines or to secure formulary status and reimbursement through arrangements with PBMs and other payers, particularly with healthcare plans that use custom formularies, our ability to achieve net sales growth for our primary care business unit would be impaired.

There has been negative publicity and inquiries from Congress and enforcement authorities regarding the use of specialty pharmacies and drug pricing. Our patient access programs are not involved in the prescribing of medicines and are solely to assist in ensuring that when a physician determines one of our medicines offers a potential clinical benefit to their patients and they prescribe one for an eligible patient, financial assistance may be available to reduce the patient's out-of-pocket costs. In addition, all pharmacies that fill prescriptions for our medicines are fully independent, including those that participate in HorizonCares. We do not own or possess any option to purchase an ownership stake in any pharmacy that distributes our medicines, and our relationship with each pharmacy is non-exclusive and arm's length. All of our sales are processed through pharmacies independent of us. Despite this, the negative publicity and interest from Congress and enforcement authorities regarding specialty pharmacies may result in physicians being less willing to participate in our patient access programs and thereby limit our ability to increase patient access and adoption of our medicines.

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

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

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

If we are unable to successfully implement our commercial plans and facilitate adoption by patients and physicians of any approved medicines through our sales, marketing and commercialization efforts, then we will not be able to generate sustainable revenues from medicine sales which will have a material adverse effect on our business and prospects.

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

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

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

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

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

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

- may not deem a medicine candidate to be adequately safe and effective;
- may not find the data from preclinical studies, CMC studies and clinical trials to be sufficient to support a claim of safety and efficacy;
- may interpret data from preclinical studies, CMC studies and clinical trials significantly differently than we do;
- may not approve the manufacturing processes or facilities associated with our medicine candidates;
- may conclude that we have not sufficiently demonstrated long-term stability of the formulation for which we are seeking marketing approval;
- may change approval policies (including with respect to our medicine candidates’ class of drugs) or adopt new regulations; or
- may not accept a submission due to, among other reasons, the content or formatting of the submission.

Even if we believe that data collected from our preclinical studies, CMC studies and clinical trials of our medicine candidates are promising and that our information and procedures regarding CMC are sufficient, our data may not be sufficient to support marketing approval by regulatory authorities, or regulatory interpretation of these data and procedures may be unfavorable. Even if approved, medicine candidates may not be approved for all indications requested and such approval may be subject to limitations on the indicated uses for which the medicine may be marketed, restricted distribution methods or other limitations. Our business and reputation may be harmed by any failure or significant delay in obtaining regulatory approval for the sale of any of our medicine candidates. We cannot predict when or whether regulatory approval will be obtained for any medicine candidate we develop.

If we are unable to obtain any further approvals for RAVICTI outside the United States, Canada and Europe, or determine that commercializing RAVICTI outside the United States, Canada and Europe is not economically viable, the market potential of RAVICTI may be limited.

On June 19, 2017, we received a notice of compliance, from Health Canada, or HC, for PROCYSBI for the treatment of nephropathic cystinosis in adults and children two years of age and older. PROCYSBI is the only cystine-depleting agent approved in Canada for the treatment of nephropathic cystinosis.

If we are unable to obtain any further approvals for PROCYSBI in the United States, Canada, Latin America and Asia-Pacific region, or determine that commercializing PROCYSBI outside the United States, Canada, Latin America and Asia-Pacific region is not economically viable, the market potential of PROCYSBI may be limited.

With respect to QUINSAIR, the FDA has indicated in previous written and verbal communications with Raptor Pharmaceutical Corp., or Raptor, and with the drug's previous sponsor that it believes the data submitted in connection with EMA's subsequent approval of QUINSAIR for the management of chronic pulmonary infections due to Pseudomonas aeruginosa in adults with cystic fibrosis does not provide substantial evidence of efficacy and safety to support FDA approval of QUINSAIR for treatment of patients with cystic fibrosis. On October 27, 2016, the FDA expressed its recommendation that an additional clinical trial should be conducted, and noted that if Raptor submits a new drug application, or NDA, without conducting an additional clinical trial, the FDA will review the submission to determine whether it is acceptable for filing. Based upon the FDA's feedback, we have made the decision not to pursue an NDA for U.S. approval of QUINSAIR as a treatment of Pseudomonas aeruginosa in adults with cystic fibrosis at this time.

Prior to our acquisition of Raptor, Raptor planned to pursue the development of QUINSAIR for use in the indication of bronchiectasis, or BE, not associated with cystic fibrosis. Raptor submitted a protocol to FDA on August 18, 2016 for a Phase 2, placebo-controlled study of QUINSAIR in adults with BE. Feedback from FDA was received on October 17, 2016 requesting additional information and changes to the proposed study protocol. Raptor was also exploring further clinical development of QUINSAIR for the treatment of pulmonary nontuberculous mycobacteria, or NTM infection, based on third-party data generated pertaining to the susceptibility of certain pathogens to treatment with levofloxacin and other fluoroquinolone molecules. No clinical data has been generated with QUINSAIR in patients with BE or with NTM infections, either by Raptor, subsequently by Horizon or by other parties. This creates uncertainty regarding the potential efficacy of QUINSAIR in these indications.

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

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

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

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

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

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

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

- commence criminal investigations and prosecutions.

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Moreover, existing regulatory approvals and any future regulatory approvals that we obtain will be subject to limitations on the approved indicated uses and patient populations for which our medicines may be marketed, the conditions of approval, requirements for potentially costly, post-market testing and requirements for surveillance to monitor the safety and efficacy of the medicines. In the EEA, the advertising and promotion of pharmaceuticals is strictly regulated. The direct-to-consumer promotion of prescription pharmaceuticals is not permitted, and some countries in the EEA require the notification and/or prior authorization of promotional or advertising materials directed at healthcare professionals. The FDA, EMA and other authorities in the EEA countries strictly regulate the promotional claims that may be made about prescription medicines, and our medicine labeling, advertising and promotion are subject to continuing regulatory review. Physicians nevertheless may prescribe our medicines to their patients in a manner that is inconsistent with the approved label or that is off-label. Positive clinical trial results in any of our medicine development programs increase the risk that approved pharmaceutical forms of the same APIs may be used off-label in those indications. Our investigational medicine candidate RP103 is comprised of the same API as PROCYSBI. If we are found to have improperly promoted off-label uses of approved medicines, we may be subject to significant sanctions, civil and criminal fines and injunctions prohibiting us from engaging in specified promotional conduct.

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

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

Our limited history of commercial operations makes evaluating our business and future prospects difficult and may increase the risk of any investment in our ordinary shares.

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

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

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

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

The facilities used by our third-party manufacturers to manufacture our medicines and medicine candidates must be approved by the applicable regulatory authorities. We do not control the manufacturing processes of third-party manufacturers and are currently completely dependent on our third-party manufacturing partners. In addition, we are required to obtain AstraZeneca's consent prior to engaging any third-party manufacturers for esomeprazole, one of the APIs in VIMOVO, other than the third-party manufacturer(s) used by AstraZeneca or its affiliates or licensees. To the extent such manufacturers are unwilling or unable to manufacture esomeprazole for us on commercially acceptable terms, we cannot guarantee that AstraZeneca would consent to our use of alternate sources of supply.

We rely on an exclusive supply agreement with Boehringer Ingelheim Biopharmaceuticals GmbH, or Boehringer Ingelheim Biopharmaceuticals, for manufacturing and supply of ACTIMMUNE. ACTIMMUNE is manufactured by starting with cells from working cell bank samples which are derived from a master cell bank. We and Boehringer

Ingelheim Biopharmaceuticals separately store multiple vials of the master cell bank. In the event of catastrophic loss at our or Boehringer Ingelheim Biopharmaceuticals' storage facility, it is possible that we could lose multiple cell banks and have the manufacturing capacity of ACTIMMUNE severely impacted by the need to substitute or replace the cell banks. In addition, a key excipient used in PENNSAID 2% as a penetration enhancer is dimethyl sulfoxide, or DMSO. We and Nuvo, our exclusive supplier of PENNSAID 2%, rely on a sole proprietary form of DMSO for which we maintain a substantial safety stock. However, should this supply become inadequate, damaged, destroyed or unusable, we and Nuvo may not be able to qualify a second source. We rely on NOF Corporation, or NOF, as our exclusive supplier of the PEGylation agent that is a critical raw material in the manufacture of KRYSTEXXA. If NOF failed to supply such PEGylation agent, it may lead to KRYSTEXXA supply constraints.

If any of our third-party manufacturers cannot successfully manufacture material that conforms to our specifications and the applicable regulatory authorities' strict regulatory requirements, or pass regulatory inspection, they will not be able to secure or maintain regulatory approval for the manufacturing facilities. For example, Pharmaceutics International, Inc., or Pii, our manufacturer of BUPHENYL, was found to be non-compliant for cGMPs by the Medicines and Healthcare Products Regulatory Agency, or the MHRA, which could restrict Pii from supplying BUPHENYL in the EU. However, BUPHENYL was considered to be critical to public health and as a result, the MHRA issued a certificate of cGMP compliance for Pii, which was initially valid until June 30, 2017. Following reinspection of Pii and progress made since the MHRA's initial inspection, this certificate was extended until June 30, 2018. In addition, we have no control over the ability of third-party manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or any other applicable regulatory authorities do not approve these facilities for the manufacture of our medicines or if they withdraw any such approval in the future, or if our suppliers or third-party manufacturers decide they no longer want to supply our primary active ingredients or manufacture our medicines, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our medicines. To the extent any third-party manufacturers that we engage with respect to our medicines are different from those currently being used for commercial supply in the United States, the FDA will need to approve the facilities of those third-party manufacturers used in the manufacture of our medicines prior to our sale of any medicine using these facilities.

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

The manufacture of medicines requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of medicines often encounter difficulties in production, particularly in scaling up and validating initial production. These problems include difficulties with production costs and yields, quality control, including stability of the medicine, quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Furthermore, if microbial, viral or other contaminations are discovered in the medicines or in the manufacturing facilities in which our medicines are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that issues relating to the manufacture of any of our medicines will not occur in the future. Additionally, our manufacturers may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If our manufacturers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, our ability to commercialize our medicines in the United States or provide any medicine candidates to patients in clinical trials would be jeopardized.

Any delay or interruption in our ability to meet commercial demand for our medicines will result in the loss of potential revenues and could adversely affect our ability to gain market acceptance for these medicines. In addition, any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely.

Failures or difficulties faced at any level of our supply chain could materially adversely affect our business and delay or impede the development and commercialization of any of our medicines or medicine candidates and could have a material adverse effect on our business, results of operations, financial condition and prospects.

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

As of December 31, 2010 and prior to the commercial launch of DUEXIS, we employed approximately 40 full-time employees as a consolidated entity. As of June 30, 2017, we employed approximately 935 full-time employees, including approximately 385 sales representatives, representing a substantial change to the size of our organization. We have also experienced, and may continue to experience, turnover of the sales representatives that we hired or will hire in connection with the commercialization of our medicines, requiring us to hire and train new sales representatives. Our management, personnel, systems and facilities currently in place may not be adequate to support this recent and anticipated growth, and we may not be able to retain or recruit qualified personnel in the future due to competition for personnel among pharmaceutical businesses.

As our commercialization plans and strategies continue to develop, we will need to continue to recruit and train sales and marketing personnel and expect to need to expand the size of our employee base for managerial, operational, financial and other resources as a result of our recent acquisitions. Our ability to manage any future growth effectively may require us to, among other things:

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

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

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

If any of these factors impair our ability to continue to integrate our operations with those of any companies or businesses we acquire, we may not be able to realize the business opportunities, growth prospects and anticipated tax synergies from combining the businesses. In addition, we may be required to spend additional time or money on integration that otherwise would be spent on the development and expansion of our business.

As a result of our plans to launch RAVICTI in Europe through an exclusive distribution agreement with SOBI, we may continue expanding our operations and add commercial personnel in Europe. We may not be successful in growing our commercial operations outside the United States, and could encounter other challenges in growing our commercial presence in Europe, including due to risks associated with political and economic instability, operating under different legal requirements and tax complexities. If we are unable to manage our commercial growth outside of the United States, our opportunities to expand sales in other countries will be limited or we may experience greater costs with respect to our ex-U.S. commercial operations.

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

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

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

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

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

Pseudomonas aeruginosa lung infections in patients with cystic fibrosis, TOBI Podhaler, Cayston and colistimethate.

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

Patent litigation is currently pending in the United States District Court for the District of New Jersey against several companies intending to market a generic version of PENNSAID 2% prior to the expiration of certain of our patents listed in the FDA's Orange Book, or the Orange Book. These cases are collectively known as the PENNSAID 2% cases, and involve the following sets of defendants: (i) Actavis Laboratories UT, Inc., formerly known as Watson Laboratories, Inc., Actavis, Inc. and Actavis plc, or collectively Actavis; and (ii) Lupin Limited and Lupin Pharmaceuticals, Inc., or collectively Lupin. These cases arise from Paragraph IV Patent Certification notice letters from each of Actavis and Lupin advising each had filed an Abbreviated New Drug Application, or ANDA, with the FDA seeking approval to market a generic version of PENNSAID 2% before the expiration of the patents-in-suit. In Horizon Pharma Ireland Limited, et al v. Actavis Laboratories UT, Inc., C.A. No. 14-cv-7992-NLH-AMD, a bench trial was held in March 2017 regarding claim 12 of U.S. Patent 9,066,913. Post-trial briefs were filed April 20, 2017. A decision is expected to issue no later than May 15, 2017. No trial date has been set in any other PENNSAID 2% cases.

We received from Actavis a Paragraph IV Patent Certification Notice Letter dated September 27, 2016, against Orange Book listed U.S. Patent No. 9,415,029 advising that Actavis had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

We received from Apotex Inc., or Apotex, three Paragraph IV Patent Certification Notice Letters dated April 1, 2016, June 30, 2016, and September 21, 2016 against Orange Book listed U.S. Patent Nos. 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, 8,871,809, 9,066,913, 9,101,591, 9,132,110, 9,168,304, 9,168,305, 9,220,784, 9,339,551, 9,339,552 and 9,415,029, advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

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

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

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

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

BUPHENYL's composition of matter patent protection and orphan drug exclusivity have expired. Because BUPHENYL has no regulatory exclusivity or listed patents, there is nothing to prevent a competitor from submitting an ANDA for a generic version of BUPHENYL and receiving FDA approval. In November 2011, Ampolgen Pharmaceuticals, LLC received FDA approval for a generic version of NaPBA tablets, which may compete with RAVICTI and BUPHENYL in treating UCD. In March 2013, SigmaPharm Laboratories, LLC received FDA approval for a generic version of NaPBA powder, which competes with BUPHENYL and may compete with RAVICTI in treating UCD. In July 2013, Lucane Pharma, or Lucane, received marketing approval from the EMA for taste-masked NaPBA and has announced a distribution partnership in Canada. In January 2015, Lucane announced it had received marketing approval for its taste-masked NaPBA in Canada. We believe Lucane is also seeking approval via an ANDA in the United States. If this ANDA is approved, this formulation may compete with RAVICTI and BUPHENYL in treating UCD in the United States. Generic versions of BUPHENYL to date have been priced at a discount relative to BUPHENYL or RAVICTI, and physicians, patients, or payers may decide that this less expensive alternative is preferable to BUPHENYL and RAVICTI. If this occurs, sales of BUPHENYL and/or RAVICTI could be materially reduced, but we would nevertheless be required to make royalty payments to Ucyclyd Pharma, Inc., or Ucyclyd, and another external party, at the same royalty rates. While Ucyclyd and its affiliates are generally contractually prohibited from developing or commercializing new medicines, anywhere in the world, for the treatment of UCD or hepatic encephalopathy, or HE, which are chemically similar to RAVICTI, they may still develop and commercialize medicines that compete with RAVICTI. For example, medicines approved for indications other than UCD and HE may still compete with RAVICTI if physicians prescribe such medicines off-label for UCD or HE. We are also aware that Orphan Europe SARL, or Orphan Europe, is conducting a clinical trial of carglumic acid to treat some of the UCD enzyme deficiencies for which RAVICTI was approved. Promethera Biosciences SA has successfully completed Phase I/II trials of its cell-based therapy for the treatment of UCD and plans to conduct a Phase IIb/III clinical trial. Carglumic acid is approved for maintenance therapy for chronic hyperammonemia and to treat hyperammonenic crises in Nacetylglutamate synthase deficiency, a rare UCD subtype, and is sold under the name Carbaglu. If the results of this trial are successful and Orphan Europe is able to complete development and obtain approval of Carbaglu to treat additional UCD enzyme deficiencies, RAVICTI would face additional competition from this compound.

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

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

- develop and acquire medicines that are superior to other medicines in the market;
- attract qualified clinical, regulatory, and sales and marketing personnel;
- obtain patent and/or other proprietary protection for our medicines and technologies;
- obtain required regulatory approvals; and
- successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new medicine candidates.

If we are unable to maintain or realize the benefits of orphan drug exclusivity, we may face increased competition with respect to certain of our medicines.*

Under the Orphan Drug Act of 1983, the FDA may designate a medicine as an orphan drug if it is a drug intended to treat a rare disease or condition affecting fewer than 200,000 people in the United States. A company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years from the date of its approval. RAVICTI, KRYSTEXXA and PROCYSBI have been granted orphan drug exclusivity by the FDA, which we expect will provide orphan drug marketing exclusivity in the United States until February 2020, September 2017 and December 2020, respectively, with exclusivity for PROCYSBI extending to 2022 for patients ages two to six years. However, despite orphan drug exclusivity, the FDA can still approve another drug containing the same active ingredient and used for the same orphan indication if it determines that a subsequent drug is safer, more effective or makes a major contribution to patient care, and orphan exclusivity can be lost if the orphan drug manufacturer is unable to ensure that a sufficient quantity of the orphan drug is available to meet the needs of patients with the rare disease or condition. Orphan drug exclusivity may also be lost if the FDA later determines that the initial request for designation was materially defective. In addition, orphan drug exclusivity does not prevent the FDA from approving competing drugs for the same or similar indication containing a different active ingredient. If orphan drug exclusivity is lost and we were unable to successfully enforce any remaining patents covering RAVICTI, KRYSTEXXA or PROCYSBI, we could be subject to generic competition and revenues from RAVICTI, KRYSTEXXA or PROCYSBI could decrease materially. In addition, if a subsequent drug is approved for marketing for the same or a similar indication as RAVICTI, KRYSTEXXA or PROCYSBI despite orphan drug exclusivity, we may face increased competition and lose market share with respect to these medicines. KRYSTEXXA does not have orphan drug exclusivity in the EU or other regions of the world. RAVICTI will benefit from a period of 10 years of orphan market exclusivity in the EU, concurrently applied to each of the approved six sub-types of the UCDs. This will run concurrently with its marketing exclusivity status.

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

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

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

Similarly, from time to time we are involved in disputes with distributors, PBMs and licensing partners regarding our rights and performance of obligations under contractual arrangements. For example, we were previously in litigation with Express Scripts, related to alleged breach of contract claims and in which Express Scripts was seeking payment for rebates relating to DUEXIS, RAYOS and VIMOVO. We counterclaimed against Express Scripts, contesting the amount owed and contending Express Scripts had breached the rebate agreement. In September 2016, we entered into a settlement agreement and mutual release with Express Scripts pursuant to which we and Express Scripts were released from any and all claims relating to the litigation without admitting any fault or wrongdoing and we paid Express Scripts $65.0 million.

Litigation related to these disputes may be costly and time-consuming and could materially and adversely impact our financial position and results of operations if resolved against us.

A variety of risks associated with operating our business and marketing our medicines internationally could materially adversely affect our business.*

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

- compliance with differing or unexpected regulatory requirements for our medicines;
- compliance with Irish laws and the maintenance of our Irish tax residency with respect to our overall corporate structure and administrative operations, including the need to generally hold meetings of our board of directors and make decisions in Ireland, which may make certain corporate actions more cumbersome, costly and time-consuming;
- difficulties in staffing and managing foreign operations;
- in certain circumstances, including with respect to the commercialization of LODOTRA in Europe and certain Asian, Latin American, Middle Eastern and African countries, commercialization of BUPHENYL in select countries throughout Europe, the Middle East, and the Asia-Pacific region, commercialization of RAVICTI in select countries throughout Europe and commercialization of DUEXIS in Latin America, increased dependence on the commercialization efforts and regulatory compliance of third-party distributors or strategic partners;
- compliance with German laws with respect to our Horizon Pharma GmbH subsidiary through which Horizon Pharma Switzerland GmbH conducts most of its European operations;
- foreign government taxes, regulations and permit requirements;
- U.S. and foreign government tariffs, trade restrictions, price and exchange controls and other regulatory requirements;
- anti-corruption laws, including the Foreign Corrupt Practices Act, or the FCPA;
- economic weakness, including inflation, natural disasters, war, events of terrorism or political instability in particular foreign countries;
- fluctuations in currency exchange rates, which could result in increased operating expenses and reduced revenues, and other obligations related to doing business in another country;
- compliance with tax, employment, immigration and labor laws, regulations and restrictions for employees living or traveling abroad;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- changes in diplomatic and trade relationships; and
- challenges in enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States.

Our business activities outside of the United States are subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate, including the United Kingdom's Bribery Act 2010, or the U.K. Bribery Act. The FCPA and similar anti-corruption laws generally prohibit offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to non-U.S. government officials in order to improperly influence any act or decision, secure any other improper advantage, or obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the company and to devise and maintain an adequate system of internal accounting controls. The U.K. Bribery Act prohibits giving, offering, or promising bribes to any person, including non-United Kingdom, or U.K., government officials and private persons, as well as requesting, agreeing to receive, or accepting bribes from any person. In addition, under the U.K. Bribery Act, companies which carry on a business or part of a business in the U.K. may be held liable for bribes given, offered or promised to any person, including non-U.K. government officials and private persons, by employees and persons associated with the company in order to obtain or retain business or a business advantage for the company. Liability is strict, with no element of a corrupt state of mind, but a defense of having in place adequate procedures designed to prevent bribery is available. Furthermore, under the U.K. Bribery Act there is no exception for facilitation payments. As described above, our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, any dealings with these prescribers and purchasers may be subject to regulation under the FCPA. Recently the SEC and the U.S. Department of Justice have increased their FCPA enforcement activities with respect to pharmaceutical companies. In addition, under the Dodd–Frank Wall Street Reform and Consumer Protection Act, private individuals who report to the SEC original information that leads to successful enforcement actions may be eligible for a monetary award. We are engaged in ongoing efforts that are designed to ensure our compliance with these laws, including due diligence, training, policies, procedures and internal controls. However, there is no certainty that all employees and third-party business partners (including our distributors, wholesalers, agents, contractors, and other partners) will comply with anti-bribery laws. In particular, we do not control the actions of manufacturers and other third-party agents, although we may be liable for their actions. Violation of these laws may result in civil or criminal sanctions, which could include monetary fines, criminal penalties, and disgorgement of past profits, which could have a material adverse impact on our business and financial condition.

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

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

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

Moreover, any medicine candidate we acquire may require additional, time-consuming development or regulatory efforts prior to commercial sale or prior to expansion into other indications, including preclinical studies if applicable, and extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All medicine candidates are prone to the risk of failure that is inherent in pharmaceutical medicine development, including the possibility that the medicine candidate will not be shown to be sufficiently safe and/or effective for approval by regulatory authorities. In addition, we cannot assure you that any such medicines that are approved will be manufactured or produced economically, successfully commercialized or widely accepted in the marketplace or be more effective or desired than other commercially available alternatives.

In addition, if we fail to successfully commercialize and further develop our medicines, there is a greater likelihood that we will fail to successfully develop a pipeline of other medicine candidates to follow our existing medicines or be able to acquire other medicines to expand our existing portfolio, and our business and prospects would be harmed.

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

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

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

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

Our parent company may not be able to successfully maintain its current advantageous tax status and resulting tax rates, which could adversely affect our business and financial condition, results of operations and growth prospects.*

Our parent company is incorporated in Ireland and maintains subsidiaries in multiple jurisdictions, including Ireland, the U.K, the United States, Switzerland, Luxembourg, Germany, Canada and Bermuda. Prior to our merger transaction with Vidara Therapeutics International Public Limited Company, or Vidara, and such transaction, the Vidara Merger, Vidara was able to achieve a favorable tax rate through the performance of certain functions and ownership of certain assets in tax-efficient jurisdictions, including Ireland and Bermuda, together with intra-group service and transfer pricing agreements, each on an arm's length basis. We are continuing a substantially similar structure and arrangements. Taxing authorities, such as the U.S. Internal Revenue Service, or IRS, actively audit and otherwise challenge these types of arrangements, and have done so in the pharmaceutical industry. We expect that these challenges will continue as a result of the recent increase in scrutiny and political attention on corporate tax structures. The IRS may challenge our structure and transfer pricing arrangements through an audit or lawsuit. Responding to or defending such a challenge could be expensive and consume time and other resources, and divert management's time and focus from operating our business. We cannot predict whether taxing authorities will conduct an audit or file a lawsuit challenging this structure, the cost involved in responding to any such audit or lawsuit, or the outcome. If we are unsuccessful in defending such a challenge, we may be required to pay taxes for prior periods, interest, fines or penalties, and may be obligated to pay increased taxes in the future, any of which could require us to reduce our operating expenses, decrease efforts in support of our medicines or seek to raise additional funds, all of which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

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

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

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

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

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

Under current law, we expect our parent company to be treated as a foreign corporation for U.S. federal income tax purposes. However, changes to the rules in Section 7874 of the Code or regulations promulgated thereunder or other guidance issued by the U.S. Department of the Treasury, or the U.S. Treasury, or the IRS could adversely affect our parent company's status as a foreign corporation for U.S. federal income tax purposes, and any such changes could have prospective or retroactive application. If our parent company is treated as a domestic corporation, more of our income will be taxed by the United States which may substantially increase our effective tax rate.

On April 4, 2016, the U.S. Treasury and the IRS issued temporary regulations and in January 2017 issued final regulations that expand the scope of transactions subject to the rules designed to eliminate the U.S. tax benefits of so-called inversion transactions. Under the temporary regulations, the former stockholders of U.S. corporations acquired by a foreign corporation within 36 months of the signing date of the last such acquisition are aggregated for the purpose of determining whether the foreign corporation will be treated as a domestic corporation for U.S. federal tax purposes because at least 80 percent of the stock of the foreign corporation is held by former stockholders of a U.S. corporation. The requirement to aggregate the stockholders in such acquisitions for the purpose of determining whether the 80 percent threshold is met may limit our ability to use our stock to acquire U.S. corporations or their assets in the future. The Secretary of the United States Treasury recently announced that the U.S. Treasury will review every significant regulation issued over the past year and a half, including certain inversion regulations, but, at present, it is unclear what the outcome of Treasury's review will be or what impact it may have on us.

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

In July 2015, the International Tax Bipartisan Tax Working Group of the United States Senate Committee on Finance, or the Finance Committee, issued its report on international tax reform. The Finance Committee's co-chairs concluded that it will be necessary to limit earnings stripping by foreign multinationals through interest deductions on inter-company debt in order to eliminate a competitive advantage that foreign multinationals would otherwise have over domestic multinational companies. The status of the recommendations from the International Tax Bipartisan Tax Working Group, including regulations aimed at curbing earnings stripping, as well as the status of United States tax reform in general, is subject to significant uncertainty as President Trump and both houses of Congress are considering several material tax reform proposals. These proposals include, among other items, a significant reduction to the U.S. corporate tax rate and a possible "border adjustment tax" that would effectively increase the economic cost of imports. Consideration of various tax reform proposals continues to evolve. In July 2017, the Speaker of the House, Majority Leader of the Senate, Chairmen of the House of Representatives Committee on Ways and Means, Finance Committee, Secretary of the Treasury and Director of the National Economic Council issued a joint statement setting aside the idea of a border adjustment tax and called for tax reform legislation that "reduces tax rates as much as possible, allows unprecedented capital expensing, places a priority on permanence, and creates a system that encourages American companies to bring back jobs and profits trapped overseas". At this point in time it is not possible to determine all of the possible consequences to us of the various tax reform proposals that are under consideration. However, any tax reform could significantly impact our U.S. and worldwide tax liabilities.

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

The U.S. federal government has called for substantial changes to U.S. tax policy and laws and President Trump has released an outline of a proposed tax plan which would significantly alter the U.S. tax code if enacted. We do not currently have sufficient information that would allow us to predict what U.S. tax reform, if any, may be enacted in the future or what impact any such changes would have on our business. Changes to U.S. tax laws could significantly impact our business, financial condition, results of operations, or cash flows.

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

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

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

Many of the other biotechnology and pharmaceutical companies with whom we compete for qualified personnel have greater financial and other resources, different risk profiles and longer histories in the industry than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high quality candidates than that which we have to offer. If we are unable to continue to attract and retain high quality personnel, the rate and success at which we can develop and commercialize medicines and medicine candidates will be limited.

We are, with respect to our current medicines, and will be, with respect to any other medicine or medicine candidate for which we obtain FDA or EMA approval or which we acquire, subject to ongoing FDA or the EMA obligations and continued regulatory review, which may result in significant additional expense. Additionally, any other medicine candidate, if approved by the FDA or the EMA, could be subject to labeling and other restrictions and market withdrawal, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our medicines.*

Any regulatory approvals that we obtain for our medicine candidates may also be subject to limitations on the approved indicated uses for which the medicine may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the medicine candidate. In addition, with respect to our current FDA-approved medicines (and with respect to our medicine candidates, if approved), the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the medicine are subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs, GCPs, international conference on harmonization regulations, or ICH regulations, and GLPs, which are regulations and guidelines enforced by the FDA for all of our medicines in clinical development, for any clinical trials that we conduct post-approval. With respect to RAVICTI, the FDA imposed several post-marketing requirements and a post-marketing commitment, which include remaining obligations to conduct studies in UCD patients during the first two months of life and from two months to two years of age, including a study of the pharmacokinetics in both age groups, and a randomized study to determine the safety and efficacy in UCD patients who are treatment naïve to phenylbutyrate treatment. Although we are committed to carrying out these commitments, there are challenges in conducting studies in pediatric patients including availability of study sites, patients, and obtaining parental informed consent. In May 2017, the FDA approved our supplemental new drug application, or sNDA, for RAVICTI to expand the age range for chronic management of UCDs from two years of age and older to two months of age and older. Subject to positive data from on-going studies, we have targeted an sNDA submission in the first quarter of 2018 in relation to UCD patients during the first two months of life. In connection with our acquisition of Crealta Holdings LLC, or Crealta, in January 2016, we assumed responsibility for an observational study related to KRYSTEXXA, which requirement was fulfilled in May 2017. We are in the process of closing out the study and drafting the final report.

In addition, the FDA closely regulates the marketing and promotion of drugs and biologics. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturers' promotional communications. A significant number of pharmaceutical companies have been the target of inquiries and investigations by various U.S. federal and state regulatory, investigative, prosecutorial and administrative entities in connection with the promotion of medicines for off-label uses and other sales practices. These investigations have alleged violations of various U.S. federal and state laws and regulations, including claims asserting antitrust violations, violations of the Food, Drug and Cosmetic Act, false claims laws, the Prescription Drug Marketing Act, anti-kickback laws, and other alleged violations in connection with the promotion of medicines for unapproved uses, pricing and Medicare and/or Medicaid reimbursement.

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

- restrictions on the marketing or manufacturing of the medicine, withdrawal of the medicine from the market, or voluntary or mandatory medicine recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners, or suspension or revocation of medicine license approvals;

- medicine seizure or detention, or refusal to permit the import or export of medicines; and
- injunctions, the imposition of civil or criminal penalties, or exclusion, debarment or suspension from government healthcare programs.

If we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would have a material adverse effect on our business, results of operations, financial condition and prospects.

Coverage and reimbursement may not be available, or reimbursement may be available at only limited levels, for our medicines, which could make it difficult for us to sell our medicines profitably or to successfully execute planned medicine price increases.*

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

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

Outside of the United States, the success of our medicines, including BUPHENYL, LODOTRA, PROCYSBI, QUINSAIR, RAVICTI and IMUKIN, will depend largely on obtaining and maintaining government coverage, because in many countries patients are unlikely to use prescription drugs that are not covered by their government healthcare programs. The majority of LODOTRA sales are in Germany and Italy where reimbursement has been approved. BUPHENYL is marketed in select countries throughout Europe, the Middle East and the Asia-Pacific region. We launched RAVICTI in Canada in November 2016 and we expect to begin commercializing RAVICTI in Europe in 2017 through an exclusive distribution agreement with SOBI. QUINSAIR was recently launched in Canada and we plan to launch PROCYSBI in Canada in the fourth quarter of 2017. We cannot be certain that existing reimbursement in such countries will be maintained or that we will be able to secure reimbursement in additional countries. Negotiating coverage and reimbursement with governmental authorities can delay commercialization by 12 months or more. Coverage and reimbursement policies may adversely affect our ability to sell our medicines on a profitable basis. In many international markets, governments control the prices of prescription pharmaceuticals, including through the implementation of reference pricing, price cuts, rebates, revenue-related taxes and profit control, and we expect prices of prescription pharmaceuticals to decline over the life of the medicine or as volumes increase. Many countries in the EU have increased the amount of discounts required on medicines, and we expect these discounts to continue as countries attempt to manage healthcare expenditures, especially in light of current economic conditions. As a result of these pricing practices, it may become difficult to achieve or sustain profitability or expected rates of growth in revenue or results of operations. Any shortfalls in revenue could adversely affect our business, financial condition and results of operations.

In light of such policies and the uncertainty surrounding proposed regulations and changes in the coverage and reimbursement policies of governments and third-party payers, we cannot be sure that coverage and reimbursement will be available for any of our medicines in any additional markets or for any other medicine candidates that we may develop. Also, we cannot be sure that reimbursement amounts will not reduce the demand for, or the price of, our medicines. If coverage and reimbursement are not available or are available only at limited levels, we may not be able to successfully commercialize our medicines.

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

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

We may also experience pressure from payers concerning certain promotional approaches that we may implement such as our HorizonCares program or any other co-pay or free medicine programs whereby we assist qualified patients with certain out-of-pocket expenditures for our medicine. If we are unsuccessful with our HorizonCares program or any other co-pay initiatives or free medicine programs, or we alternatively are unable to secure expanded formulary access through additional arrangements with PBMs or other payers, we would be at a competitive disadvantage in terms of pricing versus preferred branded and generic competitors. We may also experience financial pressure in the future which would make it difficult to support investment levels in areas such as managed care contract rebates, HorizonCares and other access tools.

We are subject to federal, state and foreign healthcare laws and regulations and implementation or changes to such healthcare laws and regulations could adversely affect our business and results of operations.*

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

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

In January 2017, the United States House of Representatives and Senate passed legislation, the concurrent budget resolution for fiscal year 2017, which initiates actions that would repeal certain aspects of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA. Further, on January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA, to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. In May 2017, following the passage of the budget resolution for fiscal year 2017, the U.S. House of Representatives passed legislation known as the American Health Care Act, which, if enacted, will amend and repeal significant portions of the ACA. However, the U.S. Senate is unlikely to adopt the American Health Care Act as passed by the U.S. House of Representatives. The U.S. Senate considered but did not adopt other legislation to amend and/or replace elements of the ACA. We continue to evaluate the effect that the ACA and its possible repeal and replacement has on our business.

In addition, drug pricing by pharmaceutical companies has recently come under increased scrutiny. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the out-of-pocket cost of prescription drugs, review the relationship between pricing and manufacturer patient programs, reduce the cost of drugs under Medicare, and reform government program reimbursement methodologies. Moreover, President Trump has discussed the need for federal legislation, regulation or Executive Order to regulate the prices of medicines. The majority of our medicines are purchased by private payers, and much of the focus of pending legislation is on government program reimbursement. However, we cannot know what form any such action may take, the likelihood it would be executed, enacted, effectuated or implemented or the market's perception of how such legislation would affect us. Any reduction in reimbursement from government programs may result in a similar reduction in payments from private payers. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our current medicines and/or those for which we may receive regulatory approval in the future.

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

In the United States, we are subject directly, or indirectly through our customers, to various state and federal fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute, the federal False Claims Act, civil monetary penalty statutes prohibiting beneficiary inducements, and similar state laws, federal and state privacy and security laws, sunshine laws, government price reporting laws, and other fraud laws. These laws may impact, among other things, our current and proposed sales, marketing and educational programs, as well as other possible relationships with customers, pharmacies, physicians, payers, and patients.

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

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

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

Our medicines or any other medicine candidate that we develop may cause undesirable side effects or have other properties that could delay or prevent regulatory approval or commercialization, result in medicine re-labeling or withdrawal from the market or have a significant impact on customer demand.

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

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

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

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

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

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

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

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

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

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

Clinical testing is expensive and can take many years to complete, and its outcome is uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of potential medicine candidates may not be predictive of the results of later-stage clinical trials. Medicine candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical testing. For example, Raptor announced in September 2015, based on information then available, that it would not advance its program for the treatment of pediatric NASH with PROCYSBI after a Phase 2b trial failed achieve its primary endpoints. Also, on December 8, 2016, we announced that the Phase 3 trial, Safety, Tolerability and Efficacy of ACTIMMUNE Dose Escalation in Friedreich's Ataxia study evaluating ACTIMMUNE for the treatment of Friedreich's ataxia, or FA, did not meet its primary endpoint of a statistically significant change from baseline in the modified Friedreich's Ataxia Rating Scale at twenty-six weeks versus treatment with placebo. In addition, the secondary endpoints did not meet statistical significance. We, in conjunction with the independent Data Safety Monitoring Board, the principal investigator and the Friedreich's Ataxia Research Alliance Collaborative Clinical Research Network in FA, determined that, based on the trial results, the STEADFAST program would be discontinued, including the twenty-six week extension study and the long-term safety study.

With respect to the investigator-initiated study to evaluate ACTIMMUNE in combination with OPDIVO® (nivolumab) in advanced solid tumors and the planned Phase 3 pivotal clinical trial of teprotumumab in thyroid eye disease that we expect to begin in the second half of 2017, and to the extent that we are required to conduct additional clinical development of any of our existing or later acquired medicines or we conduct clinical development of earlier stage medicine candidates or for other additional indications for RAYOS/LODOTRA, we may experience delays in these clinical trials or investigator-initiated studies. We do not know whether any additional clinical trials will be initiated in the future, begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

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

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

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

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

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

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

Our operations could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions. While we carry insurance for certain of these events and have implemented disaster management plans and contingencies, the occurrence of any of these business interruptions could seriously harm our business and financial condition and increase our costs and expenses. We conduct significant management operations at both our global headquarters located in Dublin, Ireland and our U.S. office located in Lake Forest, Illinois. If our Dublin or Lake Forest offices were affected by a natural or man-made disaster or other business interruption, our ability to manage our domestic and foreign operations could be impaired, which could materially and adversely affect our results of operations and financial condition. We currently rely, and intend to rely in the future, on third-party manufacturers and suppliers to produce our medicines and third-party logistics partners to ship our medicines. Our ability to obtain commercial supplies of our medicines could be disrupted and our results of operations and financial condition could be materially and adversely affected if the operations of these third-party suppliers or logistics partners were affected by a man-made or natural disaster or other business interruption. The ultimate impact of such events on us, our significant suppliers and our general infrastructure is unknown.

We are dependent on information technology systems, infrastructure and data, which exposes us to data security risks.

We are dependent upon information technology systems, infrastructure and data, including mobile technologies, to operate our business. The multitude and complexity of our computer systems make them inherently vulnerable to service interruption or destruction, malicious intrusion and random attack. Likewise, data privacy or security breaches by employees or others may pose a risk that sensitive data, including our intellectual property, trade secrets or personal information of our employees, patients, customers or other business partners may be exposed to unauthorized persons or to the public. Cyber-attacks are increasing in their frequency, sophistication and intensity. Cyber-attacks could include the deployment of harmful malware, denial-of-service, social engineering and other means to affect service reliability and threaten data confidentiality, integrity and availability. Our business partners face similar risks and any security breach of their systems could adversely affect our security posture. A security breach or privacy violation that leads to disclosure or modification of or prevents access to patient information, including personally identifiable information or protected health information, could harm our reputation, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, require us to verify the correctness of database contents and otherwise subject us to liability under laws and regulations that protect personal data, any of which could disrupt our business and/or result in increased costs or loss of revenue. Moreover, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information, trade secrets or other intellectual property. While we have invested, and continue to invest, in the protection of our data and information technology infrastructure, there can be no assurance that our efforts will prevent service interruptions, or identify breaches in our systems, that could adversely affect our business and operations and/or result in the loss of critical or sensitive information, which could result in financial, legal, business or reputational harm to us. In addition, our liability insurance may not be sufficient in type or amount to cover us against claims related to security breaches, cyber-attacks and other related breaches.

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

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

- decreased demand for our medicines or medicine candidates that we may develop;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and resources;
- substantial monetary awards to trial participants or patients;
- medicine recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources; and
- the inability to commercialize our medicines or medicine candidates.

Our inability to obtain and retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of medicines we develop. We currently carry product liability insurance covering our clinical studies and commercial medicine sales in the amount of $125 million in the aggregate. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. If we determine that it is prudent to increase our product liability coverage due to the on-going commercialization of our current medicines in the United States, and/or the potential commercial launches of any of our medicines in additional markets or for additional indications, we may be unable to obtain such increased coverage on acceptable terms or at all. Our insurance policies also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

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

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

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

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

Risks Related to our Financial Position and Capital Requirements

In the past we have incurred significant operating losses.*

We have a limited operating history and even less history operating as a combined organization following the acquisitions of Vidara, Hyperion, Crealta and Raptor. We have financed our operations primarily through equity and debt financings and have incurred significant operating losses in the past. We had an operating loss of $291.1 million for the six months ended June 30, 2017, an operating loss of $147.2 million for the year ended December 31, 2016, operating income of $55.4 million for the year ended December 31, 2015 and an operating loss of $8.5 million for the year ended December 31, 2014. We had a net loss of $300.1 million for the six months ended June 30, 2017, a net loss of $166.8 million for the year ended December 31, 2016, net income of $39.5 million for the year ended December 31, 2015 and a net loss of $263.6 million for the year ended December 31, 2014. As of June 30, 2017, we had an accumulated deficit of $1,141.9 million. Our prior losses have resulted principally from costs incurred in our development activities for our medicines and medicine candidates, commercialization activities related to our medicines, costs associated with our acquisition transactions and costs associated with derivative liability accounting. Our prior losses, combined with possible future losses, have had and will continue to have an adverse effect on our shareholders' deficit and working capital. While we anticipate that we will generate operating profits in the future, whether we can sustain this will depend on the revenues we generate from the sale of our medicines being sufficient to cover our operating expenses.

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

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

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

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

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

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

- commercialize our existing medicines in the United States, including the substantial expansion of our sales force in recent years;
- complete the regulatory approval process, and any future required clinical development related thereto, for our medicines and medicine candidates;
- potentially acquire other businesses or additional complementary medicines or medicines that augment our current medicine portfolio, including costs associated with refinancing debt of acquired companies; and
- conduct clinical trials with respect to potential additional indications, as well as conduct post-marketing requirements and commitments, with respect to our medicines and medicines we acquire.

While we believe that our existing cash and cash equivalents will be sufficient to fund our operations based on our current expectations of continued revenue growth, we may need to raise additional funds if we choose to expand our commercialization or development efforts more rapidly than presently anticipated, if we develop or acquire additional medicines or acquire companies, or if our revenue does not meet expectations.

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

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

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

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

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

As of June 30, 2017, we had $1,892.3 million book value, or $2,022.9 million principal amount, of indebtedness, including $847.9 million in secured indebtedness. In March 2017, we borrowed $850.0 million in principal amount of secured loans pursuant to our credit agreement. In connection with the acquisition of Hyperion, we issued $475.0 million aggregate principal amount of 6.625% Senior Notes due 2023, or the 2023 Senior Notes, in April 2015. In connection with the acquisition of Raptor, we issued $300.0 million aggregate principal amount of 8.75% Senior Notes due 2024, or the 2024 Senior Notes, in October 2016. In March 2015, we issued $400.0 million aggregate principal amount of 2.50% Exchangeable Senior Notes due 2022, or the Exchangeable Senior Notes. Accordingly, we have a significant amount of debt outstanding on a consolidated basis.

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

- reducing the benefits we expect to receive from our recent and any future acquisition transactions;

- making it more difficult for us to satisfy our obligations;
- requiring a substantial portion of our cash flows from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flows to fund acquisitions, capital expenditures, and future business opportunities;
- exposing us to the risk of increased interest rates to the extent of any future borrowings, including borrowings under our credit agreement, at variable rates of interest;
- making it more difficult for us to satisfy our obligations with respect to our indebtedness, including our outstanding notes, our credit agreement, and any failure to comply with the obligations of any of our debt instruments, including restrictive covenants and borrowing conditions, could result in an event of default under the agreements governing such indebtedness;

- increasing our vulnerability to, and reducing our flexibility to respond to, changes in our business or general adverse economic and industry conditions;
- limiting our ability to obtain additional financing for working capital, capital expenditures, debt service requirements, acquisitions, and general corporate or other purposes and increasing the cost of any such financing;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and placing us at a competitive disadvantage as compared to our competitors, to the extent they are not as highly leveraged and who, therefore, may be able to take advantage of opportunities that our leverage may prevent us from exploiting; and
- restricting us from pursuing certain business opportunities.

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

Our ability to obtain future financing and engage in other transactions may be restricted by these covenants. In addition, any credit ratings will impact the cost and availability of future borrowings and our cost of capital. Our ratings at any time will reflect each rating organization's then opinion of our financial strength, operating performance and ability to meet our debt obligations. There can be no assurance that we will achieve a particular rating or maintain a particular rating in the future. A reduction in our credit ratings may limit our ability to borrow at acceptable interest rates. If our credit ratings were downgraded or put on watch for a potential downgrade, we may not be able to sell additional debt securities or borrow money in the amounts, at the times or interest rates or upon the more favorable terms and conditions that might otherwise be available. Any impairment of our ability to obtain future financing on favorable terms could have an adverse effect on our ability to refinance any of our then-existing debt and may severely restrict our ability to execute on our business strategy, which includes the continued acquisition of additional medicines or businesses.

We may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments under or to refinance our debt obligations depends on our financial condition and operating performance, which is subject to prevailing economic, industry and competitive conditions and to certain financial, business and other factors beyond our control. Our ability to generate cash flow to meet our payment obligations under our debt may also depend on the successful implementation of our operating and growth strategies. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. We cannot assure you that we will maintain a level of cash flows from operating activities sufficient to pay the principal, premium, if any, and interest on our indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets or business operations, seek additional capital or restructure or refinance our indebtedness. We cannot ensure that we would be able to take any of these actions, that these actions would be successful and permit us to meet our scheduled debt service obligations or that these actions would be permitted under the terms of existing or future debt agreements, including the indentures that govern the 2024 Senior Notes and the 2023 Senior Notes and the credit agreement. In addition, any failure to make payments of interest and principal on our outstanding indebtedness on a timely basis would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness.

If we cannot make scheduled payments on our debt, we will be in default and, as a result:

- our debt holders could declare all outstanding principal and interest to be due and payable;
- the administrative agent and/or the lenders under the credit agreement could foreclose against the assets securing the borrowings then outstanding; and
- we could be forced into bankruptcy or liquidation, which could result in you losing your investment.

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

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

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

Under Sections 382 and 383 of the Code, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percent change (by value) in its equity ownership over a three-year period), the corporation's ability to use pre-change net operating loss carryforwards and other pre-change tax attributes to offset post-change income may be limited. We continue to carry forward our annual limitation resulting from an ownership change date of August 2, 2012. The limitation on pre-change net operating losses incurred prior to the August 2, 2012 change date is approximately $14.7 million for 2017 and $7.7 million for 2018 through 2028. During the third quarter of 2016, we also recognized additional net operating losses and federal and state tax credits as a result of our acquisition of Raptor on October 25, 2016 in the amount of approximately $97.3 million of federal net operating losses, state operating losses of approximately $177.5 million and approximately $22.4 million of federal and state tax credits. We continue to carry forward the annual limitation related to Hyperion of $50 million resulting from the last ownership change date in 2014. In addition, in the second quarter of 2017, we recognized $37.4 million of federal net operating losses, $43.2 million of state net operating losses and $5.8 million of federal tax credits following our acquisition of River Vision Development Corp. These acquired federal net operating losses and credits are subject to an annual limitation of $8.1 million for the 2017 year and $12.5 million from 2018 through 2021. The net operating loss carryforward limitation is cumulative such that any use of the carryforwards below the limitations in one year will result in a corresponding increase in the limitations for the subsequent tax year.

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

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

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

From time to time, global credit and financial markets have experienced extreme disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment and continued unpredictable and unstable market conditions. If the equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and share price and could require us to delay or abandon commercialization or development plans. There is a risk that one or more of our current service providers, manufacturers and other partners may not survive an economic down-turn, which could directly affect our ability to attain our operating goals on schedule and on budget.

The U.K.'s referendum to leave the EU or "Brexit," has and may continue to cause disruptions to capital and currency markets worldwide. The full impact of the Brexit decision, however, remains uncertain. A process of negotiation will determine the future terms of the U.K.'s relationship with the EU. During this period of negotiation, our results of operations and access to capital may be negatively affected by interest rate, exchange rate and other market and economic volatility, as well as regulatory and political uncertainty. The tax consequences of the U.K.'s withdrawal from the EU are uncertain as well. Brexit may also have a detrimental effect on our customers, distributors and suppliers, which would, in turn, adversely affect our revenues and financial condition.

At June 30, 2017, we had $554.3 million of cash and cash equivalents consisting of cash and money market funds. While we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents since June 30, 2017, no assurance can be given that deterioration in conditions of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents or our ability to meet our financing objectives. Dislocations in the credit market may adversely impact the value and/or liquidity of marketable securities owned by us.

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

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

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

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

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

These covenants may:

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limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;

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

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

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

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

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

Risks Related to Our Intellectual Property

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

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

Even if patents do successfully issue, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed or invalidated.

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

On January 12, 2017, a six-day bench trial commenced against defendants Dr. Reddy’s and Mylan before Honorable Judge Mary Cooper in the District of New Jersey for Case I. The patents at issue in this trial included two Orange Book listed patents: U.S. Patent Nos. 6,926,907 and 8,557,285. Defendant Lupin formerly entered into a stay pending the entry of judgment in Case I. On June 26, 2017, the court issued its opinion upholding the validity of the ‘285 and ‘907 patents and finding that Dr. Reddy’s, Mylan’s, and Lupin’s proposed generic naproxen/esomeprazole magnesium products would all infringe at least one of the two patents. The court entered the final judgment on July 21, 2017. Any notice of appeal is due by August 21, 2017.

On January 19, 2017, the court entered a scheduling order for Case II and Case III, which was subsequently updated. The court's scheduling order requires, inter alia, filing and serving of the opening claim construction submissions by May 26, 2017. The court has not issued a claim construction order in Case II. A trial date for Cases II and III has not yet been set. On December 20, 2016, Mylan filed a motion to dismiss the Company's first amended complaint for patent infringement in Case III. On April 28, 2017, Dr. Reddy's filed a motion to dismiss for lack of jurisdiction in Case III, and we are awaiting final ruling.

On August 19, 2015, Lupin filed Petitions for inter partes review, or IPR, of U.S. Patent No. 8,858,996, or the '996 patent, and U.S. Patent Nos. 8,852,636 and 8,865,190, or the '190 patent, all patents in litigation in the above referenced VIMOVO cases. On March 1, 2016, the Patent Trial and Appeal Board, or the PTAB, issued decisions to institute the IPRs for the '996 patent and the '190 patent. The PTAB must issue a final written decision on the IPRs of the '996 patent and the '190 patent no later than March 1, 2017. Also on March 1, 2016, the PTAB denied the Petition for IPR for U.S. Patent No. 8,852,636. The PTAB hearings for the '996 and '190 patents were both held on November 29, 2016. On February 28, 2017, the Patent Trial and Appeal Board issued final written decisions on the IPRs of the '996 and '190 patents, upholding the validity of both patents.

Patent litigation is currently pending in the United States District Court for the District of New Jersey against two companies intending to market a generic version of PENNSAID 2% prior to the expiration of certain of our patents listed in the Orange Book. These cases are collectively known as the PENNSAID 2% cases, and involve the following sets of defendants: (i) Actavis and (ii) Lupin. These cases arise from Paragraph IV Patent Certification notice letters from each of Actavis and Lupin advising each had filed an ANDA with the FDA seeking approval to market a generic version of PENNSAID 2% before the expiration of Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, 8,871,809, 9,066,913, 9,101,591, 9,132,110, 9,168,304, 9,168,305, 9,220,784, 9,339,551 and 9,339,552.

On August 17, 2016, the district court issued a Markman opinion holding certain of the asserted claims of U.S. Patents 8,252,838, 8,563,613, 9,066,913 and 9,101,591 invalid as indefinite. On August 30, 2016, we filed a motion for reconsideration of the court's August 17, 2016, opinion. On January 6, 2017, the court denied our motion for reconsideration. On March 16, 2017, the court granted Actavis' motion for summary judgment of non-infringement of the asserted claims of U.S. Patents 8,546,450, 8,217,078 and 9,132,110. In view of the Markman and summary judgment decisions, a bench trial was held on March 21-30, 2017, regarding claim 12 of U.S. Patent 9,066,913. On May 14, 2017, the court issued its opinion upholding the validity of claim 12 of the '913 patent, which Actavis had previously admitted its proposed generic diclofenac sodium topical solution product would infringe. Actavis filed its Notice of Appeal on June 16, 2017. We filed our Notice of Appeal of the district court's rulings on certain claims of the '450, '078, '838, '613, '591 '304, '305, '784, '913, and '110 patents on June 9, 2017.

On October 27, 2015, we filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, we filed suit in the United States District Court for the District of New Jersey against Actavis for patent infringement of U.S. Patent No. 9,220,784. All three patents, U.S. Patent Nos. 9,168,304, 9,168,305, and 9,220,784, are listed in the Orange Book and have claims that cover PENNSAID 2%. All claims from U.S. Patents 9,168,304, 9,168,305 and 9,220,784 asserted against Actavis were held invalid as indefinite by way of the court's August 17, 2016, Markman opinion and the court's January 6, 2017, order denying our motion for reconsideration. The court's rulings are currently on appeal to the Federal Circuit.

We received from Actavis a Paragraph IV Patent Certification Notice Letter dated September 27, 2016, against Orange Book listed U.S. Patent 9,415,029, advising that Actavis had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

On March 18, 2015, we received a Paragraph IV Patent Certification against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, and 8,871,809 from Lupin Limited advising that Lupin Limited had filed an ANDA with the FDA for generic version of PENNSAID 2%. On April 30, 2015, we filed suit in the United States District Court for the District of New Jersey against Lupin Limited and Lupin Pharmaceuticals Inc., collectively referred to as Lupin, seeking an injunction to prevent the approval of the ANDA. The lawsuit alleges that Lupin has infringed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, and 8,871,809 by filing an ANDA seeking approval from the FDA to market generic versions of PENNSAID 2% prior to the expiration of certain of our patents listed in the Orange Book. The commencement of the patent infringement lawsuit stays, or bars, FDA approval of Lupin's ANDA for 30 months or until an earlier district court decision which finds that the subject patents are not infringed or are invalid.

On June 30, 2015, we filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent 9,066,913. On August 11, 2015, we filed an amended complaint in the United States District Court for the District of New Jersey against Lupin that added U.S. Patent 9,101,591 to the litigation pending on U.S. Patent 9,066,913. On September 17, 2015, we filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent 9,132,110. All three patents, U.S. Patents 9,066,913, 9,101,591, and 9,132,110, are listed in the Orange Book and have claims that cover PENNSAID 2%.

On October 27, 2015, we filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patents 9,168,304 and 9,168,305. On February 5, 2016, we filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patent 9,220,784. On August 18, 2016, we filed suit in the United States District Court for the District of New Jersey against Lupin for patent infringement of U.S. Patents 9,339,551, 9,339,552, 9,370,501 and 9,375,412. All seven patents, U.S. Patents 9,168,304, 9,168,305, 9,220,784, 9,339,551, 9,339,552, 9,370,501 and 9,375,412, are listed in the Orange Book and have claims that cover PENNSAID 2%. All of the infringement actions brought against Lupin remain pending, with certain claims of the ’809, ’913, ’450, ’110, ’551, ’552, ’412 and ’501 patents being asserted. The decisions reached by the court in the related Actavis actions regarding the ’809, ’450, ’110, ’551, ’552, ’412 and ’501 patents as described above, are expected to apply to the same claims asserted against Lupin in these actions. The court has not yet set a trial date for the Lupin actions.

We have received from Apotex Paragraph IV Patent Certification Notice Letters dated April 1, 2016, June 30, 2016, September 21, 2016, April 20, 2017 and April 27, 2017 against Orange Book listed U.S. Patents 8,217,078, 8,252,838, 8,546,450, 8,563,613, 8,618,164, 8,741,956, 8,871,809, 9,066,913, 9,101,591, 9,132,110, 9,168,304, 9,168,305, 9,220,784, 9,339,551, 9,339,552 9,415,029, 9,539,335 and 9,370,501 advising that Apotex had filed an ANDA with the FDA for a generic version of PENNSAID 2%.

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

On April 29, 2015, Par Pharmaceutical filed Petitions for IPR of U.S. Patent 8,404,215 and U.S. Patent 8,642,012, two of the patents involved in the above mentioned RAVICTI cases. On November 4, 2015, the PTAB issued decisions instituting such IPRs and on December 14, 2015, the District Court Judge Roy Payne issued a stay pending a final written decision from the PTAB with respect to such IPRs. On September 29, 2016, the PTAB found all of the claims in U.S. Patent 8,404,215 to be unpatentable. We did not appeal the PTAB’s final written decision with respect to U.S. Patent 8,404,215. On November 3, 2016, the PTAB issued a final written decision holding all of the claims of U.S. Patent 8,642,012 patentable. On December 29, 2016, Par filed a notice of appeal with the Federal Circuit to appeal the final written decision of the PTAB concerning the patentability of U.S. Patent 8,642,012. Par’s opening brief is due on October 16, 2017.

On April 1, 2016, Lupin filed a Petition for IPR of U.S. Patent 9,095,559, a patent currently at issue in the Lupin RAVICTI case. On September 30, 2016, the PTAB issued a decision instituting the IPR. The PTAB must issue a final written decision on the IPR no later than September 30, 2017. On March 27, 2017, Lupin filed a Petition to request an IPR of the ‘278 patent and a Petition to request an IPR of the ‘966 patent. We filed our response on the ‘966 patent on July 6, 2017. Our preliminary patent owner response for the ‘278 patent was filed on July 24, 2017.

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

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

With respect to RAVICTI, the composition of matter patent we hold would have expired in the United States in February 2015 without term extension. However, Hyperion applied for a term extension for this patent under the Drug Price Competition and Patent Term Restoration Act and received notice that the United States Patent and Trademark Office, or the U.S. PTO, extended the expiration date of the patent to July 28, 2018. We cannot guarantee that pending patent applications related to RAVICTI will result in additional patents or that other existing and future patents related to RAVICTI will be held valid and enforceable or will be sufficient to deter generic competition in the United States. Therefore, it is possible that upon expiration of the RAVICTI composition of matter patent, we would need to rely on forms of regulatory exclusivity, to the extent available, to protect against generic competition.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our drug discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Although we expect all of our employees to assign their inventions to us, and all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed or that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques.

Our ability to obtain patents is highly uncertain because, to date, some legal principles remain unresolved, there has not been a consistent policy regarding the breadth or interpretation of claims allowed in patents in the United States and the specific content of patents and patent applications that are necessary to support and interpret patent claims is highly uncertain due to the complex nature of the relevant legal, scientific and factual issues. Changes in either patent laws or interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection. For example, on September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The U.S. PTO has developed new and untested regulations and procedures to govern the full implementation of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective in March 2013. The Leahy-Smith Act has also introduced procedures making it easier for third-parties to challenge issued patents, as well as to intervene in the prosecution of patent applications. Finally, the Leahy-Smith Act contains new statutory provisions that still require the U.S. PTO to issue new regulations for their implementation and it may take the courts years to interpret the provisions of the new statute. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. In addition, the ACA allows applicants seeking approval of biosimilar or interchangeable versions of biological products such as ACTIMMUNE to initiate a process for challenging some or all of the patents covering the innovator biological product used as the reference product. This process is complicated and could result in the limitation or loss of certain patent rights. An inability to obtain, enforce and defend patents covering our proprietary technologies would materially and adversely affect our business prospects and financial condition.

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

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

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

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

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

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

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

In connection with our November 2013 acquisition of the U.S. rights to VIMOVO, we (i) received the benefit of a covenant not to sue under AstraZeneca's patent portfolio with respect to Nexium (which shall automatically become a license under such patent portfolio if and when AstraZeneca reacquires control of such patent portfolio from Merck Sharp & Dohme Corp. and certain of its affiliates), (ii) were assigned AstraZeneca's amended and restated collaboration and license agreement for the United States with Aralez, under which AstraZeneca has in-licensed exclusive rights under certain of Aralez's patents with respect to VIMOVO, and (iii) acquired AstraZeneca's co-ownership rights with Aralez with respect to certain joint patents covering VIMOVO, all for the commercialization of VIMOVO in the United States. If we fail to comply with our obligations under our agreements with AstraZeneca or if we fail to comply with our obligations under our agreements with Aralez, our rights to commercialize VIMOVO in the United States may be adversely affected or terminated by AstraZeneca or Aralez.

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

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

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

In addition, we are subject to contractual obligations under our agreements with Tripex and PARI related to QUINSAIR. Under the agreement with Tripex, we are required to pursue commercially reasonable efforts to initiate, and subsequently to complete, an additional clinical trial of QUINSAIR in a non-cystic fibrosis patient population within a specified period of time and an obligation to progress toward submitting an NDA for approval of QUINSAIR in the United States for use in all or part of the cystic fibrosis patient population. These obligations are subject to certain exceptions due to, for example, manufacturing delays not under our control, or delays caused by the FDA. If we fail to properly exercise such efforts to initiate and complete an appropriate clinical trial, or fail to submit an NDA for U.S. approval in the cystic fibrosis patient population, during the time periods specified in the agreement, we may be subject to various claims by Tripex and parties affiliated with Tripex. In addition, if we do not spend a minimum amount on QUINSAIR development in each of the three years following our acquisition of Raptor, we may also be obligated to pre-pay a milestone payment related to initiating a clinical trial for QUINSAIR in a non-cystic fibrosis indication. Under the license agreement with PARI, we are required to comply with diligence milestones related to development and commercialization of QUINSAIR in the United States and to spend a specified minimum amount per year on development activities in the United States until submission of the NDA for QUINSAIR in the United States. If we do not comply with these obligations, our licenses to certain intellectual property related to QUINSAIR may become non-exclusive in the United States or could be terminated. We are also subject to contractual obligations under our amended and restated license agreement with UCSD, with respect to PROCYSBI, including obligations to consider engaging in the development of PROCYSBI for the treatment of NASH and related diligence obligations if we undertake such development. Under the amended and restated license agreement with USCD, we also are subject to diligence obligations to identify a third party to undertake development of PROCYSBI for the treatment of

Huntington's disease. To the extent that we fail to perform the diligence obligations under the agreement, UCSD may, with respect to such indication, terminate the license or otherwise cause the license to become non-exclusive. If one or more of these licenses was terminated, we would have no further right to use or exploit the related intellectual property, which would limit our ability to develop PROCYSBI or QUINSAIR in other indications, and could impact our ability to continue commercializing PROCYSBI or QUINSAIR in their approved indications.

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

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

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

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

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

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

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

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

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

Risks Related to Ownership of Our Ordinary Shares

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

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

- our failure to successfully execute our commercialization strategy with respect to our approved medicines, particularly our commercialization of our medicines in the United States;
- actions or announcements by third-party or government payers with respect to coverage and reimbursement of our medicines;
- disputes or other developments relating to intellectual property and other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our medicines and medicine candidates;
- unanticipated serious safety concerns related to the use of our medicines;
- adverse regulatory decisions;
- changes in laws or regulations applicable to our business, medicines or medicine candidates, including but not limited to clinical trial requirements for approvals or tax laws;
- inability to comply with our debt covenants and to make payments as they become due;
- inability to obtain adequate commercial supply for any approved medicine or inability to do so at acceptable prices;

- developments concerning our commercial partners, including but not limited to those with our sources of manufacturing supply;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse results or delays in clinical trials;
- our failure to successfully develop and/or acquire additional medicine candidates or obtain approvals for additional indications for our existing medicine candidates;
- introduction of new medicines or services offered by us or our competitors;
- overall performance of the equity markets, including the pharmaceutical sector, and general political and economic conditions;
- failure to meet or exceed revenue and financial projections that we may provide to the public;
- actual or anticipated variations in quarterly operating results;
- failure to meet or exceed the estimates and projections of the investment community;
- inaccurate or significant adverse media coverage;
- publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- our inability to successfully enter new markets;
- the termination of a collaboration or the inability to establish additional collaborations;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our inability to maintain an adequate rate of growth;
- ineffectiveness of our internal controls or our inability to otherwise comply with financial reporting requirements;
- adverse U.S. and foreign tax exposure;
- additions or departures of key management, commercial or regulatory personnel;
- issuances of debt or equity securities;
- significant lawsuits, including patent or shareholder litigation;
- changes in the market valuations of similar companies to us;
- sales of our ordinary shares by us or our shareholders in the future;
- trading volume of our ordinary shares;
- effects of natural or man-made catastrophic events or other business interruptions; and
- other events or factors, many of which are beyond our control.

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

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

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

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

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

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

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

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

If our existing shareholders sell, or indicate an intention to sell, substantial amounts of our ordinary shares in the public market, the trading price of such ordinary shares could decline. In addition, our ordinary shares that are either subject to outstanding options or reserved for future issuance under our employee benefit plans are or may become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules and Rule 144 and Rule 701 under the Securities Act of 1933, as amended, or the Securities Act. If these additional ordinary shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our ordinary shares could decline.

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

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

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

Irish law differs from the laws in effect in the United States and may afford less protection to holders of our securities.

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

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

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

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

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

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

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

A transfer of our ordinary shares may be subject to Irish stamp duty.

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

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

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

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

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

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

The stock markets have from time to time experienced significant price and volume fluctuations that have affected the market prices for the equity securities of pharmaceutical companies. These broad market fluctuations may cause the market price of our ordinary shares to decline. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. For example, following declines in our stock price, two federal securities class action lawsuits were filed in March 2016 against us and certain of our current and former officers alleging violations of the Securities Exchange Act of 1934, as amended. Subsequently, the two actions were consolidated, and plaintiff added claims under the Securities Act and named additional defendants. This consolidated class action (captioned Schaffer v. Horizon Pharma plc, et al., Case No. 1:16-cv-01763) is currently pending in the United States District Court for the Southern District of New York. In November 2016, defendants filed motions to dismiss plaintiffs' consolidated amended complaint, which are fully briefed but have not yet been decided by the court. Even if we are successful in defending against this action or any similar claims that may be brought in the future, such litigation could result in substantial costs and may be a distraction to our management, and may lead to an unfavorable outcome that could adversely impact our financial condition and prospects.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(a) Recent Sales of Unregistered Securities

We completed the following issuances of unregistered securities during the three months ended June 30, 2017:

- In June 2017, we issued an aggregate of 2,500 ordinary shares to Baraboo Growth upon the cash exercise of warrants and we received proceeds of $11,425 representing the aggregate exercise price of such warrants.

(b) Use of Proceeds

- None

(c) Issuer Purchases of Equity Securities

The following table summarizes purchases of our ordinary shares made by or on behalf of us or any of our "affiliated purchasers" as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934, as amended, during each fiscal month during the three month period ended June 30, 2017:

	Total Number of Shares Purchased	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs (3)
April 1 – April 30, 2017	—	$ —	—	16,000,000
May 1 – May 31, 2017	100,000	9.93	100,000	15,900,000
June 1 – June 30, 2017	—	—	—	15,900,000
Total	100,000	$ 9.93	100,000	15,900,000

(1) Average price paid per ordinary share includes brokerage commissions.

(2) The ordinary shares reported in the table above were purchased pursuant to our publicly announced share repurchase program. In May 2016, our board of directors authorized a share repurchase program pursuant to which we may repurchase up to 5,000,000 of our ordinary shares. In May 2017, our board of directors reauthorized a share repurchase program pursuant to which we may repurchase up to 16,000,000 of our ordinary shares.

(3) The share amount shown represents as of the end of each period, the number of ordinary shares that may yet be purchased under our publicly announced share repurchase program. The timing and amount of repurchases, if any, will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, our cash resources, restrictions under our credit agreement and market conditions.

ITEM 6. EXHIBITS

The exhibits listed on the Index to Exhibits following the signature page are filed as part of this Quarterly Report on Form 10-Q.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

		HORIZON PHARMA PLC
Date: August 7, 2017	By:	/s/ Timothy P. Walbert Timothy P. Walbert Chairman, President and Chief Executive Officer (Principal Executive Officer)
Date: August 7, 2017	By:	/s/ Paul W. Hoelscher Paul W. Hoelscher Executive Vice President, Chief Financial Officer (Principal Financial Officer)

INDEX TO EXHIBITS

Exhibit Number	Description of Document
2.1(1)	Transaction Agreement and Plan of Merger, dated March 18, 2014, by and among Horizon Pharma, Inc., Vidara Therapeutics Holdings LLC, Vidara Therapeutics International Ltd. (now known as Horizon Pharma Public Limited Company), Hamilton Holdings (USA), Inc. and Hamilton Merger Sub, Inc.†
2.2(2)	First Amendment to Transaction Agreement and Plan of Merger, dated June 12, 2014, by and between Horizon Pharma, Inc. and Vidara Therapeutics Holdings LLC.
2.3(3)	Agreement and Plan of Merger, dated March 29, 2015, by and among Horizon Pharma, Inc., Ghrian Acquisition Inc. and Hyperion Therapeutics, Inc.†
2.4(4) ***	Agreement and Plan of Merger, dated December 10, 2015, by and among Horizon Pharma USA, Inc., HZNP Limited, Criostail LLC, Crealta Holdings LLC and the other parties thereto.††
2.5(5)	Agreement and Plan of Merger, dated September 12, 2016, by and among Horizon Pharma Public Limited Company, Misneach Corporation and Raptor Pharmaceutical Corp.†
3.1(6)	Memorandum and Articles of Association of Horizon Pharma Public Limited Company, as amended.
4.1(7)**	Form of Warrant issued by Horizon Pharma, Inc. pursuant to the Securities Purchase Agreement, dated February 28, 2012, by and among Horizon Pharma, Inc. and the Purchasers and Warrant Holders listed therein.
4.2(8)**	Form of Warrant issued by Horizon Pharma, Inc. in Public Offering of Units.
4.3(9)	Indenture, dated March 13, 2015, by and among Horizon Pharma Public Limited Company, Horizon Pharma Investment Limited and U.S. Bank National Association.
4.4(9)	Form of 2.50% Exchangeable Senior Note due 2022 (included in Exhibit 4.3).
4.5(10)	Indenture, dated April 29, 2015, by and between Horizon Pharma Financing Inc. and U.S. Bank National Association.
4.6(10)	Form of 6.625% Senior Note due 2023 (included in Exhibit 4.5).
4.7(11)	First Supplemental Indenture, dated May 7, 2015, by and among Horizon Pharma Public Limited Company, certain subsidiaries of Horizon Pharma Public Limited Company and U.S. Bank National Association.
4.8(12)	Indenture, dated October 25, 2016, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and U.S. Bank National Association, as trustee.

4.9(12)	Form of 8.75% Senior Note due 2024 (included in Exhibit 4.8).
10.1(13)	Amendment No. 2, dated March 29, 2017, to Credit Agreement, dated May 7, 2015 (as amended by Amendment No. 1, dated October 25, 2016), by and among Horizon Pharma, Inc., as Borrower, Horizon Pharma USA, Inc., as an Additional Borrower, Horizon Pharma Public Limited Company, as Irish Holdco and a guarantor, the subsidiary guarantors party thereto, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent.
10.2(14)	Transition services letter agreement, dated April 21, 2017, between Horizon Pharma plc and David Happel.
10.3*	Global Supply Agreement, dated June 30, 2017, by and between Horizon Pharma Ireland Limited and Boehringer Ingelheim Biopharmaceuticals GmbH.
10.4*	Amended and Restated License Agreement, dated May 31, 2017, by and between Horizon Orphan LLC and The Regents of the University of California.
10.5+	Executive Employment Agreement, effective as of February 1, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Vikram Karnani.
10.6+	Second Amendment to Amended and Restated Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Jeffrey W. Sherman, M.D.
10.7+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Paul W. Hoelscher.
10.8+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Barry Moze.

Exhibit Number	Description of Document
10.9+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Brian Beeler.
10.10+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and David A. Happel.
10.11+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and George P. Hampton.
10.12+	First Amendment to Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Robert F. Carey.
10.13+	Second Amendment to Amended and Restated Executive Employment Agreement, dated May 4, 2017, by and among Horizon Pharma, Inc., Horizon Pharma USA, Inc. and Timothy P. Walbert.
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act.
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act.
32.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(b) or 15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350.
32.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(b) or 15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350.
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 management contract or compensatory plan.

† Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Horizon Pharma Public Limited Company undertakes to furnish supplemental copies of any of the omitted schedules upon request by the Securities and Exchange Commission.

†† Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Horizon Pharma Public Limited Company undertakes to furnish supplemental copies of any of the omitted schedules upon request by the Securities and Exchange Commission; provided, however, that Horizon Pharma Public Limited Company may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended, for any schedule so furnished.

* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

** Indicates an instrument, agreement or compensatory arrangement or plan assumed by Horizon Pharma Public Limited Company in the merger transaction with Vidara Therapeutics International Public Limited Company and no longer binding on Horizon Pharma, Inc.

*** Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

(1) Incorporated by reference to Horizon Pharma, Inc.'s Current Report on Form 8-K, filed on March 20, 2014.

(2) Incorporated by reference to Horizon Pharma, Inc.'s Current Report on Form 8-K, filed on June 18, 2014.

(3) Incorporated by reference to Horizon Pharma Public Limited Company's Amendment No. 1 to Current Report on Form 8-K, filed on April 9, 2015.

(4) Incorporated by reference to Horizon Pharma Public Limited Company's Annual Report on Form 10-K, filed on February 29, 2016.

(5) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on September 12, 2016.

(6) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on May 5, 2017.
(7) Incorporated by reference to Horizon Pharma, Inc.'s Current Report on Form 8-K, filed on March 1, 2012.
(8) Incorporated by reference to Horizon Pharma, Inc.'s Current Report on Form 8-K, filed on September 20, 2012.
(9) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on March 13, 2015.
(10) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on April 29, 2015.
(11) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on May 11, 2015.
(12) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on October 25, 2016.
(13) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on March 30, 2017.
(14) Incorporated by reference to Horizon Pharma Public Limited Company's Current Report on Form 8-K, filed on April 21, 2017.