AMAG PHARMACEUTICALS INC.
Form 10-Q
August 09, 2016
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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, 2016

or

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

For the transition period from to

Commission file number 001 10865

AMAG Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	04 2742593
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
1100 Winter Street Waltham, Massachusetts	02451
(Address of Principal Executive Offices)	(Zip Code)

(617) 498 3300

(Registrant’s Telephone Number, Including Area Code)

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non accelerated filer, or a smaller reporting company. See definition of “accelerated filer,” “large accelerated filer” and “smaller reporting company” in Rule 12b 2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer	Non accelerated filer (Do not check if a smaller reporting company)	Smaller Reporting Company

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

As of August 4, 2016, there were 34,154,044 shares of the registrant’s Common Stock, par value $0.01 per share, outstanding.

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AMAG PHARMACEUTICALS, INC.

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FOR THE QUARTER ENDED JUNE 30, 2016

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

AMAG PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

(Unaudited)

	June 30, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 251,110	$ 228,705
Investments	295,359	237,626
Accounts receivable, net	66,086	85,678
Inventories	39,564	40,645
Receivable from collaboration	—	428
Prepaid and other current assets	13,437	13,592
Total current assets	665,556	606,674
Property, plant and equipment, net	27,173	28,725
Goodwill	639,484	639,188
Intangible assets, net	1,144,858	1,196,771
Restricted cash	2,593	2,593
Other long-term assets	1,146	2,259
Total assets	$ 2,480,810	$ 2,476,210
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 8,653	$ 4,906
Accrued expenses	107,599	106,363
Current portion of long-term debt	49,610	17,500
Current portion of acquisition-related contingent consideration	98,703	96,967
Deferred revenues	32,499	20,185
Total current liabilities	297,064	245,921
Long-term liabilities:		
Long-term debt, net	764,543	803,669
Convertible 2.5% notes, net	174,953	170,749
Acquisition-related contingent consideration	125,106	125,592
Deferred tax liabilities	188,852	189,145
Deferred revenues	9,983	5,093

Other long-term liabilities	4,142	3,777
Total liabilities	1,564,643	1,543,946
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.01 per share, 2,000,000 shares authorized; none issued	—	—
Common stock, par value $0.01 per share, 117,500,000 shares authorized; 34,154,044 and 34,733,117 shares issued and outstanding at June 30, 2016 and December 31, 2015, respectively	342	347
Additional paid-in capital	1,224,670	1,233,786
Accumulated other comprehensive loss	(3,058)	(4,205)
Accumulated deficit	(305,787)	(297,664)
Total stockholders' equity	916,167	932,264
Total liabilities and stockholders' equity	$ 2,480,810	$ 2,476,210

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

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AMAG PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(IN THOUSANDS, EXCEPT PER SHARE DATA)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Revenues:				
U.S. product sales, net	$ 102,983	$ 84,652	$ 192,547	$ 162,067
Service revenues, net	24,379	—	43,898	—
License fee, collaboration and other revenues	57	39,232	273	51,322
Total revenues	127,419	123,884	236,718	213,389
Costs and expenses:				
Cost of product sales	21,937	19,679	40,236	40,705
Cost of services	5,195	—	10,721	—
Research and development expenses	14,234	8,184	28,463	15,172
Selling, general and administrative expenses	51,924	31,801	115,098	63,913
Impairment charges of intangible assets	15,963	—	15,963	—
Acquisition-related costs	—	2,653	—	2,653
Restructuring expenses	89	443	712	1,014
Total costs and expenses	109,342	62,760	211,193	123,457
Operating income	18,077	61,124	25,525	89,932
Other income (expense):				
Interest expense	(18,250)	(10,205)	(36,693)	(20,572)
Interest and dividend income	773	372	1,481	443
Other income (expense)	—	2	220	2
Total other income (expense)	(17,477)	(9,831)	(34,992)	(20,127)
Income (loss) before income taxes	600	51,293	(9,467)	69,805
Income tax expense (benefit)	1,196	18,035	(1,344)	23,643
Net income (loss)	$ (596)	$ 33,258	$ (8,123)	$ 46,162
Net income (loss) per share:				
Basic	$ (0.02)	$ 1.09	$ (0.24)	$ 1.60
Diluted	$ (0.02)	$ 0.82	$ (0.24)	$ 1.23
Weighted average shares outstanding used to compute net income (loss) per share:				
Basic	34,223	30,636	34,481	28,934
Diluted	34,223	43,181	34,481	40,791

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

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AMAG PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(IN THOUSANDS)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net income (loss)	$ (596)	$ 33,258	$ (8,123)	$ 46,162
Other comprehensive income (loss):				
Unrealized gains (losses) on securities:				
Holding gains (losses) arising during period, net of tax	215	(396)	1,147	(327)
Reclassification adjustment for gains (losses) included in net income (loss)	—	(3)	—	(4)
Net unrealized gains (losses) on securities	215	(399)	1,147	(331)
Total comprehensive income (loss)	$ (381)	$ 32,859	$ (6,976)	$ 45,831

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

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AMAG PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)

(Unaudited)

	Six Months Ended June 30,	
	2016	2015
Cash flows from operating activities:		
Net income (loss)	$ (8,123)	$ 46,162
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	41,231	34,375
Impairment of intangible assets	15,963	—
Amortization of premium/discount on purchased securities	351	658
Write-down of inventory to net realizable value	—	278
Non-cash equity-based compensation expense	11,342	6,684
Amortization of debt discount and debt issuance costs	5,940	5,501
Change in fair value of contingent consideration	1,399	1,639
Deferred income taxes	(1,371)	23,643
Changes in operating assets and liabilities:		
Accounts receivable, net	19,592	(17,849)
Inventories	281	(1,027)
Receivable from collaboration	428	(1,097)
Prepaid and other current assets	(273)	3,331
Accounts payable and accrued expenses	4,700	10,231
Deferred revenues	17,204	(44,376)
Other assets and liabilities	1,970	3,535
Net cash provided by operating activities	110,634	71,688
Cash flows from investing activities:		
Acquisition of Lumara Health, net of acquired cash	—	562
Proceeds from sales or maturities of investments	42,500	6,464
Purchase of investments	(98,795)	(291,085)
Capital expenditures, net of proceeds from sale of assets	(2,587)	(677)
Net cash used in investing activities	(58,882)	(284,736)
Cash flows from financing activities:		
Proceeds from the issuance of common stock, net of underwriting discount and other expenses	—	188,864
Long-term debt principal payments	(8,752)	(16,686)
Payment of contingent consideration	(149)	(190)
Payments for repurchases of common stock	(20,000)	—
Proceeds from the exercise of stock options	809	11,648
Proceeds from the issuance of common stock under ESPP	760	—
Payments of employee tax withholding related to equity-based compensation	(2,015)	—

Net cash (used in) provided by financing activities	(29,347)	183,636
Net increase (decrease) in cash and cash equivalents	22,405	(29,412)
Cash and cash equivalents at beginning of the period	228,705	119,296
Cash and cash equivalents at end of the period	$ 251,110	$ 89,884

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

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AMAG PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

A. DESCRIPTION OF BUSINESS

AMAG Pharmaceuticals, Inc., a Delaware corporation, was founded in 1981. We are a biopharmaceutical company focused on developing and delivering important therapeutics, conducting clinical research in areas of unmet need and creating education and support programs for the patients and families we serve. We have a diverse portfolio of products and services with a focus on maternal health, anemia management and cancer supportive care, including our product Makena® (hydroxyprogesterone caproate injection), which we acquired in November 2014, services related to the collection, processing and storage of umbilical cord blood stem cell and cord tissue units (the "CBR Services") operated through Cord Blood Registry® ("CBR"), which we acquired in August 2015, our product Feraheme® (ferumoxytol) for intravenous ("IV") use and MuGard® Mucoadhesive Oral Wound Rinse.

Throughout this Quarterly Report on Form 10-Q, AMAG Pharmaceuticals, Inc. and our consolidated subsidiaries are collectively referred to as "the Company," "AMAG," "we," "us," or "our."

B. BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

These condensed consolidated financial statements are unaudited and, in the opinion of management, include all adjustments necessary for a fair statement of the financial position and results of operations of the Company for the interim periods presented. Such adjustments consisted only of normal recurring items. The year-end condensed consolidated balance sheet data was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("GAAP").

In accordance with GAAP for interim financial reports and the instructions for Form 10-Q and the rules of the Securities and Exchange Commission, certain information and footnote disclosures normally included in annual financial statements have been condensed or omitted. Our accounting policies are described in the Notes to the Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2015 (our "Annual Report"). Interim results are not necessarily indicative of the results of operations for the full year. These interim financial statements should be read in conjunction with our Annual Report.

Principles of Consolidation

The accompanying condensed consolidated financial statements include our accounts and the accounts of our wholly-owned subsidiaries. Our results of operations for the three and six months ended June 30, 2016, include the results of CBR, which we acquired in August 2015. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates and Assumptions

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the related disclosure of contingent assets and liabilities. The most significant estimates and assumptions are used to determine amounts and values of, but are not limited to: revenue recognition related to product sales and services revenue; product sales allowances and accruals; allowance for doubtful accounts; investments; inventory; acquisition date fair value and subsequent fair value estimates used to assess impairment of long-lived assets, including goodwill, in-process research and development ("IPR&D") and other intangible assets; contingent consideration; debt obligations; certain accrued liabilities, including clinical trial accruals and restructuring liabilities; income taxes and equity-based compensation expense. Actual results could differ materially from those estimates.

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Concentrations and Significant Customer Information

Financial instruments which potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents, investments, and accounts receivable. As of June 30, 2016, our cash, cash equivalents and investments amounted to approximately $546.5 million. We currently hold our excess cash primarily in institutional money market funds, corporate debt securities, U.S. treasury and government agency securities, commercial paper and municipal securities. As of June 30, 2016, approximately $19.0 million of our total $251.1 million cash and cash equivalents balance was invested in institutional money market funds.

Our operations are located entirely within the U.S. We focus primarily on developing, manufacturing, and commercializing Makena and Feraheme and marketing and selling the CBR Services. We perform ongoing credit evaluations of our product sales customers and generally do not require collateral. The following table sets forth customers or partners who represented 10% or more of our total revenues for the three and six months ended June 30, 2016 and 2015:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2016		2015		2016		2015	
AmerisourceBergen Drug Corporation	22	%	19	%	23	%	24	%
Caremark LLC (Specialty Pharmacy)	10	%	<10	%	10	%	<10	%
McKesson Corporation	<10	%	<10	%	<10	%	10	%
Takeda Pharmaceuticals Company Limited	—	%	32	%	—	%	24	%

Revenues from outside of the U.S. amounted to approximately 24% of our total revenues for the six months ended June 30, 2015 and were principally related to deferred Feraheme revenue recognized in connection with the termination of our license, development and commercialization agreement (the “Takeda Agreement”) with Takeda Pharmaceutical Company Limited (“Takeda”), which is headquartered in Japan. Substantially all of the revenue generated during the six months ended June 30, 2016 was generated within the U.S.

Our net accounts receivable primarily represented amounts due for products sold directly to wholesalers, distributors, and specialty pharmacies and amounts due for CBR Services sold directly to consumers. Accounts receivable for our products and services are recorded net of reserves for estimated chargeback obligations, prompt payment discounts and any allowance for doubtful accounts.

Customers which represented greater than 10% of our accounts receivable balance as of June 30, 2016 and December 31, 2015, respectively, were as follows:

	June 30, 2016		December 31, 2015	
AmerisourceBergen Drug Corporation	13	%	43	%
Caremark LLC (Specialty Pharmacy)	11	%	<10	%

We are currently dependent on a single supplier for Feraheme drug substance (produced in two separate facilities) and finished drug product. In addition, we rely on single sources for certain materials required to support the CBR

Services. We would be exposed to a significant loss of revenue from the sale of our products and services if our suppliers and/or manufacturers could not fulfill demand for any reason.

Revenue Recognition

Our primary sources of revenue during the reporting periods were: (a) product revenues from Makena and Feraheme; (b) service revenues associated with the CBR Services; and (c) license fees, collaboration and other revenues, which primarily included milestone payments received from our collaboration agreements, royalties received from our license agreements, and international product revenues of Feraheme derived from our former collaboration agreement with Takeda. Revenue is recognized when the following criteria are met:

· Persuasive evidence of an arrangement exists;

· Delivery of product has occurred or services have been rendered;

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· The sales price charged is fixed or determinable; and

· Collection is reasonably assured.

Product Revenue

Our U.S. product sales, which primarily represented revenues from Makena and Feraheme for the three and six months ended June 30, 2016 and 2015, were offset by provisions for allowances and accruals as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Gross U.S. product sales	$ 176,581	$ 136,589	$ 328,773	$ 262,106
Provision for U.S. product sales allowances and accruals:				
Contractual adjustments	53,938	39,251	99,519	74,385
Governmental rebates	19,660	12,686	36,707	25,654
Total provision for U.S. product sales allowances and accruals	73,598	51,937	136,226	100,039
U.S. product sales, net	$ 102,983	$ 84,652	$ 192,547	$ 162,067

We recognize U.S. product sales net of certain allowances and accruals in our condensed consolidated statement of operations at the time of sale. Our contractual adjustments include provisions for returns, pricing and prompt payment discounts, as well as wholesaler distribution fees, rebates to hospitals that qualify for 340B pricing, and volume-based and other commercial rebates. Governmental rebates relate to our reimbursement arrangements with state Medicaid programs.

We did not materially adjust our product sales allowances and accruals during the three or six months ended June 30, 2016. During the three months ended June 30, 2015, we reduced our Makena related Medicaid and chargeback reserves, which were initially recorded at the time of the Lumara acquisition, by $4.0 million and $1.9 million, respectively. These adjustments were recorded to goodwill during the quarter ended June 30, 2015, as it was within one year of the Lumara Health acquisition date. If we determine in future periods that our actual experience is not indicative of our expectations, if our actual experience changes, or if other factors affect our estimates, we may be required to adjust our allowances and accruals estimates, which would affect our net product sales in the period of the adjustment and could be significant.

Multiple Element Arrangements

For multiple element arrangements, we allocate revenue to all deliverables based on their relative selling prices. We determine the selling price to be used for allocating revenue to deliverables as follows: (a) vendor specific objective evidence; (b) third-party evidence of selling price and (c) the best estimate of the selling price. Vendor specific objective evidence generally exists only when we sell the deliverable separately and it is the price actually charged by us for that deliverable. Any discounts given to the customer are allocated by applying the relative selling price

method.

Amounts received prior to satisfying the above revenue recognition criteria are recorded as deferred revenue in our condensed consolidated balance sheets. Deferred revenue associated with our service revenues includes (a) amounts collected in advance of unit processing and (b) amounts associated with unearned storage fees collected at the beginning of the storage contract term, net of allocated discounts. Amounts not expected to be recognized within the next year are classified as long-term deferred revenues.

Service Revenue

Our service revenues for the CBR Services include the following two deliverables: (a) enrollment, including the provision of a collection kit and cord blood and cord tissue unit processing, which are delivered at the beginning of the relationship (the “processing services”), with revenue for this deliverable recognized after the collection and successful processing of the cord blood and cord tissue; and (b) the storage of newborn cord blood and cord tissue units (the “storage services”), for either an annual fee or a prepayment of 18 years or the lifetime of the newborn donor (the “lifetime option”), with revenue for this deliverable recognized ratably over the applicable storage period. For the

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lifetime option, storage fees are not charged during the lifetime of the newborn donor. However, if the newborn donor dies and his/her legal guardian chooses to continue to store the newborn stem cells and/or cord tissue, the number of remaining years of storage covered by the lifetime option without additional charge is calculated by taking the average of male and female life expectancies based on lifetime actuarial tables published by the Social Security Administration in effect at the time of the newborn's birth and subtracting the age at death. As there are other vendors who provide processing services and storage services at separately stated list prices, the processing services and storage services, including the first year storage, each have standalone value to the customer, and therefore represent separate deliverables. The selling price for the processing services is estimated based on the best estimate of selling price because we do not have vendor specific objective evidence or third-party evidence of selling price for these elements. The selling price for the storage services is determined based on vendor specific objective evidence as we have standalone renewals to support the selling price.

Reclassifications

Certain amounts in the prior period have been reclassified in order to conform to the current period presentation. In accordance with Accounting Standards Update ("ASU") No. 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs, which we adopted in the first quarter of 2016, we reclassified total debt issuance costs related to our outstanding debt obligations from other long-term assets to the carrying amount of our debt, as a direct deduction, in our condensed consolidated balance sheets as of December 31, 2015. See Note S, "Recently Issued and Proposed Accounting Pronouncements" for additional information.

C. BUSINESS COMBINATIONS

As part of our strategy to expand our product and service portfolio, in August 2015, we acquired CBR and the CBR Services and in November 2014, we acquired Lumara Health and its product Makena. In addition, in June 2013, we entered into a license agreement (the "MuGard License Agreement") with Abeona Therapeutics, Inc. ("Abeona") pursuant to which we acquired the U.S. commercial rights to MuGard for the management of oral mucositis and stomatitis (the "MuGard Rights").

CBR Acquisition

On August 17, 2015 (the "CBR Acquisition Date"), we acquired CBR for $700.0 million in cash consideration, subject to estimated working capital, indebtedness and other adjustments. We believe CBR is a strong strategic fit for our growing business and offers a unique opportunity to reach a broader population of expectant mothers who may benefit from our product offerings in the maternal health space, including Makena.

We accounted for the acquisition of CBR as a business combination using the acquisition method of accounting. Under the acquisition method of accounting, the total purchase price of an acquisition is allocated to the net tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values as of the date of acquisition. We have made a preliminary allocation of the purchase price to the net tangible and intangible assets acquired and liabilities assumed, based on available information and various assumptions we believe are reasonable, with the remaining purchase price recorded as goodwill.

The following table summarizes the components of the total purchase price paid for CBR, as adjusted for the final net working capital, indebtedness and other adjustments (in thousands):

	Total Acquisition Date Fair Value
Cash consideration	$ 700,000
Estimated working capital, indebtedness and other adjustments	(17,837)
Purchase price paid at closing	682,163
Cash paid on finalization of the net working capital, indebtedness and other adjustments	193
Total purchase price	$ 682,356

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The following table summarizes the preliminary fair values assigned to the CBR assets acquired and liabilities assumed by us along with the resulting goodwill at the CBR Acquisition Date, as adjusted for certain measurement period adjustments for CBR recorded since the CBR Acquisition Date (in thousands):

	Total Acquisition Date Fair Value
Accounts receivable	$ 8,660
Inventories	3,825
Prepaid and other current assets	8,480
Restricted cash - short-term	30,752
Property, plant and equipment	29,401
Customer relationships	297,000
Trade name and trademarks	65,000
Favorable lease asset	358
Deferred income tax assets	5,062
Other long-term assets	496
Accounts payable	(2,853)
Accrued expenses	(13,770)
Deferred revenues - short-term	(3,100)
Payable to former CBR shareholders	(37,947)
Deferred income tax liabilities	(149,873)
Other long-term liabilities	(506)
Total estimated identifiable net assets	$ 240,985
Goodwill	441,371
Total	$ 682,356

During the six months ended June 30, 2016, we recorded measurement period adjustments related to the filing of pre-acquisition federal and state income tax returns and the finalization of other tax-related matters. These measurement period adjustments resulted in a net increase to goodwill of $0.3 million and have been reflected as current period adjustments in the first half of 2016 in accordance with the guidance in ASU 2015-16, Business Combinations (Topic 805): Simplifying the Accounting for Measurement-Period Adjustments (“ASU 2015-16”). Any remaining adjustments to the preliminary fair value of these acquired assets and liabilities assumed will be made as soon as practicable but not later than one year from the CBR Acquisition Date.

The gross contractual amount of accounts receivable at the CBR Acquisition Date of $11.7 million was adjusted to its fair value of $8.7 million. The fair value amounts for CBR’s customer relationships, trade names and trademarks were determined based on assumptions that market participants would use in pricing an asset, based on the most advantageous market for the assets (i.e., its highest and best use). We determined the fair value of the customer relationships, using an income approach, which is a valuation technique that provides an estimate of the fair value of an asset based on market participant expectations of the cash flows an asset would generate over its remaining life. Some of the more significant assumptions used in the income approach from the perspective of a market participant include the estimated net cash flows for each year for the identifiable intangible asset, the discount rate that measures the risk inherent in each cash flow stream, as well as other factors. The fair value of the trade names and trademarks

was determined using the relief from royalty method, which is also an income approach. We believe the fair values assigned to the CBR customer relationships, and the trade names and trademarks are based upon reasonable estimates and assumptions given available facts and circumstances as of the CBR Acquisition Date. If these assets are not successful, sales and profitability may be adversely affected in future periods, and as a result, the value of the assets may become impaired.

The customer relationships will be amortized to selling, general and administrative expenses based on an economic consumption model over an expected useful life of approximately 20 years. The trade names and trademark intangible asset is deemed to be an indefinite-lived asset, which is not amortized but will be subject to periodic assessments of impairment.

Based on the fair value adjustments primarily related to deferred revenue and identifiable intangible assets acquired, we recorded a net deferred tax liability of $144.8 million in acquisition accounting using a combined federal and state statutory income tax rate of 37%. The net deferred tax liability represents the $149.9 million of deferred tax liabilities

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recorded in acquisition accounting, primarily related to the fair value adjustments to CBR's deferred revenue and identifiable intangible assets, partially offset by $5.1 million of deferred tax assets acquired from CBR. These tax estimates are preliminary and subject to change based on, among other things, any adjustments to management's determination of the fair values of the tangible and identifiable intangible assets acquired and liabilities assumed by jurisdiction and management's assessment of the combined company's ability to utilize the future benefits from acquired and legacy deferred tax assets.

Lumara Health Acquisition

On November 12, 2014 (the "Lumara Health Acquisition Date"), we acquired Lumara Health at which time Lumara Health became our wholly-owned subsidiary. By virtue of the acquisition, we acquired Lumara Health's existing commercial product, Makena. Under the terms of the acquisition agreement, we acquired 100% of the equity ownership of Lumara Health, excluding the assets and liabilities of the Women's Health Division and certain other assets and liabilities, which were divested by Lumara Health prior to closing, for $600.0 million in cash, subject to certain net working capital and other adjustments, and issued approximately 3.2 million shares of our common stock, having a value of approximately $112.0 million at the time of closing, to the holders of common stock of Lumara Health. The acquisition of Lumara Health provided a strategic commercial entry into the maternal health business. The addition of Makena, the only FDA-approved therapy to reduce the risk of preterm birth in certain at-risk women, added a complementary commercial platform to our portfolio and transformed us into a multi-product specialty pharmaceutical company.

We agreed to pay additional merger consideration, up to a maximum of $350.0 million, based upon the achievement of certain net sales milestones of Makena for the period from December 1, 2014 through December 31, 2019. This contingent consideration is recorded as a liability and measured at fair value based upon significant unobservable inputs. See Note E, "Fair Value Measurements," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q and Note C, "Business Combinations," to the Financial Statements in our Annual Report for additional information.

The following table summarizes the components of the total purchase price paid for Lumara Health, as adjusted for the final net working capital and other adjustments (in thousands):

	Total Acquisition Date Fair Value
Cash consideration	$ 600,000
Fair value of AMAG common stock issued	111,964
Fair value of contingent milestone payments	205,000
Estimated working capital and other adjustments	821
Purchase price paid at closing	917,785
Less:	
Cash received on finalization of the net working capital and other adjustments	(562)
Cash acquired from Lumara Health	(5,219)
Total purchase price	$ 912,004

At the closing, $35.0 million of the cash consideration was contributed to a separate escrow fund to secure the former Lumara Health security holders' obligations to indemnify us for certain matters, including breaches of representations

and warranties, covenants included in the Lumara Health acquisition agreement, payments made by us to dissenting stockholders, specified tax claims, excess parachute claims, and certain claims related to the Women's Health Division of Lumara Health, which was divested by Lumara Health prior to the closing. As of June 30, 2016, the funds held in escrow were substantially distributed to the former Lumara Health security holders.

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The following table summarizes the fair values assigned to assets acquired and liabilities assumed by us along with the resulting goodwill at the Lumara Health Acquisition Date, as adjusted for certain measurement period adjustments for Lumara Health recorded during 2015 (in thousands):

	Total Acquisition Date Fair Value
Accounts receivable	$ 36,852
Inventories	30,300
Prepaid and other current assets	3,322
Deferred income tax assets	102,355
Property and equipment	60
Makena base technology	797,100
IPR&D	79,100
Restricted cash - long term	1,997
Other long-term assets	3,412
Accounts payable	(3,807)
Accrued expenses	(36,561)
Deferred income tax liabilities	(295,676)
Other long-term liabilities	(4,563)
Total estimated identifiable net assets	$ 713,891
Goodwill	198,113
Total	$ 912,004

During 2015, we finalized the fair values assigned to the assets acquired and liabilities assumed by us at the Lumara Health Acquisition Date. See Note C, “Business Combinations,” to the Financial Statements in our Annual Report for additional information.

Goodwill

In connection with the CBR acquisition, we recognized $441.4 million of goodwill, primarily due to the synergies expected from combining our operations with CBR and to deferred tax liabilities related to fair value adjustments of intangible assets and deferred revenue. In connection with the Lumara Health acquisition, we recognized $198.1 million of goodwill, primarily due to the net deferred tax liabilities recorded on the fair value adjustments to Lumara Health’s inventories and identifiable intangible asset. The $639.5 million of goodwill resulting from the CBR and Lumara Health acquisitions is not deductible for income tax purposes.

D. INVESTMENTS

As of June 30, 2016 and December 31, 2015, our investments equaled $295.4 million and $237.6 million, respectively, and consisted of securities classified as available-for-sale in accordance with accounting standards which provide guidance related to accounting and classification of certain investments in debt and equity securities.

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The following is a summary of our investments as of June 30, 2016 and December 31, 2015 (in thousands):

	June 30, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities				
Due in one year or less	$ 121,864	$ 30	$ (40)	$ 121,854
Due in one to three years	131,564	846	(36)	132,374
U.S. treasury and government agency securities				
Due in one year or less	1,044	1	—	1,045
Due in one to three years	4,895	46	—	4,941
Commercial paper				
Due in one year or less	32,644	—	—	32,644
Municipal securities				
Due in one year or less	2,500	1	—	2,501
Total investments	$ 294,511	$ 924	$ (76)	$ 295,359

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities				
Due in one year or less	$ 27,964	$ —	$ (38)	$ 27,926
Due in one to three years	173,652	3	(904)	172,751
Commercial paper				
Due in one year or less	34,452	2	(5)	34,449
Municipal securities				
Due in one year or less	2,500	—	—	2,500
Total investments	$ 238,568	$ 5	$ (947)	$ 237,626

Impairments and Unrealized Gains and Losses on Investments

We did not recognize any other-than-temporary impairment losses in our condensed consolidated statements of operations related to our securities during the three or six months ended June 30, 2016 and 2015. We considered various factors, including the length of time that each security was in an unrealized loss position and our ability and intent to hold these securities until the recovery of their amortized cost basis occurs. As of June 30, 2016, none of our investments has been in an unrealized loss position for more than one year. Future events may occur, or additional information may become available, which may cause us to identify credit losses where we do not expect to receive

cash flows sufficient to recover the entire amortized cost basis of a security and may necessitate the recording of future realized losses on securities in our portfolio. Significant losses in the estimated fair values of our investments could have a material adverse effect on our earnings in future periods.

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E. FAIR VALUE MEASUREMENTS

The following tables represent the fair value hierarchy as of June 30, 2016 and December 31, 2015, for those assets and liabilities that we measure at fair value on a recurring basis (in thousands):

	Fair Value Measurements at June 30, 2016 Using:			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	$ 19,029	$ 19,029	$ —	$ —
Corporate debt securities	254,228	—	254,228	—
U.S. treasury and government agency securities	5,986	—	5,986	—
Commercial paper	32,644	—	32,644	—
Municipal securities	2,501	—	2,501	—
Total Assets	$ 314,388	$ 19,029	$ 295,359	$ —
Liabilities:				
Contingent consideration - Lumara Health	$ 221,449	$ —	$ —	$ 221,449
Contingent consideration - MuGard	2,360	—	—	2,360
Total Liabilities	$ 223,809	$ —	$ —	$ 223,809

	Fair Value Measurements at December 31, 2015 Using:			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	$ 73,676	$ 73,676	$ —	$ —
Corporate debt securities	200,677	—	200,677	—
Commercial paper	34,449	—	34,449	—
Municipal securities	2,500	—	2,500	—
Total Assets	$ 311,302	$ 73,676	$ 237,626	$ —
Liabilities:				
Contingent consideration - Lumara Health	$ 214,895	$ —	$ —	$ 214,895
Contingent consideration - MuGard	7,664	—	—	7,664
Total Liabilities	$ 222,559	$ —	$ —	$ 222,559

Investments

Our money market funds are classified as Level 1 assets under the fair value hierarchy as these assets have been valued using quoted market prices in active markets and do not have any restrictions on redemption. Our investments are classified as Level 2 assets under the fair value hierarchy as these assets were primarily determined from independent pricing services, which normally derive security prices from recently reported trades for identical or similar securities, making adjustments based upon other significant observable market transactions. At the end of each reporting period, we perform quantitative and qualitative analyses of prices received from third parties to determine whether prices are reasonable estimates of fair value. After completing our analyses, we did not adjust or override any fair value measurements provided by our pricing services as of June 30, 2016. In addition, there were no transfers or reclassifications of any securities between Level 1 and Level 2 during the six months ended June 30, 2016.

Contingent consideration

There were no contingent consideration obligations related to the CBR acquisition. The fair value measurements of contingent consideration obligations and the related intangible assets arising from business combinations are classified as

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Level 3 assets under the fair value hierarchy as these assets have been valued using unobservable inputs. These inputs include: (a) the estimated amount and timing of projected cash flows; (b) the probability of the achievement of the factors on which the contingency is based; and (c) the risk adjusted discount rate used to present value the probability weighted cash flows. Significant increases or decreases in any of those inputs in isolation could result in a significantly lower or higher fair value measurement.

The following table presents a reconciliation of contingent consideration obligations related to the acquisition of Lumara Health and the MuGard Rights (in thousands):

Balance as of December 31, 2015	$ 222,559
Payments made	(149)
Adjustments to fair value of contingent consideration	1,399
Balance as of June 30, 2016	$ 223,809

The $1.4 million of adjustments to the fair value of the contingent consideration liability during the six months ended June 30, 2016 were due to a $6.6 million increase to the Makena contingent consideration and a $5.2 million decrease to the MuGard contingent consideration. During the second quarter of 2016, we revised our forecast of total projected net sales for MuGard and reassessed the fair value of the contingent consideration liability related to the MuGard Rights. As a result, we reduced our MuGard-related contingent consideration liability by $5.6 million. These adjustments were included in selling, general and administrative expenses in our condensed consolidated statements of operations. We have classified $98.3 million of the Makena contingent consideration and $0.4 million of the MuGard contingent consideration as short-term liabilities in our condensed consolidated balance sheet as of June 30, 2016. The $98.3 million Makena contingent consideration reflects a potential $100.0 million milestone payment expected to be paid in 2016 to the former Lumara Health security holders based on the achievement of a net sales milestone of Makena.

The fair value of the contingent milestone payments payable by us to the former stockholders of Lumara Health was determined based on our probability-adjusted discounted cash flows estimated to be realized from the net sales of Makena from December 1, 2014 through December 31, 2019. The cash flows were discounted at a rate of 5%, which we believe is reasonable given the estimated likelihood of the pay-out. As of June 30, 2016, the total undiscounted milestone payment amounts we could pay in connection with the Lumara Health acquisition was $350.0 million over the period from December 1, 2014 to December 31, 2019.

The fair value of the contingent royalty payments payable by us to Abeona was determined based on various market factors, including an analysis of estimated sales using a discount rate of approximately 9%. As of June 30, 2016, we estimate that the undiscounted royalty amounts we could pay under the MuGard License Agreement, based on current projections, may range from $2.0 million to $6.0 million over the remainder of the ten year period which commenced on June 6, 2013, the acquisition date, which is our best estimate of the period over which we expect the majority of the asset’s cash flows to be derived.

We believe the estimated fair values of Lumara Health and the MuGard Rights are based on reasonable assumptions, however, our actual results may vary significantly from the estimated results.

Debt

We estimate the fair value of our debt obligations by using quoted market prices obtained from third-party pricing services, which is classified as a Level 2 input. As of June 30, 2016, the estimated fair value of our 2023 Senior Notes, Convertible Notes and 2015 Term Loan Facility (each as defined below) was $443.0 million, $220.5 million and $333.5 million, respectively, which differed from their carrying values. See Note Q, "Debt" for additional information on our debt obligations.

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F. INVENTORIES

Our major classes of inventories were as follows as of June 30, 2016 and December 31, 2015 (in thousands):

	June 30, 2016	December 31, 2015
Raw materials	$ 14,987	$ 19,673
Work in process	3,058	1,985
Finished goods	21,519	18,987
Total inventories	$ 39,564	$ 40,645

G. PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment, net consisted of the following as of June 30, 2016 and December 31, 2015 (in thousands):

	June 30, 2016	December 31, 2015
Land	$ 700	$ 700
Land improvements	300	300
Building and improvements	9,500	9,500
Computer equipment and software	13,854	13,193
Furniture and fixtures	1,985	1,725
Leasehold improvements	3,364	1,717
Laboratory and production equipment	5,792	5,683
Construction in progress	1,038	786
	36,533	33,604
Less: accumulated depreciation	(9,360)	(4,879)
Property, plant and equipment, net	$ 27,173	$ 28,725

H. GOODWILL AND INTANGIBLE ASSETS, NET

Goodwill

Our $639.5 million goodwill balance consisted of $198.1 million of goodwill acquired through the November 2014 Lumara Health acquisition and $441.4 million acquired through the August 2015 CBR acquisition. During the six months ended June 30, 2016, the CBR goodwill increased by $0.3 million related to measurement period net tax adjustments. These measurement period adjustments have been reflected as current period adjustments in accordance with ASU 2015-16, discussed below in Note S, “Recently Issued and Proposed Accounting Pronouncements.” As of June 30, 2016, we had no accumulated impairment losses related to goodwill.

Intangible Assets

As of June 30, 2016 and December 31, 2015, our identifiable intangible assets consisted of the following (in thousands):

	June 30, 2016				December 31, 2015		
	Cost	Accumulated Amortization	Impairments	Net	Cost	Accumulated Amortization	Net
Amortizable intangible assets:							
Makena base technology	$ 797,100	$ 86,017	$ —	$ 711,083	$ 797,100	$ 56,540	$ 740,560
CBR customer relationships	297,000	7,325	—	289,675	297,000	1,061	295,939
Favorable lease	358	119	239	—	358	63	295
MuGard Rights	16,893	1,169	15,724	—	16,893	1,016	15,877
	1,111,351	94,630	15,963	1,000,758	1,111,351	58,680	1,052,671
Indefinite-lived intangible assets:							
Makena IPR&D	79,100	—	—	79,100	79,100	—	79,100
CBR trade names and trademarks	65,000	—	—	65,000	65,000	—	65,000
Total intangible assets	$ 1,255,451	$ 94,630	$ 15,963	$ 1,144,858	$ 1,255,451	$ 58,680	$ 1,196,771

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As of June 30, 2016, the weighted average remaining amortization period for our finite-lived intangible assets was approximately nine years.

The Makena base technology and IPR&D intangible assets were acquired in November 2014 in connection with our acquisition of Lumara Health. Amortization of the Makena base technology asset is being recognized using an economic consumption model over twenty years, which we believe is an appropriate amortization period due to the estimated economic lives of the product rights and related intangibles.

The CBR intangible assets (the CBR customer relationships, favorable lease and trade names and trademarks) were acquired in August 2015 in connection with our acquisition of CBR. Amortization of the CBR customer relationships is being recognized using an estimated useful life of twenty years, which we believe is an appropriate amortization period due to the estimated economic lives of the CBR intangible assets. The favorable lease was being amortized on a straight-line basis over the remaining term of the lease. On May 4, 2016, we entered into a sublease arrangement for a portion of our CBR office space in San Bruno, California with a sublessee at a rate lower than the market rate used to determine the favorable lease intangible asset. We reevaluated the favorable lease asset based on the negotiated sublease rate, resulting in an impairment charge for the full $0.2 million net intangible asset in the second quarter of 2016.

The MuGard Rights were acquired from Abeona in June 2013. Amortization of the MuGard Rights was being recognized using an economic consumption model over ten years, which represented our best estimate of the period over which we expected the majority of the asset’s cash flows to be derived. Based on events in the second quarter of 2016, we determined that reimbursement coverage for MuGard by government payors was unlikely based on recent interactions with those agencies and assessed the MuGard Rights for potential impairment. From this assessment, we concluded that based on the lack of broad reimbursement and insurance coverage for MuGard and the resulting decrease in expected revenues and cash flows, the projected undiscounted cash flows were less than the book value, indicating impairment of this intangible asset. As a result of an analysis of the fair value of the net MuGard Rights intangible asset as compared to its recorded book value, we recognized an impairment charge for the full $15.7 million net intangible asset in the second quarter of 2016.

See Note C, “Business Combinations,” for additional information on our intangible assets.

Total amortization expense for the six months ended June 30, 2016 and 2015, was $36.0 million and $24.9 million, respectively. Amortization expense for Makena and MuGard is recorded in cost of product sales in our condensed consolidated statements of operations. Amortization expense for the CBR related intangibles is recorded in selling, general and administrative expenses in our condensed consolidated statements of operations. We expect amortization expense related to our finite-lived intangible assets to be as follows (in thousands):

Period	Estimated Amortization Expense
Remainder of Year Ending December 31, 2016	$ 43,446
Year Ending December 31, 2017	90,826
Year Ending December 31, 2018	97,992
Year Ending December 31, 2019	68,993
Year Ending December 31, 2020	46,271
Thereafter	653,230

Total	$ 1,000,758

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I. CURRENT AND LONG-TERM LIABILITIES

Accrued Expenses

Accrued expenses consisted of the following as of June 30, 2016 and December 31, 2015 (in thousands):

	June 30, 2016	December 31, 2015
Commercial rebates, fees and returns	$ 52,860	$ 45,161
Professional, license, and other fees and expenses	24,600	27,070
Interest expense	16,926	18,411
Salaries, bonuses, and other compensation	12,106	12,838
Restructuring expense	1,107	2,883
Total accrued expenses	$ 107,599	$ 106,363

Deferred Revenues

Our deferred revenues balance as of June 30, 2016 was primarily related to our CBR service revenues and includes: (a) amounts collected in advance of unit processing and (b) amounts associated with unearned storage fees collected at the beginning of the storage contract term, net of allocated discounts.

J. INCOME TAXES

The following table summarizes our effective tax rate and income tax expense (benefit) for the three and six months ended June 30, 2016 and 2015 (in thousands except for percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Effective tax rate	199 %	35 %	14 %	34 %
Income tax expense (benefit)	$ 1,196	$ 18,035	$ (1,344)	$ 23,643

For the three and six months ended June 30, 2016, we recognized an income tax expense of $1.2 million and an income tax benefit $1.3 million, respectively, representing an effective tax rate of 199% and 14%, respectively. The difference between the expected statutory federal tax rate of 35% and the 199% effective tax rate for for the three months ended June 30, 2016, was primarily attributable to the impact of state income taxes, non-deductible stock compensation, non-deductible contingent consideration expense associated with Lumara Health, and other non-deductible expenses, partially offset by federal research and development and orphan drug tax credits. The effective tax rate for the three months ended June 30, 2016 reflected the significance of these permanent differences in relation to the pre-tax income for the three months ended June 30, 2016. The difference between the expected statutory federal tax rate of 35% and the 14% effective tax rate for the six months ended June 30, 2016, was primarily attributable to the impact of state income taxes and non-deductible stock compensation. The effective tax rates for the three and six months ended June 30, 2016, were also impacted by the impairment of the net intangible asset for the

MuGard Rights and related contingent consideration fair value adjustment. We recorded a net tax benefit in the second quarter for these discrete events at a combined federal and state statutory income tax rate of 39%.

For the three and six months ended June 30, 2015, we recognized income tax expense of $18.0 million and $23.6 million, respectively, representing an effective tax rate of 35% and 34%, respectively. The difference between the expected statutory federal tax rate of 35% and the 34% effective tax rate for the six months ended June 30, 2015, was attributable to the impact of a valuation allowance release related to certain deferred tax assets, partially offset by the impact of state income taxes.

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K. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The table below presents information about the effects of net income (loss) of significant amounts reclassified out of accumulated other comprehensive income (loss) ("AOCI"), net of tax, associated with unrealized gains (losses) on securities during the three and six months ended June 30, 2016 and 2015 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Beginning balance	$ (3,273)	$ (3,549)	$ (4,205)	$ (3,617)
Other comprehensive income (loss) before reclassifications	215	(396)	1,147	(327)
Reclassification adjustment for (losses) gains included in net income (loss)	—	(3)	—	(4)
Ending balance	$ (3,058)	$ (3,948)	$ (3,058)	$ (3,948)

L. BASIC AND DILUTED NET INCOME (LOSS) PER SHARE

We compute basic net income (loss) per share by dividing net income (loss) by the weighted average number of common shares outstanding during the relevant period. Diluted net income (loss) per common share has been computed by dividing net income (loss) by the diluted number of common shares outstanding during the period. Except where the result would be antidilutive to net income (loss), diluted net income (loss) per common share would be computed assuming the impact of the conversion of the $200.0 million of 2.5% convertible senior notes due February 15, 2019 (the "Convertible Notes"), the exercise of outstanding stock options, the vesting of restricted stock units ("RSUs"), and the exercise of warrants.

We have a choice to settle the conversion obligation under the Convertible Notes in cash, shares or any combination of the two. Pursuant to certain covenants in our six-year $350.0 million term loan facility (the "2015 Term Loan Facility"), which we entered into in 2015 to partially fund the acquisition of CBR, we may be restricted from settling the conversion obligation in whole or in part with cash unless certain conditions in the 2015 Term Loan Facility are satisfied. We utilize the if converted method to reflect the impact of the conversion of the Convertible Notes. This method assumes the conversion of the Convertible Notes into shares of our common stock and reflects the elimination of the interest expense related to the Convertible Notes.

The dilutive effect of the warrants, stock options and RSUs has been calculated using the treasury stock method.

The components of basic and diluted net income (loss) per share for the three and six months ended June 30, 2016 and 2015, were as follows (in thousands, except per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net income (loss)	$ (596)	$ 33,258	$ (8,123)	$ 46,162
Weighted average common shares outstanding	34,223	30,636	34,481	28,934
Effect of dilutive securities:				

Stock options and RSUs	—	1,785	—	1,639
Warrants	—	3,378	—	2,836
Convertible 2.5% notes	—	7,382	—	7,382
Shares used in calculating dilutive net income (loss) per share	34,223	43,181	34,481	40,791
Net income (loss) per share:				
Basic	$ (0.02)	$ 1.09	$ (0.24)	$ 1.60
Diluted	$ (0.02)	$ 0.82	$ (0.24)	$ 1.23

The following table sets forth the potential common shares issuable upon the exercise of outstanding options, the vesting of RSUs, the exercise of warrants (prior to consideration of the treasury stock method), and the conversion of the

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Convertible Notes, which were excluded from our computation of diluted net income (loss) per share because their inclusion would have been anti-dilutive (in thousands):

	Three months ended June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Options to purchase shares of common stock	2,525	601	2,694	709
Shares of common stock issuable upon the vesting of RSUs	480	68	974	341
Warrants	7,382	—	7,382	—
Convertible 2.5% notes	7,382	—	7,382	—
Total	17,769	669	18,432	1,050

In connection with the issuance of the Convertible Notes, in February 2014, we entered into convertible bond hedges. The convertible bond hedges are not included for purposes of calculating the number of diluted shares outstanding, as their effect would be anti dilutive. The convertible bond hedges are generally expected, but not guaranteed, to reduce the potential dilution and/or offset the cash payments we are required to make upon conversion of the Convertible Notes.

M. EQUITY BASED COMPENSATION

We currently maintain four equity compensation plans, namely our Third Amended and Restated 2007 Equity Incentive Plan, as amended (the “2007 Plan”), our Amended and Restated 2000 Stock Plan (the “2000 Plan”), the Lumara Health Inc. Amended and Restated 2013 Incentive Compensation Plan (the “Lumara Health 2013 Plan”) and our 2015 Employee Stock Purchase Plan (“2015 ESPP”). All outstanding stock options granted under each of our equity compensation plans have an exercise price equal to the closing price of a share of our common stock on the grant date.

Our 2007 Plan was originally approved by our stockholders in November 2007, and succeeded our 2000 Plan, under which no further grants may be made. Any shares that remained available for issuance under the 2000 Plan as of the date of adoption of the 2007 Plan are included in the number of shares that may be issued under the 2007 Plan. Any shares subject to outstanding awards granted under the 2000 Plan that expire or terminate for any reason prior to exercise will be added to the total number of shares of our stock available for issuance under the 2007 Plan. The total number of shares issuable pursuant to awards under this plan is 6,995,325. As of June 30, 2016, there were 1,704,940 shares remaining available for issuance under the 2007 Plan, which excludes shares subject to outstanding awards under the 2000 Plan. All outstanding options under the 2007 Plan have either a seven or ten-year term and all outstanding options under the 2000 Plan have a ten-year term.

In November 2014, we assumed the Lumara Health 2013 Plan in connection with the acquisition of Lumara Health. The total number of shares issuable pursuant to awards under this plan as of the effective date of the acquisition and after taking into account any adjustments as a result of the acquisition, was 200,000 shares. As of June 30, 2016, there were 89,274 shares remaining available for issuance under the Lumara Health 2013 Plan, which are available for grants to certain employees, officers, directors, consultants, and advisors of AMAG and our subsidiaries who are newly-hired or who previously performed services for Lumara Health. All outstanding options under the Lumara Health 2013 Plan have a ten-year term.

In May 2015, our stockholders approved our 2015 ESPP, which authorizes the issuance of up to 200,000 shares of our common stock to eligible employees. The terms of the 2015 ESPP permit eligible employees to purchase shares (subject to certain plan and tax limitations) in semi-annual offerings through payroll deductions of up to an annual maximum of 10% of the employee's "compensation" as defined in the 2015 ESPP. Shares are purchased at a price equal to 85% of the fair market value of our common stock on either the first or last business day of the offering period, whichever is lower. Plan periods consist of six-month periods typically commencing June 1 and ending November 30 and commencing December 1 and ending May 31. As of June 30, 2016, 41,679 shares have been issued under our 2015 ESPP.

During the six months ended June 30, 2016, we also granted equity through inducement grants outside of these plans to certain employees to induce them to accept employment with us (collectively, "Inducement Grants"). The options were granted at an exercise price equal to the fair market value of a share of our common stock on the respective grant dates and will be exercisable in four equal annual installments beginning on the first anniversary of the respective grant

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dates. The RSU grants will vest in three equal annual installments beginning on the first anniversary of the respective grant dates. The foregoing grants were made pursuant to inducement grants outside of our stockholder approved equity plans as permitted under the NASDAQ Stock Market listing rules. We assessed the terms of these awards and determined there was no possibility that we would have to settle these awards in cash and therefore, equity accounting was applied.

Stock Options

The following table summarizes stock option activity for the six months ended June 30, 2016:

	2007 Equity Plan	2000 Equity Plan	2013 Lumara Equity Plan	Inducement Grants	Total
Outstanding at December 31, 2015	1,963,162	14,040	96,000	830,975	2,904,177
Granted	495,409	—	—	80,000	575,409
Exercised	(47,937)	—	—	—	(47,937)
Expired or terminated	(152,702)	—	(41,719)	(69,250)	(263,671)
Outstanding at June 30, 2016	2,257,932	14,040	54,281	841,725	3,167,978

Restricted Stock Units

The following table summarizes RSU activity for the six months ended June 30, 2016:

	2007 Equity Plan	2000 Equity Plan	2013 Lumara Equity Plan	Inducement Grants	Total
Outstanding at December 31, 2015	446,330	—	52,350	155,675	654,355
Granted	641,826	—	—	52,000	693,826
Vested	(186,521)	—	(16,749)	(43,998)	(247,268)
Expired or terminated	(68,704)	—	(7,571)	(5,500)	(81,775)
Outstanding at June 30, 2016	832,931	—	28,030	158,177	1,019,138

Equity based compensation expense

Equity based compensation expense for the three and six months ended June 30, 2016 and 2015 consisted of the following (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Cost of product sales	$ (44)	$ 54	$ 277	$ 95
Research and development	968	565	1,725	1,043
Selling, general and administrative	4,254	3,397	9,339	5,546
Total equity-based compensation expense	$ 5,178	$ 4,016	$ 11,341	$ 6,684
Income tax effect	(1,394)	(1,558)	(3,068)	(2,593)
After-tax effect of equity-based compensation expense	$ 3,784	$ 2,458	$ 8,273	$ 4,091

We reduce the compensation expense being recognized to account for estimated forfeitures, which we estimate based primarily on historical experience, adjusted for unusual events such as corporate restructurings, which may result in higher than expected turnover and forfeitures. Under current accounting guidance, forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

We have not recognized any excess tax benefits from equity-based compensation in additional paid-in capital because the excess tax benefits have not yet reduced cash taxes paid. Accordingly, there was no impact recorded in cash flows from financing activities or cash flows from operating activities as reported in the accompanying condensed consolidated statements of cash flows.

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N. STOCKHOLDERS' EQUITY

Share Repurchase Program

In January 2016, we announced that our board of directors authorized a program to repurchase up to $60.0 million in shares of our common stock. The repurchase program does not have an expiration date and may be suspended for periods or discontinued at any time. Under the program, we may purchase our stock from time to time at the discretion of management in the open market or in privately negotiated transactions. The number of shares repurchased and the timing of the purchases will depend on a number of factors, including share price, trading volume and general market conditions, along with working capital requirements, general business conditions and other factors. We may also from time to time establish a trading plan under Rule 10b5-1 of the Securities and Exchange Act of 1934 to facilitate purchases of our shares under this program. During the three and six months ended June 30, 2016, we repurchased and retired 511,744 and 831,744 shares of common stock, respectively, under this repurchase program for $12.4 million and $20.0 million, respectively, at an average purchase price of $24.30 and $24.05 per share, respectively.

Change in Stockholders' Equity

Total stockholders' equity decreased by $16.1 million during the six months ended June 30, 2016. This decrease was primairily driven by $8.1 million from our net loss, $20.0 million related to the repurchase of our securities under our stock repurchase program, partially offset by $0.8 million from the exercise of stock options, $0.8 million from the issuance of common stock under our 2015 ESPP, and $11.3 million related to equity-based compensation expense.

O. COMMITMENTS AND CONTINGENCIES

Commitments

Our long-term contractual obligations include commitments and estimated purchase obligations entered into in the normal course of business. These include commitments related to our facility leases, purchases of inventory and other purchases related to our products, debt obligations, and other purchase obligations.

Purchase Commitments

In connection with our acquisition of CBR, we have certain minimum purchase commitments associated with an agreement entered into by CBR prior to our acquisition. The remaining amount of minimum purchase commitments totaled $1.8 million as of June 30, 2016.

Contingencies

Legal Proceedings

We accrue a liability for legal contingencies when we believe that it is both probable that a liability has been incurred and that we can reasonably estimate the amount of the loss. We review these accruals and adjust them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and our views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in our accrued liabilities would be recorded in the period in which such determination is made. For certain matters referenced below, the liability is not probable or the amount cannot be reasonably estimated and, therefore, accruals have not been made. In addition, in accordance with the relevant authoritative guidance, for

any matters in which the likelihood of material loss is at least reasonably possible, we will provide disclosure of the possible loss or range of loss. If a reasonable estimate cannot be made, however, we will provide disclosure to that effect. We expense legal costs as they are incurred.

Sandoz Patent Infringement Lawsuit

On February 5, 2016, we received a Paragraph IV certification notice letter regarding an Abbreviated New Drug Application submitted to the FDA by Sandoz Inc. (“Sandoz”) requesting approval to engage in commercial manufacture, use and sale of a generic version of ferumoxytol. A generic version of Feraheme can be marketed only with the approval of the FDA of the respective application for such generic version. The Drug Price Competition and Patent Term Restoration Act of 1984, as amended, requires an applicant whose subject drug is a drug listed in the FDA publication,

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"Approved Drug Products with Therapeutic Equivalence Evaluations," also known as the "Orange Book," to notify the patent holder of their application and potential infringement of their patent rights. The Paragraph IV certification notice is required to contain a detailed factual and legal statement explaining the basis for the applicant's opinion that the proposed product does not infringe the subject patents, that such patents are invalid, or both. Receipt of the certification notice triggers a 45 day window during which a patent infringement suit may be filed in federal district court against the applicant seeking approval of a product. In its notice letter, Sandoz claims that our ferumoxytol patents are invalid, unenforceable and/or not infringed by Sandoz's manufacture, use, sale or offer for sale of the generic version. In March 2016, we initiated a patent infringement suit alleging that Sandoz' ANDA filing itself constituted an act of infringement and that if it is approved, the manufacture, use, offer for sale, sale or importation of Sandoz' ferumoxytol products would infringe our patents. By the filing of this complaint, the FDA is generally prohibited from granting approval of Sandoz' application until the earliest of 30 months from the date the FDA accepted the application for filing, the conclusion of litigation in the generic's favor, or expiration of the patent(s) (though such stay may be shortened or lengthened if either party fails to cooperate in the litigation). On May 2, 2016, Sandoz filed a response to our patent infringement suit. If the litigation is resolved in favor of the applicant or the challenged patent expires during the 30 month stay period, the stay is lifted and the FDA may thereafter approve the application based on the applicable standards for approval. Any future unfavorable outcome in this matter could negatively affect the magnitude and timing of future Feraheme revenues. We intend to vigorously enforce our intellectual property rights relating to ferumoxytol.

European Patent Organization Appeal

In July 2010, Sandoz filed with the European Patent Office (the "EPO") an opposition to a previously issued patent which covers ferumoxytol in EU jurisdictions. In October 2012, at an oral hearing, the Opposition Division of the EPO revoked this patent. We recorded a notice of appeal at the EPO in December 2012, which suspended the revocation of our patent. The oral proceedings for the appeal occurred in June 2015, where the decision revoking the patent was set aside and remitted back to the Opposition Division for further consideration. In June 2016, we elected not to continue to challenge the opposition at the EPO, which will result in the loss of our European patent rights for ferumoxytol. This decision was based on a number of factors, including the fact that we withdrew ferumoxytol from the EU market in 2015 and our strategic focus of resources on U.S.-based commercial efforts. The decision not to challenge the opposition will not affect the fact that in the event that we seek to obtain a new marketing authorization for ferumoxytol in the future, under EU regulations ferumoxytol may still be entitled to the remaining part of the eight years of data protection and ten years of market exclusivity granted at the date of its original approval, which we believe could create barriers to entry for any generic version of ferumoxytol into the EU market until sometime between 2020 and 2022.

Other

On July 20, 2015, the Federal Trade Commission (the "FTC") notified us that it is conducting an investigation into whether Lumara Health or its predecessor engaged in unfair methods of competition with respect to Makena or any hydroxyprogesterone caproate product. We have fully cooperated with the FTC and provided a thorough response to the FTC in August 2015 and are awaiting their review of our response. The FTC noted in its letter that the existence of the investigation does not indicate that the FTC has concluded that Lumara Health or its predecessor has violated the law and we believe that our contracts and practices comply with relevant law and policy, including the federal Drug Quality and Security Act (the "DQSA"), which was enacted in November 2013, and public statements from and enforcement actions by the FDA regarding its implementation of the DQSA. We have provided the FTC with a response that provides a brief overview of the DQSA for context, which we believe will be helpful, including: (a) how the statute outlined that large-scale compounding of products that are copies or near-copies of FDA-approved drugs (like Makena) is not in the interests of public safety; (b) our belief that the DQSA has had a significant impact on the compounding of hydroxyprogesterone caproate; and (c) how our contracts with former compounders allow those

compounders to continue to serve physicians and patients with respect to supplying medically necessary alternative/altered forms of hydroxyprogesterone caproate.

On or about April 6, 2016, we received Notice of a Lawsuit and Request to Waive Service of a Summons in a case entitled Plumbers' Local Union No. 690 Health Plan v. Actavis Group et. al. ("Plumbers' Union"), which was filed in the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania and, after removal to federal court, is now pending in the United States District Court for the Eastern District of Pennsylvania (Civ. Action No. 16-0065-AB). Thereafter, we were also made aware of a related complaint entitled Delaware Valley Health Care Coalition v. Actavis Group et. al. ("Delaware Valley"), which was filed with the Court of Common Pleas of Philadelphia County,

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First Judicial District of Pennsylvania District Court of Pennsylvania (Case ID: 160200806). The complaints name K-V Pharmaceutical Company ("KV") (Lumara Health's predecessor company), certain of its successor entities, subsidiaries and affiliate entities (the "Subsidiaries"), along with a number of other pharmaceutical companies. We acquired Lumara Health in November 2014, a year after KV emerged from bankruptcy protection, at which time it, along with its then existing subsidiaries, became our wholly-owned subsidiary. We have not been served with process or waived service of summons in either case. The actions are being brought alleging unfair and deceptive trade practices with regard to certain pricing practices that allegedly resulted in certain payers overpaying for certain of KV's generic products. On July 21, 2016, the Plaintiff in the Plumbers' Union case dismissed KV Pharmaceutical Company with prejudice to refiling. This resolves the claims against KV in this litigation and we continue to pursue dismissal of the Subsidiaries in the Plumbers' Union case as well as KV and the Subsidiaries in the Delaware Valley litigation on similar grounds. Because these remaining cases are in their earliest stages and we have not been served with process in either case, we are currently unable to predict the outcome or reasonably estimate the range of potential loss associated with this matter, if any.

We may periodically become subject to other legal proceedings and claims arising in connection with ongoing business activities, including claims or disputes related to patents that have been issued or that are pending in the field of research on which we are focused. Other than the above actions, we are not aware of any material claims against us as of June 30, 2016.

P. COLLABORATION, LICENSE AND OTHER STRATEGIC AGREEMENTS

Our commercial strategy includes expanding our portfolio through the in-license or acquisition of additional pharmaceutical products or companies, including revenue-generating commercial products and late-state development assets. As of June 30, 2016, we were a party to the following collaborations:

Velo

In July 2015, we entered into an option agreement with Velo Bio, LLC ("Velo"), a privately held life-sciences company that granted us an option to acquire the rights (the "DIF Rights") to an orphan drug candidate, digoxin immune fab ("DIF"), a polyclonal antibody in clinical development for the treatment of severe preeclampsia in pregnant women. We made an upfront payment of $10.0 million in the third quarter of 2015 for the option to acquire the DIF Rights. DIF has been granted both orphan drug and fast-track review designations by the FDA for use in treating severe preeclampsia. Under the option agreement, Velo will complete a Phase 2b/3a clinical study, which we expect to begin by the end of 2016. Following the conclusion of the DIF Phase 2b/3a study, we may terminate, or, for additional consideration, exercise or extend, our option to acquire the DIF Rights. If we exercise the option to acquire the DIF Rights, we would be responsible for additional costs in pursuing FDA approval, and would be obligated to pay certain milestone payments and single-digit royalties based on regulatory approval and commercial performance of the product to Velo. If we exercise the option, we will be responsible for payments totaling up to $65.0 million (including the payment of the option exercise price and the regulatory milestone payments) and up to an additional $250.0 million in sales milestone payments based on the achievement of annual sales milestones at targets ranging from $100.0 million to $900.0 million.

We have determined that Velo is a variable interest entity ("VIE") as it does not have enough equity to finance its activities without additional financial support. As we do not have the power to direct the activities of the VIE that most significantly affect its economic performance, which we have determined to be the Phase 2b/3a clinical study, we are not the primary beneficiary of and do not consolidate the VIE.

Antares

In September 2014, Lumara Health entered into a development and license agreement (the "Antares Agreement") with Antares Pharma, Inc. ("Antares"), which in connection with our acquisition of Lumara Health in November of 2014, grants us an exclusive, worldwide, royalty-bearing license, with the right to sublicense, to certain intellectual property rights, including know-how, patents and trademarks, to develop, use, sell, offer for sale and import and export an Antares' auto-injection system for use with hydroxyprogesterone caproate (the "Product"). In consideration for the license, to support joint meetings and a development strategy with the FDA, and for initial tooling and process validation, Lumara Health paid Antares an up-front payment in October 2014. Under the Antares Agreement, we are responsible for the clinical development and preparation, submission and maintenance of all regulatory applications in

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each country where we desire to market and sell the Product, including the U.S. We are required to pay royalties to Antares on net sales of the Product commencing on Product launch in a particular country until the Product is no longer developed, marketed, sold or offered for sale in such country ("Antares Royalty Term"). The royalty rates range from high single digit to low double digits and are tiered based on levels of net sales of Products and decrease after the expiration of licensed patents or where there are generic equivalents to the Product being sold in a particular country. Antares is the exclusive supplier of our requirements for the auto-injection system devices for the Products and Antares remains responsible for the manufacture and supply of the devices and assembly of the Product. We are responsible for the supply of the drug to be used in the assembly of the finished Product. The development and license agreement terminates at the end of the Antares Royalty Term, but is subject to early termination by us for convenience, by Antares if we do not submit regulatory filings in the U.S. by a certain date and by either party upon an uncured breach by or bankruptcy of the other party.

Abeona

Please refer to Note C, "Business Combinations," to the Financial Statements in our Annual Report for a detailed description of the MuGard License Agreement.

Q. DEBT

Our outstanding debt obligations as of June 30, 2016 and December 31, 2015 consisted of the following (in thousands):

	June 30, 2016	December 31, 2015
2023 Senior Notes	$ 489,033	$ 488,481
2015 Term Loan Facility	325,120	332,688
Convertible Notes	174,953	170,749
Total long-term debt	989,106	991,918
Less: current maturities	49,610	17,500
Long-term debt, net of current maturities	$ 939,496	$ 974,418

2023 Senior Notes

On August 17, 2015, in connection with the CBR acquisition, we completed a private placement of $500.0 million aggregate principal amount of 2023 Senior Notes. The 2023 Senior Notes were issued pursuant to an Indenture, dated as of August 17, 2015 (the "Indenture"), by and among us, certain of our subsidiaries acting as guarantors of the 2023 Senior Notes and Wilmington Trust, National Association, as trustee. The Indenture contains certain customary negative covenants, which are subject to a number of limitations and exceptions. Certain of the covenants will be suspended during any period in which the 2023 Senior Notes receive investment grade ratings.

The 2023 Senior Notes, which are senior unsecured obligations of the Company, will mature on September 1, 2023 and bear interest at a rate of 7.875% per year, with interest payable semi-annually on September 1 and March 1 of each year, beginning on March 1, 2016. We may redeem some or all of the 2023 Senior Notes at any time, or from time to time, on or after September 1, 2018 at the redemption prices listed in the Indenture, plus accrued and unpaid interest to, but not including, the date of redemption. In addition, prior to September 1, 2018, we may redeem up to 35% of the aggregate principal amount of the 2023 Senior Notes utilizing the net cash proceeds from certain equity offerings, at a redemption price of 107.875% of the principal amount thereof, plus accrued and unpaid interest to, but not including, the date of redemption; provided that at least 65% of the aggregate amount of the 2023 Senior Notes

originally issued under the Indenture remain outstanding after such redemption. We may also redeem all or some of the 2023 Senior Notes at any time, or from time to time, prior to September 1, 2018, at a price equal to 100% of the principal amount of the 2023 Senior Notes to be redeemed, plus a "make-whole" premium plus accrued and unpaid interest, if any, to the date of redemption. Upon the occurrence of a "change of control," as defined in the Indenture, we are required to offer to repurchase the 2023 Senior Notes at 101% of the aggregate principal amount thereof, plus any accrued and unpaid interest to, but not including, the repurchase date. The Indenture contains customary events of default, which allow either the trustee or the holders of not less than 25% in aggregate principal amount of the then-outstanding 2023 Senior Notes to accelerate, or in certain cases, which automatically cause the acceleration of, the amounts due under the 2023 Senior Notes.

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At June 30, 2016, the carrying value of the outstanding borrowings, net of issuance costs and other lender fees and expenses, was $489.0 million.

2015 Term Loan Facility

On August 17, 2015, to fund a portion of the purchase price of CBR, we entered into a credit agreement with a group of lenders, including Jefferies Finance LLC as administrative and collateral agent, that provided us with, among other things, a six-year $350.0 million term loan facility. We borrowed the full $350.0 million available under the 2015 Term Loan Facility on August 17, 2015. The credit agreement also allows for the incurrence of incremental loans in an amount up to $225.0 million. At June 30, 2016, the carrying value of the outstanding borrowings, net of issuance costs and other lender fees and expenses, was $325.1 million. The unamortized original issue costs and other lender fees and expenses, including a prepayment penalty, included $6.8 million of the unamortized original issue costs and other lender fees and expenses from our then existing five-year term loan facility (the “2014 Term Loan Facility”) as a result of accounting guidance for the modification of debt arrangements.

The 2015 Term Loan Facility bears interest, at our option, at the London Interbank Offered Rate (“LIBOR”) plus a margin of 3.75% or the prime rate plus a margin of 2.75%. The LIBOR is subject to a 1.00% floor and the prime rate is subject to a 2.00% floor. As of June 30, 2016, the stated interest rate, based on the LIBOR, was 4.75%, and the effective interest rate was 5.65%.

We must repay the 2015 Term Loan Facility in installments of $4.4 million per quarter due on the last day of each quarter beginning with the quarter ended December 31, 2015. The 2015 Term Loan Facility matures on August 17, 2021.

The 2015 Term Loan Facility includes an annual mandatory prepayment of the debt in an amount equal to 50% of our excess cash flow (as defined in the 2015 Term Loan Facility) as measured on an annual basis, beginning with the year ending December 31, 2016. As a result, as of June 30, 2016, $32.1 million was estimated and reclassified from long-term debt to current portion of long-term debt in our condensed consolidated balance sheet as the first excess payment is expected to be made in April 2017. On or after December 31, 2016, the applicable excess cash flow percentage shall be reduced based on the total net leverage ratio as of the last day of the period. Excess cash flow is generally defined as our adjusted Earnings Before Interest, Taxes, Depreciation and Amortization (“EBITDA”) less debt service costs, unfinanced capital expenditures, unfinanced acquisition expenditures, contingent consideration paid, and current income taxes as well as other adjustments specified in the credit agreement.

The 2015 Term Loan Facility has a lien on substantially all of our assets, including a pledge of 100% of the equity interests in our domestic subsidiaries and a pledge of 65% of the voting equity interests and 100% of the non-voting equity interests in our direct foreign subsidiaries. The 2015 Term Loan Facility contains customary events of default and affirmative and negative covenants for transactions of this type. All obligations under the 2015 Term Loan Facility are unconditionally guaranteed by substantially all of our direct and indirect domestic subsidiaries, with certain exceptions. These guarantees are secured by substantially all of the present and future property and assets of such subsidiaries, with certain exclusions.

2.5% Convertible Notes

On February 14, 2014, we issued $200.0 million aggregate principal amount of the Convertible Notes. We received net proceeds of $193.3 million from the sale of the Convertible Notes, after deducting fees and expenses of $6.7 million. We used $14.1 million of the net proceeds from the sale of the Convertible Notes to pay the cost of the convertible bond hedges, as described below (after such cost was partially offset by the proceeds to us from the sale of warrants in the warrant transactions described below).

The Convertible Notes are governed by the terms of an indenture between us, as issuer, and Wilmington Trust, National Association, as the trustee. The Convertible Notes are senior unsecured obligations and bear interest at a rate of 2.5% per year, payable semi-annually in arrears on February 15 and August 15 of each year. The Convertible Notes will mature on February 15, 2019, unless earlier repurchased or converted. Upon conversion of the Convertible Notes, at a holder's election, such Convertible Notes will be convertible into cash, shares of our common stock, or a combination thereof, at our election (subject to certain limitations in the 2015 Term Loan Facility), at a conversion rate of approximately 36.9079 shares of common stock per $1,000 principal amount of the Convertible Notes, which corresponds to an initial conversion price of approximately $27.09 per share of our common stock.

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The conversion rate is subject to adjustment from time to time upon the occurrence of certain events, including, but not limited to, the issuance of stock dividends and payment of cash dividends. At any time prior to the close of business on the business day immediately preceding May 15, 2018, holders may convert their Convertible Notes at their option only under the following circumstances:

1) during any calendar quarter (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
2) during the five business day period after any five consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of the Convertible Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day; or
3) upon the occurrence of specified corporate events.

On or after May 15, 2018 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert all or any portion of their Convertible Notes, in multiples of $1,000 principal amount, at the option of the holder regardless of the foregoing circumstances. Based on the last reported sale price of our common stock during the last 30 trading days of the first quarter of 2016, the Convertible Notes were not convertible as of June 30, 2016.

In accordance with accounting guidance for debt with conversion and other options, we separately account for the liability and equity components of the Convertible Notes by allocating the proceeds between the liability component and the embedded conversion option ("equity component") due to our ability to settle the Convertible Notes in cash, common stock or a combination of cash and common stock, at our option (subject to certain limitations in the 2015 Term Loan Facility). The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The allocation was performed in a manner that reflected our non-convertible debt borrowing rate for similar debt. The equity component of the Convertible Notes was recognized as a debt discount and represents the difference between the proceeds from the issuance of the Convertible Notes and the fair value of the liability of the Convertible Notes on their respective dates of issuance. The excess of the principal amount of the liability component over its carrying amount ("debt discount") is amortized to interest expense using the effective interest method over five years. The equity component is not remeasured as long as it continues to meet the conditions for equity classification.

Our outstanding Convertible Note balances as of June 30, 2016 consisted of the following (in thousands):

	June 30, 2016
Liability component:	
Principal	$ 199,998
Less: debt discount and issuance costs, net	(25,045)
Net carrying amount	$ 174,953
Equity component	$ 38,188

In connection with the issuance of the Convertible Notes, we incurred approximately $6.7 million of debt issuance costs, which primarily consisted of underwriting, legal and other professional fees, and allocated these costs to the liability and equity components based on the allocation of the proceeds. Of the total $6.7 million of debt issuance costs, $1.3 million was allocated to the equity component and recorded as a reduction to additional paid-in capital and $5.4 million was allocated to the liability component and is now recorded as a reduction of the Convertible Notes in

our condensed consolidated balance sheets. The portion allocated to the liability component is amortized to interest expense using the effective interest method over five years.

We determined the expected life of the debt was equal to the five year term on the Convertible Notes. As of June 30, 2016, the carrying value of the Convertible Notes was $175.0 million. The effective interest rate on the liability component was 7.23% for the period from the date of issuance through June 30, 2016. As of June 30, 2016, the "if-converted value" did not exceed the remaining principal amount of the Convertible Notes.

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The following table sets forth total interest expense recognized related to the Convertible Notes during the three and six months ended June 30, 2016 and 2015 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Contractual interest expense	$ 1,250	$ 1,250	$ 2,500	$ 2,500
Amortization of debt issuance costs	265	246	524	480
Amortization of debt discount	1,867	1,727	3,682	3,376
Total interest expense	$ 3,382	$ 3,223	$ 6,706	$ 6,356

Convertible Bond Hedge and Warrant Transactions

In connection with the pricing of the Convertible Notes and in order to reduce the potential dilution to our common stock and/or offset cash payments due upon conversion of the Convertible Notes, in February 2014, we entered into convertible bond hedge transactions covering approximately 7.4 million shares of our common stock underlying the $200.0 million aggregate principal amount of the Convertible Notes with the call spread counterparties. The convertible bond hedges have an exercise price of approximately $27.09 per share, subject to adjustment upon certain events, and are exercisable when and if the Convertible Notes are converted. If upon conversion of the Convertible Notes, the price of our common stock is above the exercise price of the convertible bond hedges, the call spread counterparties will deliver shares of our common stock and/or cash with an aggregate value approximately equal to the difference between the price of our common stock at the conversion date and the exercise price, multiplied by the number of shares of our common stock related to the convertible bond hedges being exercised. The convertible bond hedges are separate transactions entered into by us and are not part of the terms of the Convertible Notes or the warrants, discussed below. Holders of the Convertible Notes will not have any rights with respect to the convertible bond hedges. We paid $39.8 million for these convertible bond hedges and recorded this amount as a reduction to additional paid-in capital, net of tax, in 2014.

In February 2014, we also entered into separate warrant transactions with each of the call spread counterparties relating to, in the aggregate, approximately 7.4 million shares of our common stock underlying the $200.0 million aggregate principal amount of the Convertible Notes. The initial exercise price of the warrants is $34.12 per share, subject to adjustment upon certain events, which is 70% above the last reported sale price of our common stock of $20.07 on February 11, 2014. The warrants would separately have a dilutive effect to the extent that the market value per share of our common stock, as measured under the terms of the warrants, exceeds the applicable exercise price of the warrants. The warrants were issued to the call spread counterparties pursuant to the exemption from registration set forth in Section 4(a)(2) of the Securities Act of 1933, as amended. We received $25.7 million for these warrants and recorded this amount to additional paid-in capital in 2014.

Aside from the initial payment of $39.8 million to the call spread counterparties for the convertible bond hedges, which was partially offset by the receipt of $25.7 million for the warrants, we are not required to make any cash payments to the call spread counterparties under the convertible bond hedges and will not receive any proceeds if the warrants are exercised.

R. RESTRUCTURING

In connection with the CBR and Lumara Health acquisitions, we initiated restructuring programs in the third quarter of 2015 and the fourth quarter of 2014, respectively, which included severance benefits primarily related to certain former CBR and Lumara Health employees. As a result of these restructurings, we recorded charges of approximately $0.1 million and $0.7 million in the three and six months ended June 30, 2016, respectively as compared to $0.4 million and $1.0 million in the same periods in 2015 . We expect to pay substantially all of these restructuring costs by the end of 2016.

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The following table outlines the components of our restructuring expenses which were included in current liabilities for the three and six months ended June 30, 2016 and 2015 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Accrued restructuring, beginning of period	$ 2,093	$ 2,118	$ 2,883	$ 1,953
Employee severance, benefits and related costs	89	284	898	855
Payments	(1,075)	(1,149)	(2,674)	(1,555)
Accrued restructuring, end of period	$ 1,107	$ 1,253	$ 1,107	$ 1,253

S. RECENTLY ISSUED AND PROPOSED ACCOUNTING PRONOUNCEMENTS

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB") or other standard setting bodies that are adopted by us as of the specified effective date.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). The new standard requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. ASU 2016-13 will be effective for us for fiscal years beginning on or after January 1, 2020, including interim periods within those annual reporting periods and early adoption is permitted. We are currently evaluating the impact of our pending adoption of ASU 2016-13 in our condensed consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09"). The new standard involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. ASU 2016-09 will be effective for us on January 1, 2017. We are currently evaluating the potential impact that this standard may have on our financial position, results of operations and statement of cash flows.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) ("ASU 2016-02"). This statement requires entities to recognize on its balance sheet assets and liabilities associated with the rights and obligations created by leases with terms greater than twelve months. This statement is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods and early adoption is permitted. We are currently evaluating the impact of ASU 2016-02 in our condensed consolidated financial statements and we currently expect that most of our operating lease commitments will be subject to the new standard and recognized as operating lease liabilities and right-of-use assets upon our adoption of ASU 2016-02.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01"), which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. ASU 2016-01 is effective for us on

January 1, 2018. We are currently evaluating the impact of our pending adoption of ASU 2016-01 in our condensed consolidated financial statements.

In July 2015, the FASB issued ASU No. 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory. The new standard applies only to inventory for which cost is determined by methods other than last-in, first-out and the retail inventory method, which includes inventory that is measured using first-in, first-out or average cost. Inventory within the scope of this standard is required to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The new standard will be effective for us on January 1, 2017. The adoption of this standard is not expected to have a material impact on our results of operations, cash flows or financial position.

In August 2014, the FASB issued ASU No. 2014 15, Presentation of Financial Statements - Going Concern: Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern ("ASU 2014-15"). ASU 2014 15 is intended to define management's responsibility to evaluate whether there is substantial doubt about an organization's ability to continue as a going concern and to provide related footnote disclosures, if required. ASU 2014 15 will be

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effective for annual reporting periods ending after December 15, 2016, which will be our fiscal year ending December 31, 2016, and to annual and interim periods thereafter. We are in the process of evaluating the impact of adoption of ASU 2014 15 in our condensed consolidated financial statements and related disclosures and do not expect it to have a material impact on our results of operations, cash flows or financial position.

In May 2014, the FASB issued ASU 2014 09, Revenue from Contracts with Customers, as a new Topic, Accounting Standards Codification Topic 606 ("ASU 2014-09"). The new revenue recognition standard provides a five step analysis of transactions to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customer Topic 606s, Principal versus Agent Considerations, which clarifies the implementation guidance on principal versus agent considerations. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers Topic 606, Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance. In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers Topic 606, Narrow-Scope Improvements and Practical Expedients, related to disclosures of remaining performance obligations, as well as other amendments to guidance on collectibility, non-cash consideration and the presentation of sales and other similar taxes collected from customers. We are currently evaluating the method of adoption and the potential impact that Topic 606 may have on our financial position and results of operations. These ASUs are effective for entities for interim and annual reporting periods beginning after December 15, 2017, including interim periods within that year, which for us is the period beginning January 1, 2018. Early adoption is permitted any time after the original effective date, which for us is January 1, 2017. Entities have the choice to apply these ASUs either retrospectively to each reporting period presented or by recognizing the cumulative effect of applying these standards at the date of initial application and not adjusting comparative information. We have not yet selected a transition method and are currently evaluating the impact of this standard in our condensed consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operation

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the audited financial information and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2015 (our "Annual Report").

Except for the historical information contained herein, the matters discussed in this Quarterly Report on Form 10-Q may be deemed to be forward looking statements that involve risks and uncertainties. We make such forward looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. In this Quarterly Report on Form 10-Q terminology such as "may," "will," "could," "should," "would," "expect," "anticipate," "continue," "believe," "plan," "estimate," "intend" or other similar words and expressions (as well as ot words or expressions referencing future events, conditions or circumstances) are intended to identify forward looking statements.

Examples of forward-looking statements contained in this report include, without limitation, statements regarding the following: plans to develop and deliver important therapeutics, conduct research and create education and support programs; beliefs that newborn stem cells have the potential to play a valuable role in the development of regenerative medicine; plans to continue to expand the impact of our portfolio by delivering on our growth strategy; expectations that we expect Velo to begin a Phase 2b/3a study by the end of 2016; expectations for our next generation development programs for Makena, including initiating a definitive PK study designed to demonstrate comparable bioavailability, including bioequivalence for area under the curve, our intention to conduct a comparative pain study, the anticipated timing to file the sNDA and pain study data, the timing of an anticipated approval for the subcutaneous auto-injector, including the expected FDA review period, and our ability to obtain orphan drug exclusivity for the auto-injector; expectations and plans as to regulatory developments and activities, including requirements and initiatives for clinical trials and studies and post-approval commitments for our products; expectations for our Phase 3 clinical trial for the broader indication for Feraheme, including the expected timing of an sNDA submission; expectations as to the impacts of recent regulatory developments on our business and competition; expectations regarding our intellectual property, including patent protection and related litigation, and the impact generic and other competition could have on our business; the market opportunities for each of our products and services; plans regarding our sales and marketing

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initiatives, including our contracting and discounting strategy and efforts to increase patient compliance and continue educational programs for patients and physicians; our expectations concerning increased sales in Makena as a result of gains in market share and our recent partnership with a leading provider of home nursing services; our expectation of costs to be incurred in connection with and revenue sources to fund our future operations; our expectations regarding the contribution of revenues from our products or services to the funding of our on going operations; expectations regarding the manufacture of all drug substance, drug products and key materials at our third-party manufacturers or suppliers; the strategic fit of the CBR Services into our maternal health portfolio; our expectations regarding customer returns and other revenue-related reserves and accruals; estimates regarding our effective tax rate and our ability to realize our net operating loss carryforwards and other tax attributes; the impact of accounting pronouncements; expected increases in research and development expenses and the timing of our planned research and development projects; expectations regarding our financial results, including revenues, cost of product sales and services, selling, general and administrative expenses, restructuring costs, amortization and other income (expense); our investing activities; estimates and beliefs related to our debt, including our 2023 Senior Notes, Convertible Notes and the 2015 Term Loan Facility; the impact of volume-based and other rebates and incentives; the valuation of certain intangible assets, goodwill, contingent consideration, debt and other assets and liabilities, including our methodology and assumptions regarding fair value measurements; the manner in which we intend or are required to settle the conversion of our Convertible Notes; and our expectations for our cash, revenue, cash equivalents, investments balances, capital needs and information with respect to any other plans and strategies for our business, including the potential payment of a $100.0 million milestone in 2016. Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated or indicated in any forward-looking statements.

Any forward looking statement should be considered in light of the factors discussed in Part II, Item 1A below under “Risk Factors” in this Quarterly Report on Form 10-Q and and in Part I, Item 1A in our Annual Report. We caution readers not to place undue reliance on any such forward looking statements, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the U.S. Securities and Exchange Commission, to publicly update or revise any such statements to reflect any change in company expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward looking statements.

Overview

AMAG Pharmaceuticals, Inc., a Delaware corporation, was founded in 1981. We are a biopharmaceutical company focused on developing and delivering important therapeutics, conducting clinical research in areas of unmet need and creating education and support programs for the patients and families we serve. Our products support the health of patients in the areas of maternal health, anemia management and cancer supportive care, including Makena® (hydroxyprogesterone caproate injection), Feraheme® (ferumoxytol) for Intravenous (“IV”) use and MuGard® Mucoadhesive Oral Wound Rinse. Through services related to the preservation of umbilical cord blood stem cell and cord tissue units operated through Cord Blood Registry® (“CBR”), we also help families to preserve newborn stem cells, which are used today in transplant medicine for certain cancers and blood, immune and metabolic disorders, and have the potential to play a valuable role in the ongoing development of regenerative medicine.

We intend to expand the impact of these and future products and services for patients by delivering on our growth strategy, which includes organic growth, as well as the pursuit of products and companies that align with our existing

therapeutic areas or those that could benefit from our proven core competencies. Currently, our primary sources of revenue are from product sales of Makena and Feraheme and service revenue from the CBR Services.

AMAG's Portfolio of Products and Services

In August 2015, we acquired CBR. CBR is the largest private newborn stem cell bank in the world that offers pregnant women and their families the ability to preserve their newborns' umbilical cord blood and cord tissue for potential future use (the "CBR Services"), which we market and sell directly to consumers. Additional details regarding the acquisition of CBR can be found in Note C, "Business Combinations," to our condensed consolidated financial statements included in this Quarterly Report on Form 10 Q.

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In July 2015, we entered into an option agreement with Velo Bio, LLC ("Velo"), a privately held life-sciences company that granted us an option to acquire the rights (the "DIF Rights") to an orphan drug candidate, digoxin immune fab ("DIF"), a polyclonal antibody in clinical development for the treatment of severe preeclampsia in pregnant women. Under the option agreement, Velo will complete a Phase 2b/3a clinical study, which we expect to begin by the end of 2016. Following the conclusion of the DIF Phase 2b/3a study, we may terminate, or, for additional consideration, exercise or extend, our option to acquire the DIF Rights. Additional details regarding the Velo agreement can be found in Note P, "Collaboration, License and Other Strategic Agreements," to our condensed consolidated financial statements included in this Quarterly Report on Form 10 Q.

In November 2014, we acquired Lumara Health Inc. ("Lumara Health") and its product Makena, a progestin indicated to reduce the risk of preterm birth in women pregnant with a single baby who have a history of singleton spontaneous preterm birth. Makena was approved by the FDA in February 2011 and was granted orphan drug exclusivity through February 3, 2018. We sell Makena primarily to specialty pharmacies, specialty distributors, which, in turn, sell Makena to healthcare providers, hospitals, government agencies and integrated delivery systems. Additional details regarding the Lumara Health acquisition can be found in Note C, "Business Combinations," to our condensed consolidated financial statements included in this Quarterly Report on Form 10 Q.

Feraheme was approved for marketing in the U.S. in June 2009 by the FDA for use as an IV iron replacement therapy for the treatment of iron deficiency anemia ("IDA") in adult patients with chronic kidney disease ("CKD"). We began selling Feraheme in July 2009 through our commercial organization, including a specialty sales force. We sell Feraheme to authorized wholesalers and specialty distributors, who, in turn, sell Feraheme to healthcare providers who administer Feraheme primarily within hospitals, hematology and oncology centers, and nephrology clinics.

In June 2013, we entered into a license agreement with Abeona Therapeutics, Inc., under which we acquired the U.S. commercial rights to MuGard for the management of oral mucositis and stomatitis (the "MuGard Rights"). Additional details regarding the acquisition of the MuGard Rights can be found in Note C, "Business Combinations," in our Annual Report.

Makena Developments

In February 2016, the FDA approved our prior approval supplement to the original Makena New Drug Application ("NDA") filed with the FDA in July 2015 seeking approval of a single-dose preservative-free formulation of Makena to be manufactured by Hospira, Inc. (now owned by The Pfizer CentreOne group of Pfizer, Inc.) which also manufactures our multidose vial. We began promoting the single-dose preservative-free formulation of Makena to physicians in the second quarter of 2016. In July 2016, we received approval of our October 2014 prior approval supplement for Piramal Pharma Solutions (formerly Coldstream Laboratories, Inc.) to also manufacture the single-dose preservative-free formulation of Makena. In addition, during the first quarter of 2016, we entered into a new agreement with a leading provider of home nursing services, which had previously utilized compounded hydroxyprogesterone caproate and now exclusively provides at-home administration of Makena.

We continue to advance our next generation development program for Makena, seeking to enhance the product profile for patients and their healthcare providers. We are developing an auto-injector device for subcutaneous administration of Makena (the "auto-injector"), including chemistry, manufacturing and controls ("CMC") development with Antares Pharma, Inc. We recently met with the FDA to discuss our proposed development and regulatory strategy, focusing on our plans to conduct a pharmacokinetic ("PK") study later this year, which is designed to demonstrate comparable bioavailability, including demonstrating bioequivalence for area under the curve, which we believe is the most relevant PK parameter for Makena. Further, in order to submit the results of the pain study with the sNDA filing, we have accelerated our plan to conduct a comparative pain study intended to capture certain measures to support clinical superiority of the subcutaneous auto-injector over the existing intramuscular injection. These plans are based on our dialogue with the FDA that orphan drug exclusivity may be granted if the FDA determines that the auto-injector is clinically superior to the existing intramuscular injection as demonstrated by a significant reduction in pain in a substantial portion of the target population. Based on our current timelines and assumptions, we anticipate filing an sNDA for approval of the auto-injector in the second quarter of 2017 and, as a result of our decision to contemporaneously submit the results of our comparative pain study, the review period is expected to be 10 months.

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Makena was approved under the provisions of the FDA's "Subpart H" Accelerated Approval regulations. As a condition of approval under Subpart H, the FDA required that Makena's sponsor perform certain adequate and well-controlled post-approval clinical studies to verify and describe the clinical benefit of Makena as well as fulfill certain other post-approval commitments. We have completed a PK trial of women taking Makena and are currently conducting two other studies to fulfill these obligations, one of which is due to the FDA by December 2018 and the other by October 2020.

Feraheme Developments

In pursuit of a broader indication for Feraheme to include the treatment of IDA in adult patients who had failed or could not tolerate oral iron or in whom oral iron was contraindicated, we are conducting a new head-to-head Phase 3 clinical trial evaluating Feraheme in adults with IDA, excluding patients on hemodialysis. This new trial is a randomized, double-blind multicenter non-inferiority trial that will evaluate the incidence of moderate to severe hypersensitivity reactions (including anaphylaxis) and moderate to severe hypotension with Feraheme compared to ferric carboxymaltose infusion. Two thousand patients will be randomized in a 1:1 ratio into one of two treatment groups, those receiving 1.02 grams of Feraheme IV infusion or those receiving 1.5 grams of ferric carboxymaltose IV infusion. We initiated this trial in the first quarter of 2016 and expect to file an sNDA in late 2017.

MuGard Developments

Based on events in the second quarter of 2016, we determined that broader reimbursement coverage for MuGard by government payors was unlikely based on recent interactions with those agencies and assessed the MuGard Rights for potential impairment. From this assessment, we concluded that based on the lack of broad reimbursement and insurance coverage for MuGard and the resulting decrease in expected revenues and cash flows, the projected undiscounted cash flows were less than the book value, indicating impairment of this intangible asset. As a result of an analysis of the fair value of the net MuGard Rights intangible asset as compared to its recorded book value, we recognized an impairment charge for the full $15.7 million net intangible asset in the second quarter of 2016.

Results of Operations - Three Months Ended June 30, 2016 and 2015

Revenues

Total revenues for the three months ended June 30, 2016 and 2015 consisted of the following (in thousands):

	Three Months Ended June 30,		2016 to 2015		
	2016	2015	$ Change	% Change	
U.S. product sales, net					
Makena	$ 78,406	$ 63,574	$ 14,832	23	%
Feraheme	24,322	20,550	3,772	18	%
MuGard	255	528	(273)	(52)	%
Total	102,983	84,652	18,331	22	%
Service revenues, net	24,379	—	24,379	N/A	
License fee, collaboration and other revenues	57	39,232	(39,175)	(100)	%
Total Revenues	$ 127,419	$ 123,884	$ 3,535	3	%

Our total revenues for the three months ended June 30, 2016 increased by $3.5 million as compared to the same period in 2015, primarily as the result of $24.4 million of CBR service revenue in the three months ended June 30, 2016 following our August 2015 acquisition of CBR and a $18.3 million increase in our net product sales. This increase in revenues was partially offset by a $39.2 million decrease in license fee, collaboration and other revenues during the three months ended June 30, 2016 as compared to the same period in 2015 primarily due to the recognition in the second quarter of 2015 of $33.6 million of previously deferred revenues associated with the amortization of the then-remaining deferred revenue balance and an additional $5.2 million of revenues related to payments made by Takeda Pharmaceutical

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Company Limited ("Takeda") under the terms of the termination of a license, development and commercialization agreement (as amended, the "Takeda Agreement") with Takeda.

Product Sales

Total gross U.S. product sales were offset by product sales allowances and accruals for the three months ended June 30, 2016 and 2015 as follows (in thousands except for percentages):

	Three Months Ended June 30,								
	2016	Percent of gross U.S. product sales		2015	Percent of gross U.S. product sales		2016 to 2015 $ Change	% Change	
Gross U.S. product sales	$ 176,581			$ 136,589			$ 39,992	29	%
Less provision for product sales allowances and accruals:									
Contractual adjustments	53,938	31	%	39,251	29	%			
Governmental rebates	19,660	11	%	12,686	9	%			
Total	73,598	42	%	51,937	38	%			
Net U.S. product sales	$ 102,983			$ 84,652			$ 18,331	22	%

We expect gross product sales to increase for the remainder of 2016 primarily based on increased units sold of our products.

Net U.S. product sales increased by $18.3 million, or approximately 22%, during the three months ended June 30, 2016 as compared to the same period in 2015 primarily due a $14.8 million increase in net Makena sales and a $3.8 million increase in net Feraheme sales. We anticipate that sales of Makena will continue to increase for the remainder of 2016 as compared to the second quarter of 2016 as we continue to gain market share from compounded product due to the availability of the single-dose, preservative-free formulation of Makena, which was approved in February 2016. We also expect that our recent partnership with a leading provider of home nursing services, will continue to be a growth driver of Makena sales. This partner had previously utilized compounded hydroxyprogesterone caproate and will now offer at-home administration of Makena by a trained professional. We anticipate that we will also continue to gain market share through broader reimbursement of Makena, improved patient compliance and continued educational programs for patients and physicians regarding treatment with Makena. We anticipate that sales of Feraheme will be relatively consistent for the remainder of the year as compared to the first half of 2016.

We recognize U.S. product sales net of certain allowances and accruals in our condensed consolidated statement of operations at the time of sale. Our contractual adjustments include provisions for returns, pricing and prompt payment discounts, as well as wholesaler distribution fees, rebates to hospitals that qualify for 340B pricing, and volume-based and other commercial rebates. Governmental rebates relate to our reimbursement arrangements with state Medicaid

programs. The increases in contractual adjustments and governmental rebates as a percentage of gross U.S. product sales primarily relate to the growth in sales to state Medicaid agencies.

We did not materially adjust our product sales allowances and accruals during the three months ended June 30, 2016. During the three months ended June 30, 2015, we reduced our Makena related Medicaid and chargeback reserves, which were initially recorded at the time of the Lumara acquisition, by $4.0 million and $1.9 million, respectively. These adjustments were recorded to goodwill during the quarter ended June 30, 2015. We may revise our estimated revenue reserves related to Makena as we continue to obtain additional experience or as our customer mix changes. If we determine in future periods that our actual experience is not indicative of our expectations, if our actual experience changes, or if other factors affect our estimates, we may be required to adjust our allowances and accruals estimates, which would affect our net product sales in the period of the adjustment and could be significant.

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Service Revenues

The $24.4 million in service revenues recorded in the three months ended June 30, 2016 was due to the addition of the CBR Services to our portfolio in August 2015. We expect service revenues to increase for the remainder of 2016 due to continued efforts to increase new enrollments of cord blood and cord tissue units in our storage facility and recurring revenue from our growing base of stored units. Also contributing to our service revenue growth is our previously reported strategy to reduce the magnitude and prevalence of discounting programs.

License Fee, Collaboration and Other Revenues

Our license fee, collaboration and other revenues for the three months ended June 30, 2016 decreased by $39.2 million as compared to the same period in 2015 primarily as the result of the termination of the Takeda Agreement. We expect that our license fee, collaboration and other revenues, if any, will be immaterial for the remainder of 2016.

Costs and Expenses

Cost of Product Sales

Cost of product sales for the three months ended June 30, 2016 and 2015 were as follows (in thousands except for percentages):

	Three Months Ended June 30,		2016 to 2015	
	2016	2015	$ Change	% Change
Cost of product sales	$ 21,937	$ 19,679	$ 2,258	11 %
Percentage of net product sales	21 %	23 %		

Our cost of product sales are primarily comprised of manufacturing costs, costs of managing our contract manufacturers, and costs for quality assurance and quality control associated with our U.S. product sales, the amortization of product-related intangible assets and the inventory step up in connection with the November 2014 acquisition of Lumara Health. Cost of product sales excludes the impairment of intangible assets described separately below under “Impairments of Intangible Assets.” The $2.3 million increase in our cost of product sales for the three months ended June 30, 2016 as compared to the same period in 2015 was primarily attributable to a $2.9 million increase in amortization of the Makena product intangible asset and a $0.8 million increase in production costs and overhead, partially offset by $1.5 million decrease of amortization of the Makena inventory step-up.

We expect our cost of product sales as a percentage of net product sales excluding any impact from the amortization of the Makena intangible asset and the amortization of inventory step-up of Makena inventory to increase slightly for the remainder of 2016 as compared to the first half of 2016 primarily due to increased sales of Makena.

Cost of Services

Cost of services for the three months ended June 30, 2016 and 2015 were as follows (in thousands except for percentages):

	Three Months Ended June 30,		2016 to 2015	
	2016	2015	$ Change	% Change
Cost of services	$ 5,195	$ —	$ 5,195	N/A %
Percentage of service revenues	21 %	— %		

Cost of services includes the transportation of the umbilical cord blood stem cells and cord tissue from the hospital and direct material plus labor costs for processing, cryogenic storage and collection kit materials. The $5.2 million in cost of services recorded in the three months ended June 30, 2016 was due to the addition of the CBR Services to our portfolio in August 2015.

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Research and Development Expenses

Research and development expenses for the three months ended June 30, 2016 and 2015 consisted of the following (in thousands except for percentages):

	Three Months Ended June 30,		2016 to 2015	
	2016	2015	$ Change	% Change
External research and development expenses				
Feraheme-related costs	$ 5,611	$ 1,604	$ 4,007	>100 %
Makena-related costs	4,291	3,244	1,047	32 %
Other external costs	633	160	473	>100 %
Total	10,535	5,008	5,527	>100 %
Internal research and development expenses	3,698	3,176	522	16 %
Total research and development expenses	$ 14,234	$ 8,184	$ 6,050	74 %

Total research and development expenses incurred in the three months ended June 30, 2016 increased by $6.1 million, or 74%, as compared to the same period in 2015. The increase was primarily due to approximately $5.8 million in new costs related to our Phase 3 clinical trial evaluating Feraheme in adults with IDA, which was initiated in the first quarter of 2016, and approximately $0.9 million in increased costs primarily related to our Makena next generation development program, partially offset by a $1.4 million reduction in clinical trial spend related to our recently completed clinical trial to determine the safety and efficacy of repeat doses of Feraheme for the treatment of IDA in patients with hemodialysis dependent CKD (“FACT”).

We expect our research and development expenses to continue to increase during the remainder of 2016 as compared to the first half of 2016 due to increased costs associated with accelerated enrollment in the Phase 3 clinical trial evaluating Feraheme in adults with IDA, the ongoing clinical trials related to Makena’s post-approval commitments and the Makena next generation development program.

Research and Development Activities

We track our external costs on a major project basis, in most cases through the later of the completion of the last trial in the project or the last submission of a regulatory filing to the FDA. We do not track our internal costs by project since our research and development personnel work on a number of projects concurrently and much of these costs benefit multiple projects or our operations in general. The following major research and development projects were ongoing as of June 30, 2016:

- Makena: This project currently includes studies conducted as part of the post-approval commitments under the provisions of the FDA’s “Subpart H” Accelerated Approval regulations including: (a) an ongoing efficacy and safety clinical study of Makena; (b) an ongoing follow-up study of the children born to mothers from the efficacy and safety clinical study; and (c) a completed PK trial of women taking Makena. The project also includes certain research and development expenses associated with our next generation development program, including the auto-injector project and the comparative pain study.

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Feraheme to treat IDA in CKD patients: This project currently includes the following: (a) a completed clinical study evaluating Feraheme treatment as compared to treatment to another IV iron; (b) a pediatric program as part of our post-approval Pediatric Research Equity Act requirement to support pediatric CKD labeling of Feraheme. We have elected to suspend this program due to difficulty in enrollment, and we plan to work with the FDA to discuss the path forward regarding this post-approval commitment for Feraheme; and (c) a completed global multi-center randomized clinical trial to determine the safety and efficacy of repeat doses of Feraheme as compared to iron sucrose for the treatment of IDA in patients with hemodialysis dependent CKD ("FACT"). We recently completed the FACT study and are in the process of analyzing the data.

· Feraheme to treat IDA regardless of the underlying cause: This project currently includes a randomized, double-blind multicenter non-inferiority trial that will evaluate the incidence of moderate to severe hypersensitivity reactions (including anaphylaxis) and moderate to severe hypotension with Feraheme compared to ferric carboxymaltose infusion in adults with IDA, which was initiated in the first quarter of 2016.

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From November 12, 2014 (the date of the Lumara Health acquisition) through June 30, 2016, we have incurred aggregate external research and development expenses of approximately $15.2 million related to our current program for Makena, described above. We currently estimate that the total remaining external costs associated with this development project will be in the range of approximately $18.0 million to $23.0 million over the next several years.

Through June 30, 2016, we have incurred aggregate external research and development expenses of approximately $42.1 million related to our current program for the development of Feraheme to treat IDA in CKD patients, described above. We currently estimate that the total remaining external costs associated with this development project will be less than $2.0 million.

We incurred approximately $57.8 million of aggregate external research and development expenses related to our program for the development of Feraheme to treat IDA regardless of the underlying cause up to the submission of our sNDA in 2013. In January 2014, we received a complete response letter from the FDA for the sNDA informing us that our sNDA could not be approved in its present form and stating that we had not provided sufficient information to permit labeling of Feraheme for safe and effective use for the proposed broader indication. In the third quarter of 2015, we commenced start up activities related to this program, including a head-to-head Phase 3 clinical trial, described above. We began enrolling patients in the head-to-head trial in the first quarter of 2016 and have spent approximately $11.0 million since the first quarter of 2016. We currently estimate that the total remaining external costs associated with this development project will be in the range of approximately $19.0 million to $24.0 million through the end of 2017.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended June 30, 2016 and 2015 consisted of the following (in thousands except for percentages):

	Three Months Ended June 30,		2016 to 2015		
	2016	2015	$ Change	% Change	
Compensation, payroll taxes and benefits	$ 18,406	$ 13,736	$ 4,670	34	%
Professional, consulting and other outside services	29,793	15,628	14,165	91	%
Fair value of contingent consideration liability	(3,657)	(960)	(2,697)	>100	%
Amortization expense related to customer relationship intangible	3,132	—	3,132	N/A	
Equity-based compensation expense	4,249	3,397	852	25	%
Total selling, general and administrative expenses	$ 51,924	$ 31,801	$ 20,123	63	%

Total selling, general and administrative expenses incurred in the three months ended June 30, 2016 increased by $20.1 million, or approximately 63%, as compared to the same period in 2015 for the following reasons:

- $4.7 million increase in compensation, payroll taxes and benefits primarily due to increased costs associated with personnel from the August 2015 CBR acquisition;
- $9.1 million increase in sales and marketing consulting, professional fees, and other expenses primarily due to costs related to CBR marketing activities and activities related to the launch of the single-dose formulation of Makena;
- $5.1 million increase in general and administrative consulting, professional fees and other expenses primarily due to increased costs associated with the CBR acquisition;
- $2.7 million decrease to the contingent consideration liability due to a $2.0 million reduction of the MuGard-related contingent consideration primarily resulting from a revision of our total projected MuGard sales in the second quarter of 2016, and a $0.7 million decrease to the Makena related contingent consideration;
- $3.1 million increase in amortization expense related to the CBR customer relationship intangible; and
- $0.9 million increase in equity based compensation expense due primarily to an increase in the number of equity awards to new and existing employees, including additional employees from the CBR acquisition.

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We expect that total selling, general and administrative expenses will remain relatively consistent for the remainder of 2016 as compared to first half of 2016.

Impairment of Intangible Assets

Impairments of finite-lived intangible assets was $16.0 million for the three months ended June 30, 2016, due to an impairment charge of $15.7 million in the second quarter of 2016 related to the impairment of the remaining net intangible asset for the MuGard Rights based the lack of broad reimbursement and insurance coverage for MuGard and the impairment of the remaining $0.2 million net CBR favorable lease intangible asset due the subleasing of a portion of our CBR office space in San Bruno, California at a rate below the market rate used to determine the favorable lease intangible asset. As part of our ongoing assessment of potential impairment indicators related to our finite-lived and indefinite-lived intangible assets, we will closely monitor the performance of our product portfolio and our intangible assets. If our ongoing assessments reveal indications of impairment, we may determine that an impairment charge is necessary and such charge could be material.

Acquisition-related Costs

There were no acquisition-related costs recorded in the three months ended June 30, 2016. Acquisition-related costs of $2.7 million incurred in the three months ended June 30, 2015 included costs for consulting, business development and legal expenses primarily related to pre-acquisition activities in connection with our August 2015 acquisition of CBR.

Restructuring Expenses

In connection with the August 2015 CBR acquisition and the November 2014 Lumara Health acquisition, we initiated restructuring programs, which included severance benefits related to former CBR and Lumara Health employees. As a result of these restructurings, we recorded charges of approximately $0.1 million and $0.4 million in the three months ended June 30, 2016 and 2015, respectively. We expect to pay substantially all of these restructuring costs by the end of 2016.

Other Income (Expense)

Other income (expense) for the three months ended June 30, 2016 decreased by $7.6 million as compared to the same period in 2015 primarily as the result of the recognition of an additional $8.0 million in interest expense in the second quarter of 2016, which was primarily comprised of the amortization of debt discount, contractual interest expense and amortization of debt issuance costs in connection with our higher current debt obligations as compared to the same quarter in 2015.

Income Tax Expense

The following table summarizes our effective tax rate and income tax expense for the three months ended June 30, 2016 and 2015 (in thousands except for percentages):

	Three Months Ended June 30,

	2016		2015	
Effective tax rate	199	%	35	%
Income tax expense	$ 1,196		$ 18,035	

For the three months ended June 30, 2016, we recognized income tax expense of $1.2 million, representing an effective tax rate of 199%. The difference between the expected statutory federal tax rate of 35% and the 199% effective tax rate for the three months ended June 30, 2016, was primarily attributable to the impact of state income taxes, non-deductible stock compensation, non-deductible contingent consideration expense associated with Lumara Health, and other non-deductible expenses, partially offset by federal research and development and orphan drug tax credits. The effective tax rate for the three months ended June 30, 2016 reflected the significance of these permanent differences in relation to the pre-tax income for the three months ended June 30, 2016 and is not indicative of our expected full year

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effective tax rate. The effective tax rate for the three months ended June 30, 2016 was also impacted by the impairment of the net intangible asset for the MuGard Rights and related contingent consideration fair value adjustment. We recorded a net tax benefit in the second quarter for these discrete events at a combined federal and state statutory income tax rate of 39%. For the three months ended June 30, 2015, we recognized income tax expense of $18.0 million, representing an effective tax rate of 35%. The effective tax rate during the three months ended June 30, 2015 included the impact of state income taxes offset by the impact of a valuation allowance release related to certain deferred tax assets.

Results of Operations – Six Months Ended June 30, 2016 and 2015

Revenues

Total revenues for the six months ended June 30, 2016 and 2015 consisted of the following (in thousands except for percentages):

	Six Months Ended June 30,		2016 to 2015		
	2016	2015	$ Change	% Change	
U.S. product sales, net					
Makena	$ 143,438	$ 119,103	$ 24,335	20	%
Feraheme	48,517	42,008	6,509	15	%
MuGard	592	956	(364)	(38)	%
Total	192,547	162,067	30,480	19	%
Service revenues, net	43,898	—	43,898	N/A	
License fee, collaboration and other revenues	273	51,322	(51,049)	(99)	%
Total Revenues	$ 236,718	$ 213,389	$ 23,329	11	%

Our total revenues for the six months ended June 30, 2016 increased by $23.3 million as compared to the same period in 2015, primarily as the result of $43.9 million of CBR service revenue in the six months ended June 30, 2016 following our August 2015 acquisition of CBR and a $30.5 million increase in our net product sales. This increase in revenues was partially offset by an $51.0 million decrease in license fee, collaboration and other revenues during the six months ended June 30, 2016 as compared to the same period in 2015 due to the recognition of $44.4 million of previously deferred revenues associated with the amortization of the then-remaining deferred revenue balance in the first half of 2015, and an additional $5.2 million of revenues related to payments made by Takeda under the terms of the termination of the Takeda Agreement.

Product Sales

Total gross U.S. product sales were offset by product sales allowances and accruals for the six months ended June 30, 2016 and 2015 as follows (in thousands except for percentages):

	Six Months Ended June 30,							
	2016	Percent of gross U.S. product sales		2015	Percent of gross U.S. product sales		2016 to 2015 $ Change	% Change
Gross U.S. product sales	$ 328,773			$ 262,106			$ 66,667	25 %
Less provision for product sales allowances and accruals:								
Contractual adjustments	99,519	30	%	74,385	28	%		
Governmental rebates	36,707	11	%	25,654	10	%		
Total	136,226	41	%	100,039	38	%		
Net U.S. product sales	$ 192,547			$ 162,067			$ 30,480	19 %

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Total net product sales increased by $30.5 million, or approximately 19%, during the six months ended June 30, 2016 as compared to the same period in 2015 primarily due a $24.3 million increase in net Makena sales and a $6.5 million increase in net Feraheme sales.

We did not materially adjust our product sales allowances and accruals during the six months ended June 30, 2016. During the six months ended June 30, 2015, we reduced our Makena related Medicaid and chargeback reserves, which were initially recorded at the time of the Lumara Health acquisition, by $4.0 million and $1.9 million, respectively. These adjustments were recorded to goodwill during the six months ended June 30, 2015.

Service Revenues

The $43.9 million in service revenues recorded in the six months ended June 30, 2016 was due to the addition of the CBR Services to our portfolio in August 2015.

License Fee, Collaboration and Other Revenues

Our license fee, collaboration and other revenues for the six months ended June 30, 2016 decreased by $51.0 million as compared to the same period in 2015 primarily as the result of the termination of the Takeda Agreement.

Costs and Expenses

Cost of Product Sales

Cost of product sales for the six months ended June 30, 2016 and 2015 were as follows (in thousands except for percentages):

	Six Months Ended June 30,		2016 to 2015	
	2016	2015	$ Change	% Change
Cost of product sales	$ 40,236	$ 40,705	$ (469)	(1) %
Percentage of net product sales	21%	25%		

The $0.5 million decrease in our cost of product sales for the six months ended June 30, 2016 as compared to the same period in 2015 was primarily attributable to a $3.6 million decrease of amortization of the Makena inventory step-up and a $3.6 million decrease related to inventory reserves, partially offset by a $4.9 million increase in amortization of the Makena product intangible asset and a $1.8 million increase in production costs and overhead. Cost of product sales excludes the impairment of intangible assets described separately below under “Impairments of Intangible Assets.”

Cost of Services

Cost of services for the six months ended June 30, 2016 and 2015 were as follows (in thousands except for percentages):

	Six Months Ended June 30,		2016 to 2015	
			$	% Change
	2016	2015	Change	
Cost of services	$ 10,721	$ —	$ 10,721	N/A %
Percentage of service revenues	24 %	— %		

The $10.7 million in cost of services recorded in the six months ended June 30, 2016 was due to the addition of the CBR Services to our portfolio in August 2015.

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Research and Development Expenses

Research and development expenses for the six months ended June 30, 2016 and 2015 consisted of the following (in thousands except for percentages):

	Six Months Ended June 30,		2016 to 2015		
	2016	2015	$ Change	% Change	
External research and development expenses					
Feraheme-related costs	$ 11,501	$ 3,656	$ 7,845	>100	%
Makena-related costs	7,900	4,762	3,138	66	%
Other external costs	1,477	508	969	>100	%
Total	20,879	8,926	11,953	>100	%
Internal research and development expenses	7,584	6,246	1,338	21	%
Total research and development expenses	$ 28,463	$ 15,172	$ 13,291	88	%

Total research and development expenses incurred in the six months ended June 30, 2016 increased by $13.3 million, or 88%, as compared to the same period in 2015. The increase was primarily due to approximately $11.0 million in new costs related to our Phase 3 clinical trial evaluating Feraheme in adults with IDA, which was initiated in the first quarter of 2016, and approximately $2.6 million in costs related to our Makena next generation development program, partially offset by a $2.1 million reduction in our recently completed FACT study.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the six months ended June 30, 2016 and 2015 consisted of the following (in thousands except for percentages):

	Six Months Ended June 30,		2016 to 2015		
	2016	2015	$ Change	% Change	
Compensation, payroll taxes and benefits	$ 39,166	$ 26,953	$ 12,213	45	%
Professional, consulting and other outside services	58,930	29,775	29,155	98	%
Fair value of contingent consideration liability	1,399	1,639	(240)	(15)	%
Amortization expense related to customer relationship intangible	6,264	—	6,264	N/A	
Equity-based compensation expense	9,339	5,546	3,793	68	%
Total selling, general and administrative expenses	$ 115,098	$ 63,913	$ 51,185	80	%

Total selling, general and administrative expenses incurred in the six months ended June 30, 2016 increased by $51.2 million, or approximately 80%, as compared to the same period in 2015 for the following reasons:

- $12.2 million increase in compensation, payroll taxes and benefits primarily due to increased costs associated with personnel from the August 2015 CBR acquisition;
- $15.8 million increase in sales and marketing consulting, professional fees, and other expenses primarily due to costs related to CBR marketing activities and pre-approval and launch activities of the single-dose formulation of Makena;
- $13.4 million increase in general and administrative consulting, professional fees and other expenses primarily due to increased costs associated with CBR acquisition;
- $0.2 million decrease to the contingent consideration liability due to a $1.7 million reduction of the MuGard-related contingent consideration resulting from a revision of our total projected MuGard sales in the second quarter of 2016, partially offset by a $1.5 million increase to the Makena related contingent consideration;
- $6.3 million increase in amortization expense related to the CBR customer relationship intangible; and
- $3.8 million increase in equity based compensation expense due primarily to an increase in the number of equity awards to new and existing employees, including additional employees from the CBR acquisition.

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Impairment of Intangible Assets

Impairments of finite-lived intangible assets was $16.0 million for the six months ended June 30, 2016, due to an impairment charge of $15.7 million in the second quarter of 2016 related to the impairment of the remaining net intangible asset for the MuGard Rights based on the lack of broad reimbursement and insurance coverage for MuGard and the impairment of the remaining $0.2 million net CBR favorable lease intangible asset due the subleasing of a portion of our CBR office space in San Bruno, California at a rate below the market rate used to determine the favorable lease intangible asset.

Acquisition-related Costs

There were no acquisition-related costs recorded in the six months ended June 30, 2016. Acquisition-related costs of $2.7 million incurred in the six months ended June 30, 2015 included costs for consulting, business development and legal expenses primarily related to pre-acquisition activities in connection with our August 2015 acquisition of CBR.

Restructuring Expenses

In connection with the August 2015 CBR acquisition and the November 2014 Lumara Health acquisition, we initiated restructuring programs, which included severance benefits related to former CBR and Lumara Health employees. As a result of these restructurings, we recorded charges of approximately $0.7 million and $1.0 million in the six months ended June 30, 2016 and 2015, respectively.

Other Income (Expense)

Other income (expense) for the six months ended June 30, 2016 decreased by $14.9 million as compared to the same period in 2015 primarily as the result of the recognition of an additional $16.1 million in interest expense in the first half of 2016, which was primarily comprised of the amortization of debt discount, contractual interest expense and amortization of debt issuance costs in connection with our higher current debt obligations as compared to the same period in 2015.

Income Tax Expense (Benefit)

The following table summarizes our effective tax rate and income tax expense (benefit) for the six months ended June 30, 2016 and 2015 (in thousands except for percentages):

	Six Months Ended June 30,			
	2016		2015	
Effective tax rate	14	%	34	%
Income tax expense (benefit)	$ (1,344)		$ 23,643	

For the six months ended June 30, 2016, we recognized an income tax benefit of $1.3 million, representing an effective tax rate of 14%. The difference between the expected statutory federal tax rate of 35% and the 14% effective tax rate for the six months ended June 30, 2016, was primarily attributable to the impact of state income taxes and non-deductible stock compensation. The effective tax rate for the six months ended June 30, 2016 was also impacted by the impairment of the net intangible asset for the MuGard Rights and related contingent consideration fair value

adjustment. We recorded a net tax benefit in the six months ended June 30, 2016 for these discrete events at a combined federal and state statutory income tax rate of 39%. For the six months ended June 30, 2015, we recognized income tax expense of $23.6 million, representing an effective tax rate of 34%. The difference between the expected statutory federal tax rate of 35% and the 34% effective tax rate was attributable to the impact of a valuation allowance release related to certain deferred tax assets, partially offset by the impact of state income taxes.

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Liquidity and Capital Resources

General

We currently finance our operations primarily from the sale of our products and services and cash generated from our investing and financing activities. We expect to continue to incur significant expenses as we continue to market, sell and contract for the manufacture of Makena and Feraheme, market and sell the CBR Services, pursue the next generation development program for Makena, and further develop and seek U.S. regulatory approval for Feraheme for the treatment of IDA in a broad range of patients. For a detailed discussion regarding the risks and uncertainties related to our liquidity and capital resources, please refer to our Risk Factors in Part I, Item 1A of our Annual Report and in Part II, Item IA of this Quarterly Report on Form 10-Q.

Cash, cash equivalents, investments and certain financial obligations as of June 30, 2016 and December 31, 2015 consisted of the following (in thousands except for percentages):

	June 30, 2016	December 31, 2015	$ Change	% Change	
Cash and cash equivalents	$ 251,110	$ 228,705	$ 22,405	10	%
Investments	295,359	237,626	57,733	24	%
Total	$ 546,469	$ 466,331	$ 80,138	17	%
Outstanding principal on 2023 Senior Notes	$ 500,000	$ 500,000	$ —	(0)	%
Outstanding principal on Convertible Notes	199,998	200,000	(2)	—	%
Outstanding principal on 2015 Term Loan Facility	336,875	345,625	(8,750)	(3)	%
Total	$ 1,036,873	$ 1,045,625	$ (8,752)	(1)	%

The $80.1 million increase in cash, cash equivalents and investments as of June 30, 2016, as compared to December 31, 2015, was primarily due to cash flow from product and service sales, partially offset by expenditures to fund our operations, service our debt, and $20.0 million of cash used to repurchase our common stock during the first half of 2016.

In March 2015, we sold approximately 4.6 million shares of our common stock at a public offering price of $44.00 per share, resulting in net proceeds to us of approximately $188.8 million. In addition, in August 2015, we sold approximately 3.6 million shares of our common stock at a public offering price of $63.75 per share, resulting in net proceeds to us of approximately $218.6 million.

We expect that our cash, cash equivalents and investments balances, in the aggregate, will increase due to increased net product sales during the remainder of 2016, partially offset by debt-related payments and potential milestone payments. Our expectation assumes our continued investment in the development and commercialization of our products. We believe that our cash, cash equivalents and investments as of June 30, 2016, and the cash we currently expect to receive from sales of our products and services, and earnings on our investments, will be sufficient to satisfy our cash flow needs for the foreseeable future, including a potential $100.0 million milestone payment expected to be paid in 2016 to the former Lumara Health security holders based on the achievement of a net sales milestone of Makena.

Borrowings and Other Liabilities

In August 2015, in connection with the CBR acquisition, we completed a private placement of $500.0 million aggregate principal amount of 7.875% Senior Notes due 2023 (the “2023 Senior Notes”) and entered into a credit agreement with a group of lenders and Jefferies Finance LLC, as administrative and collateral agent, that provided us with, among other things, a six-year $350.0 million term loan facility (the “2015 Term Loan Facility”). The 2023 Senior Notes, which are senior unsecured obligations, will mature on September 1, 2023 and will bear interest at a rate of 7.875% per year, with interest payable semi-annually on September 1 and March 1 of each year, beginning on March 1, 2016. We borrowed the full $350.0 million available under the 2015 Term Loan Facility in August 2015. In addition, the 2015 Term Loan Facility includes an annual mandatory prepayment of the debt in an amount equal to 50% of our excess

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cash flow (as defined in the 2015 Term Loan Facility) as measured on an annual basis, beginning with the fiscal year ending December 31, 2016. As a result, as of June 30, 2016, $32.1 million was estimated and reclassified from long-term debt to current portion of long-term debt in our condensed consolidated balance sheet as the first excess payment is expected to be made in April 2017. On or after December 31, 2016, the applicable excess cash flow percentage shall be reduced based on the total net leverage ratio as of the last day of the period. For additional information, see Note Q, “Debt,” to our condensed consolidated financial statements included in this Quarterly Report on Form 10 Q.

In February 2014, we issued $200.0 million aggregate principal amount of 2.5% convertible senior notes due February 15, 2019 (the “Convertible Notes”), as discussed in more detail in Note Q, “Debt,” to our condensed consolidated financial statements included in this Quarterly Report on Form 10 Q. The Convertible Notes are senior unsecured obligations and bear interest at a rate of 2.5% per year, payable semi-annually in arrears on February 15 and August 15 of each year. The Convertible Notes will mature on February 15, 2019, unless repurchased or converted earlier. The Convertible Notes will be convertible into cash, shares of our common stock, or a combination thereof, at our election (subject to certain limitations in the 2015 Term Loan Facility), at a conversion rate of approximately 36.9079 shares of common stock per $1,000 principal amount of the Convertible Notes, which corresponds to a conversion price of approximately $27.09 per share of our common stock. The conversion rate is subject to adjustment from time to time. Based on the last reported sale price of our common stock during the last 30 trading days of the second quarter of 2016, the Convertible Notes were not convertible as of June 30, 2016.

Share Repurchase Program

In January 2016, we announced that our board of directors had authorized a program to repurchase up to $60.0 million in shares of our common stock. The repurchase program does not have an expiration date and may be suspended for periods or discontinued at any time. Under the program, we may purchase our stock from time to time at the discretion of management in the open market or in privately negotiated transactions. The number of shares repurchased and the timing of the purchases will depend on a number of factors, including share price, trading volume and general market conditions, along with working capital requirements, general business conditions and other factors. We may also from time to time establish a trading plan under Rule 10b5-1 of the Securities and Exchange Act of 1934 to facilitate purchases of our shares under this program. During the three and six months ended June 30, 2016, we repurchased and retired 511,744 and 831,744 shares of common stock, respectively, under this repurchase program for $12.4 million and $20.0 million, respectively, at an average purchase price of $24.30 and $24.05 per share, respectively.

Cash flows from operating activities

Net cash provided by operating activities for the six months ended June 30, 2016 was $110.6 million as compared to $71.7 million for the same period in 2015. The increase in net cash provided by operating activities was primarily due to a change in accounts receivable of $37.4 million and the net increase in CBR deferred revenues of $61.6 million, partially offset by an increase in net loss of approximately $54.3 million. We expect to generate cash from operations

as we continue to grow our business, partially offset by increased expenditures to support our growth.

Cash flows from investing activities

Net cash used in investing activities in the six months ended June 30, 2016 was $58.9 million as compared to $284.7 million for the same period in 2015. Cash used in investing activities decreased during the six months ended June 30, 2016 primarily due to a $192.3 million decrease in cash used to purchase investments, partially offset by and a $36.0 million increase in net proceeds from the sales or maturities of investments. The cash flows from investing activities during the six months ended June 30, 2015 reflect the investment of a portion of the $188.8 million we received following the sale of 4.6 million shares of our common stock in an underwritten public offering in the first quarter of 2015.

Cash flows from financing activities

Net cash used in financing activities in the six months ended June 30, 2016 was $29.3 million as compared to net cash provided by financing activities of $183.6 million for the same period in 2015. Cash flows from financing activities decreased during the six months ended June 30, 2016 as compared to the same period in 2015 primarily due to the $188.9 million net proceeds we received in March 2015 in an underwritten public offering and the $20.0 million of cash

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used to repurchase shares of our common stock under our share repurchase program in the first half of 2016.

Off Balance Sheet Arrangements

As of June 30, 2016, we did not have any off balance sheet arrangements as defined in Regulation S K, Item 303(a)(4)(ii).

Impact of Recently Issued and Proposed Accounting Pronouncements

See Note S, “Recently Issued and Proposed Accounting Pronouncements,” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for information regarding new accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

There have been no material changes with respect to the information appearing in Part II, Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” in our Annual Report.

Item 4. Controls and Procedures.

Managements’ Evaluation of our Disclosure Controls and Procedures

Our principal executive officer and principal financial officer, after evaluating the effectiveness of our “disclosure controls and procedures” (as defined in the Exchange Act Rule 13a-15(e), or Rule 15d-15(e)), with the participation of our management, have each concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were effective and were designed to ensure that information we are required to disclose in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure, and is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms. It should be noted that any system of controls is designed to provide reasonable, but not absolute, assurances that the system will achieve its stated goals under all reasonably foreseeable circumstances. Our principal executive officer and principal financial officer have each concluded that our disclosure controls and procedures as of the end of the period covered by this report are effective at a level that provides such reasonable assurances.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during the three months ended June 30, 2016 that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

See Note O, “Commitments and Contingencies,” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for information regarding our legal proceedings, including how we accrue liabilities for legal contingencies.

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Item 1A. Risk Factors

With the exception of the risk factor below, there have been no material changes from the Risk Factors disclosed in Part I, Item 1A, of our Annual Report.

We may not be successful in developing, gaining regulatory approval for and commercializing any products from Makena’s next generation development programs, which could have a negative impact on our business.

We are seeking to expand Makena's drug delivery technologies and formulations as part of our multi-pronged next generation development programs to deliver new and improved versions of Makena. The next generation development programs for Makena are an important strategy for our business, especially in light of the expiration of Makena's orphan drug exclusivity in February 2018, and the possibility that generic versions of Makena could enter the market following such loss of exclusivity.

For example, we are developing an auto-injector device for subcutaneous administration of Makena (the “auto-injector”), which could possibly provide Makena with additional exclusivity through the combination of potential additional orphan drug exclusivity and patent protection on the new dosing, route of administration, and auto-injector. We have recently met with the FDA to discuss our proposed development and regulatory strategy focusing on establishing bioequivalence of the subcutaneous auto-injector compared to the intramuscular administration of Makena. We intend to seek regulatory approval by submitting pharmacokinetic (“PK”) data from a bioequivalence study we plan to conduct, which is designed to demonstrate comparable bioavailability. In accordance with FDA guidance, we utilize the term ‘bioequivalence’ in the context of an sNDA to mean “relative bioavailability,” and not the strict bioequivalence that is typically required for generic ANDA filings. We can make no assurances that the study will demonstrate adequate comparability on any or all PK parameters to permit approval without clinical data. If any such parameters differ from the intramuscular injection of Makena, we can make no assurances that the FDA will accept our rationale that these potential differences have no clinical impact on safety or efficacy, and the FDA may request that we conduct one or more clinical studies in order to gain approval.

Further, we plan to conduct a comparative pain study intended to capture certain measures to support clinical superiority of the subcutaneous auto-injector over the existing intramuscular injection to support our submission for orphan drug exclusivity. These plans are based on our dialogue with the FDA that improvement in pain may be considered a clinically superior adverse event profile of the subcutaneous auto-injector. The FDA has substantial discretion in the determination of clinical superiority of the auto-injector and, therefore, we can make no assurances that comparative pain study data or other information that we generate or submit, even if statistically successful, will be adequate for the FDA to grant new orphan drug exclusivity for the auto-injector. Based on our current timelines and assumptions, we anticipate filing an sNDA for approval of the auto-injector in the second quarter of 2017 and, as a result of our decision to contemporaneously submit the results of our comparative pain study, the review period is expected to be 10 months. This timing may impact our ability to receive approval for the auto-injector before the expiration of Makena’s orphan drug exclusivity period in February 2018, which could permit generics to enter the market prior to commercialization of the auto-injector and could have an adverse impact on our Makena sales.

Further, the degree of protection afforded by any intellectual property that we may in-license or develop may not enable us to protect or commercially exploit the auto-injector technology, providing us with little or no competitive advantage. There is also a risk that others may circumvent any patents licensed or issued to us relating to the auto-injector, including any intellectual property covering the injector device, or that another company may develop a product that circumvents any new orphan drug exclusivity. We are relying on third-party manufacturers to aid in the design of the injector device as part of the auto-injector, and we may encounter difficulties finalizing a safe and effective subcutaneous delivery system design. Further, we are currently in discussions with third-party manufacturers to secure commercial supply of certain components and for assembly of the auto-injector. We may not be able to reach agreement on acceptable terms or encounter difficulties including problems involving scale-up, yields, quality control and assurance, product reliability, and manufacturing costs, any of which could result in significant delays in production.

Even if we succeed in gaining FDA approval for an auto-injector for Makena, we will likely be competing against generics of the current formulation of Makena after February 2018. These generics could be less expensive than our

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potential new and improved version of Makena. As a result of the lower cost for the generics or a lack of perceived benefit of the subcutaneous auto-injector for Makena, physicians may choose to prescribe the generic, which could cause sales of Makena to decline. In addition, insurance companies and government payors, such as state Medicaid agencies, who currently provide coverage for Makena may make it more difficult for physicians to prescribe our new version of Makena by charging higher copays, implementing prior authorizations, or not reimbursing for our new version at all. Furthermore, other companies are or may be working on developing additional formulations or routes of administration for products that reduce or prevent preterm birth. For example, an oral HPC is currently in development and its developer has stated that it intends to discuss a Phase 3 development plan with the FDA. If such products are approved, they could be, or be perceived to be, more efficacious, safer, less expensive, easier to administer, available for a broader patient population, or provide more favorable insurance coverage or reimbursement, and could reduce our revenues and the value of our product development efforts.

We have limited experience in the development of an auto-injector for Makena and in developing and implementing next generation development programs. If we are not successful in implementing Makena’s next generation development programs, if the subcutaneous auto-injector is not approved before the expiration of Makena's orphan drug exclusivity in February 2018 or at all, or if the subcutaneous auto-injector does not receive orphan drug exclusivity, our business may suffer.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The following table provides certain information with respect to our purchases of shares of our stock during the three months ended June 30, 2016.

Period	Total Number of Shares Purchased(1)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Number of Shares (or approximate dollar value) that May Yet Be Purchased Under the Plans or Programs (2)
April 1, 2016 through April 30, 2016	336,000	$ 25.28	336,000	1,795,315
May 1, 2016 through May 31, 2016	188,122	22.17	175,744	1,663,489
June 1, 2016 through June 30, 2016	4,251	21.71	—	1,663,489
Total	528,373	$ 24.14	511,744	

(1) Includes the surrender of 16,629 shares of our common stock withheld by us to satisfy the minimum tax withholding obligations in connection with the vesting of restricted stock units held by our employees.

(2)

During the second quarter of 2016, we repurchased 511,744 shares of our common stock in open-market transactions for $12.4 million at an average purchase price of $24.30 per share, totaling $20 million of our common stock repurchased under the share repurchase program to date. These shares were purchased pursuant to a repurchase program authorized by our board of directors that was announced in January 2016 to repurchase up to $60.0 million of our common stock, of which $40.0 million remains outstanding as of June 30, 2016. The repurchase program does not have an expiration date and may be suspended for periods or discontinued at any time.

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Item 6. Exhibits

Exhibit Number	Description
10.1+	Amendment to Amended and Restated Non-Employee Director Compensation Policy, approved as of May 19, 2016
10.2	Second Amendment to the AMAG Pharmaceuticals, Inc. Third Amended and Restated 2007 Equity Incentive Plan (incorporated herein by reference to Appendix A to the Company's Definitive Proxy Statement for its 2016 Annual Meeting of Stockholders, filed April 15, 2016, File No. 001-10865)
10.3+	Form of Restricted Stock Unit Agreement for Non-Employee Directors under AMAG Pharmaceuticals, Inc. Third Amended and Restated 2007 Equity Incentive Plan
31.1+	Certification Pursuant to Rule 13a 14(a)/15d 14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
31.2+	Certification Pursuant to Rule 13a 14(a)/15d 14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
32.1++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
32.2++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
101.INS+	XBRL Instance Document
101.SCH+	XBRL Taxonomy Extension Schema Document
101.CAL+	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF+	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB+	XBRL Taxonomy Extension Label Linkbase Document
101.PRE+	XBRL Taxonomy Extension Presentation Linkbase Document

+ Exhibits marked with a plus sign ("+") are filed herewith.

++ Exhibits marked with a double plus sign ("++") are furnished herewith.

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SIGNATURES

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

AMAG PHARMACEUTICALS, INC.

By: /s/ William K. Heiden
William K. Heiden
Chief Executive Officer

(Principal Executive Officer)

Date: August 9, 2016

AMAG PHARMACEUTICALS, INC.

By: /s/ Edward Myles
Edward Myles
Senior Vice President of Finance, Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

Date: August 9, 2016

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Exhibit Number	Description
10.1+	Amendment to Amended and Restated Non-Employee Director Compensation Policy, approved as of May 19, 2016
10.2	Second Amendment to the AMAG Pharmaceuticals, Inc. Third Amended and Restated 2007 Equity Incentive Plan (incorporated herein by reference to Appendix A to the Company's Definitive Proxy Statement for its 2016 Annual Meeting of Stockholders, filed April 15, 2016, File No. 001-10865)
10.3+	Form of Restricted Stock Unit Agreement for Non-Employee Directors under AMAG Pharmaceuticals, Inc. Third Amended and Restated 2007 Equity Incentive Plan
31.1+	Certification Pursuant to Rule 13a 14(a)/15d 14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
31.2+	Certification Pursuant to Rule 13a 14(a)/15d 14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
32.1++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
32.2++	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
101.INS+	XBRL Instance Document
101.SCH+	XBRL Taxonomy Extension Schema Document
101.CAL+	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF+	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB+	XBRL Taxonomy Extension Label Linkbase Document
101.PRE+	XBRL Taxonomy Extension Presentation Linkbase Document

+ Exhibits marked with a plus sign ("+") are filed herewith.
++ Exhibits marked with a double plus sign ("++") are furnished herewith.